DTIC FILE COPY

1

AD-A196 123

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFIT/CI/NR 88-38	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) ROTC CADET INFORMATION SYSTEM		5. TYPE OF REPORT & PERIOD COVERED MS THESIS
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) CARTER L. FRANK		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS AFIT STUDENT AT: UNIVERSITY OF ARIZONA		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE 1988
		13. NUMBER OF PAGES 244
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office) AFIT/NR Wright-Patterson AFB OH 45433-6583		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

DISTRIBUTED UNLIMITED: APPROVED FOR PUBLIC RELEASE

DTIC ELECTE AUG 0 3 1988 S D

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

SAME AS REPORT

CD

18. SUPPLEMENTARY NOTES

Approved for Public Release: IAW AFR 190-1
LYNN E. WOLAVER [illegible] 18 July 88
Dean for Research and Professional Development
Air Force Institute of Technology
Wright-Patterson AFB OH 45433-6583

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

ATTACHED

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

ROTC CADET INFORMATION SYSTEM

(RCIS)

BY

Carter L. Frank

A Report Submitted in Partial Fulfillment of the
Requirements for the Degree of Master of Science
(Management Information Systems)
in The University of Arizona

1987

Master Committee:
Dr. Sudha Ram

ABSTRACT

ROTC CADET INFORMATION SYSTEM

by

Carter L. Frank

The ROTC CADET INFORMATION SYSTEM (RCIS) is a computerized database system that was custom developed for the U.S. Air Force AFROTC Detachment 020. RCIS assists the administrative staff by providing them with fast on-line access, for cadet file updates, for processing ad hoc cadet file queries, and for producing hardcopy reports. RCIS assists the executive staff by providing fast on-line access to essential cadet information. RCIS will be reviewed by AFROTC Headquarters for possible nation-wide implementation.

[illegible]

TABLE OF CONTENTS

SYSTEMS ANALYSIS AND DEVELOPMENT JOURNAL

TABLE OF CONTENTS

1. INTRODUCTION

Name of Project

ROTC Cadet Information System (RCIS)

Name of Organization

U.S. Air Force
AFROTC Detachment 020
University of Arizona
Tucson, Arizona 85721
(602) 621-3521

Contact Person

Ms. Peggy Mittendorf
AFROTC Detachment 020 Secretary

Advisors to the Project

Dr. Sudha Ram
Department of Management Information Systems

Short Description of the Organization

The AFROTC Detachment 020 staff is comprised of five officers, three enlisted personnel and two civilians. This staff is responsible for the training of approximately 200 cadets as well as maintaining their records and serving as liaison for approximately 50 AFIT students attending the University of Arizona. Colonel Charlie Hastings is the detachment commander, and Ms. P. Mittendorf is his secretary. The officers reporting to Colonel Hastings are Major R. Youmans (Commandant of Cadets/Freshman Instructor), Major D.

Smith (Education & Training Officer/Senior Instructor), Captain J. Dougherty (Recruiting Officer/Sophomore Instructor), Captain K. Nonaka (Drill Team Advisor/Junior Instructor). Also reporting to Colonel Hastings is Technical Sergeant G. Cobo (Detachment Non-commissioned officer in charge). He supervises Technical Sergeant R. Nicholson (underclassmen records administrator) and Sergeant D. McGrath (upperclassmen records administrator). Mr. R. Haney serves as the Uniform Custodian and is responsible to Colonel Hastings.

Statement of the Problem

The Detachment's present system involves a myriad of forms dealing with a variety of personnel information and suspense dates for required reports. This information includes testing, rating, and grading results as well as personal information on all of cadets and AFIT students. All information gathering is done manually.

One of the major problems the detachment staff faces under the current system is the amount of time it takes to collate information from the various Air Force and Detachment forms and present information in a usable format. This takes a considerable amount of time for one cadet and even longer when information must be gathered on different groupings of cadets.

2. DEVELOPMENT OF RCIS

Purpose of the Project

The purpose of the project is to develop a computerized database system (RCIS) for the AFROTC Detachment 020 Cadet files. After the database records have been fully audited, the database will provide the means for the detachment staff to quickly access their files, efficiently process a wide variety of ad hoc queries, and produce hard-copy reports based on those queries.

Contents of the Project

RCIS will provide a menu-driven interface that allows the user to enter, update, archive and delete cadet records that are now stored on various forms in large metal filing cabinets. The system will also provide a query interface that allows the user to develop an ad hoc query without using the dBASE III PLUS command language. Finally, RCIS will provide utilities that automatically create backup copies of required system database files.

Classification of System Components

The system contains the following:

a. Assembly lanquage driver to create pop-up menus (Created by Stephen M. Curran)
b. Data entry and update screens
c. Review screens
d. Ad hoc query generator
e. Archive utilities
f. Automatic backup and reload utilities

Methodology

The following methodology was used to complete the proposed project:

a. Analysis of previous manual system
b. User review of proposed system
c. Design of database
d. Design of data entry utilities
e. Validation of data entry utilities
f. Redesign of data entry utilities
g. Design of query interface
h. Validation of query interface
i. Redesign of query interface
j. User Training
k. Installation of final system

Software Required

dBASE PLUS III, Version 1.1 or higher.

Hardware Required

RCIS was designed for an IBM PC/XT, PC/AT or MS-DOS compatible configured with one floppy diskette drive and one hard disk drive.

User Documentation

System documentation consists of a User's Manual and a Technical Reference Manual. The User's Manual is intended to assist the users in operating and maintaining the system. The Technical Manual provides documentation for the design of the databases and the system software. The Technical Manual is intended primarily as a programmer's maintenance guide.

3. TASK PROGRESS

Analysis of Previous System

The initial interviews with members of the detachment staff were conducted by Ron Crane, Gary McAlum, Gary Talbot and myself during January and February 1987. The purpose of the interviews was to collect background information to design a mainframe database application for the MIS 531B class project.

We conducted the interviews in two phases. The first phase concentrated on the executive staff's view of how the database system could automate the manual compilation of cadet data used to complete reports and forms required by Headquarters AFROTC. The executive staff concluded that the proposed database system would drastically reduce the amount of time necessary to organize the required data and would give the entire staff more time to dedicate directly to the cadets. The executive staff was so excited about the project that they immediately put in a requisition for the Zenith PC micro-computer system which would be used to implement the PC based system.

The second analysis phase consisted of interviews with individual members of the executive and administrative staff. Data field requirements were obtained from each individual and, after a few data analysis and user review sessions, the required group of data fields was agreed upon. Each person on the staff submitted the types of data groupings (queries) they performed and we designed a set of query functions to meet the staff's requests. The staff reviewed the query functions and minor modifications were made.

User Review of Proposed System

The entire staff was briefed on the overall functional requirements developed from the information gathered and their final approval was obtained before we began the database system design. We advised the staff that the prototype system would be developed on the university mainframe computer system and that the final deliverable system would be transported to the office microcomputer using dBASE III PLUS.

In April 1987, the prototype system was demonstrated for the detachment staff. We reviewed the previously accepted system requirements and discussed possible changes required for the micro-based system. It was enthusiatically received by all members of the staff and approval was given to begin conversion onto the Zenith PC system.

Design of the Database

The database design used for the mainframe application required revision before it could be efficiently implemented on a microcomputer. The prototype system structure was analyzed to determine the best structure which would provide optimum performance in the dBASE III PLUS environment on the PC. The system was required to support two classes of cadet records: cadets currently enrolled in the AFROTC program and cadets who either disenrolled or successfully completed the program. By separating the active and inactive records, system performance could be substantially improved. In addition, this separation would also simplify query processing. For a detailed discussion of the database design, refer to the Technical Reference Manual.

Design of Data Entry Utilities

The initial utilities incorporated into the system included the basic data entry and maintenance utilities, i.e. Add, Edit, View, Delete and Transfer. The administrative staff was concerned with the magnitude of data entry effort required to audit and enter 200 cadets (over 500 characters each, for a total of over 100,000 characters). To facilitate this effort, a data entry form was designed which matched the data field order on the system's data entry screens. This form would be used to gather cadet data from the various cadet files for entry into the system. In the future it would be used to enter a new cadet's data which could be gathered from an initial interview or a package of background information received from the cadet. A paging function was incorporated to allow the user to easily locate the data entry screen which contained the data fields they needed to update.

Validation of Data Entry Utilities

The Zenith PC I developed the system on was located in the detachment's administrative office, so I had the opportunity for the staff to informally review the system's progress almost on a weekly basis. Several semi-formal review sessions were conducted to familiarize the staff with the evolving system capabilities. During these sessions, additional database field requirements were identified for inclusion in the cadet database files.

Redesign of Data Entry Utilities

The additional fields were added and corrections to the data entry utilities were completed in July 1987. By this time, the administrative staff had began to gather data from the cadet files and had completed approximately 10 data entry forms.

Design of Query Interface

In the past, the detachment staff had been unable perform numerous desirable ad hoc queries because the manpower required to manually search the existing file system was prohibitive. RCIS provides the database structure that should facilitate processing queries. Unfortunately, detachment staff personnel have no experience with the dBASE III PLUS command language. To handle the staff's future query processing requirements, a general-purpose friendly interface was essential.

The query requirements gathered during the prototype design were used as a basis for the design of the query input screens. The query input screens were designed to allow the user to constrain predefined data fields or set ranges of values for the predefined fields by using relational operators. The predefined fields on the input screen are designed to give the user maximum flexibility in processing queries for that particular type of query. The interface is restricted in the sense that it only allows the user to specify AND conditions, but for almost all cases, this is not a severe restriction. In addition to allowing the user to process a wide-variety of query requirements, the query interface output screens and reports were meticulously designed to efficiently use the space provided on the screens and reports.

Validation of Query Interface

As was the case with the data entry utilities, I had the opportunity for the staff to informally review the system's progress almost on a weekly basis. Once again, semi-formal review sessions were conducted to familiarize the staff with the evolving capabilities of the query interface. During these sessions, additional predefined input field requirements were identified for inclusion on the query input screens and data fields in the query output formats were identified for addition and deletion.

Redesign of Query Interface

The predefined fields were added to the query input screens and corrections were completed in August 1987. By this time the administrative staff had completed approximately 30 cadet data entry forms.

User Training

User training for the data entry utilities and the query interface was conducted during the first week of September 1987.

Most of the staff had little previous experience with micro-computers but they all expressed a willingness to learn.

We reviewed each of the basic data entry procedures and walked through a few example entry sessions to show the staff how to navigate their way through the system. We reviewed the basic query input and output formats by performing some example queries on test data previously entered onto the database. I demonstrated how each of the 10 high level queries were designed to provide flexiblity in performing more specific queries in addition to their primary stated function.

Installation of Final System

The final system is a Run-Time+ version of the data entry utilities and the query interface. The Run-Time+ utility encrypts and compresses the dBASE III PLUS source code and provides a faster running system. The actual source code will be stored on two separate floppy disks in a secure location and will not be available on the hard disk or the system load disks. This will ensure that no unauthorized changes can be made to the source code.

4. FINAL REMARKS

Contribution to the Field of MIS

This master's project has produced a custom designed database system that provides straightforward data entry utilities and a nonprocedural, user-friendly interface for query processing. The basic system menu was coded in assembly language by Stephen M. Curran and it duplicates the flexible ASSIST level menu system provided by dBASE III PLUS.

The project demonstrates the effectiveness of employing the following techniques in designing a system:

a. Initial analysis performed using a formal requirements collection approach.

b. Initial system design and confirmation of system requirements accomplished by using a prototype.

c. Soliciting user validation of the system performance during critical phases in the system development.

Practical Experience Gained

The project provided experience in designing a database application from two perspectives: first from the mainframe perspective and then for the micro-computer environment. I was surprised at the number of database structure changes and database language function changes required to convert the mainframe database design into a design which would provide optimum performance in the dBASE III PLUS micro-computer environment.

Although the detachment staff was very cooperative in this endeavor, their lack of experience with micro-computers often led to misunderstandings as to what they really wanted from the system. However, this project was a success because those misunderstandings were overcome by allowing the individual staff members to participate and to shape the direction of the system.

USER'S MANUAL

FOR

ROTC CADET INFORMATION SYSTEM (RCIS)

VERSION 1.10

BY

Carter L. Frank

A Report Submitted in Partial Fulfillment of the
Requirements for the Degree of Master of Science
(Management Information Systems)
in The University of Arizona

1987

Master Committee:
Dr. Sudha Ram

TABLE OF CONTENTS

TABLE OF FIGURES

1.0 INTRODUCTION.

This manual provides operating instructions for the ROTC Cadet Information System (RCIS), version 1.10. In the sections that follow, you'll be introduced to RCIS data files, and you'll be shown how to access data entry, query and maintenance functions. Additional technical data is available in Section 5.

1.1 OVERVIEW.

RCIS consists of two major groupings of files. Active files contain data on cadets currently enrolled in the AFROTC program. Inactive files contain data on cadets who either disenrolled or successfully completed the program. Within each of these file groupings there are two major subdivisions:

a. Cadet Master file.

b. Cadet Pay file.

The cadet master file contains personal, administrative, academic and corps information for each cadet. The cadet master file is the most important database file because all the other database files are used to support the master file information. The cadet master record can be thought of as the parent record for the cadet pay records, therefore, a master record must be created before any associated pay records can be added to the database. The cadet pay records contain required pay data for cadets who are contractually obligated to the AFROTC program. There can be multiple pay records for any one cadet (current system limitation is 16 pay records but system could be modified to allow an unlimited number). The remaining database files are really tables of information created to facilitate an efficient database design. A description of each of these files is given as follows:

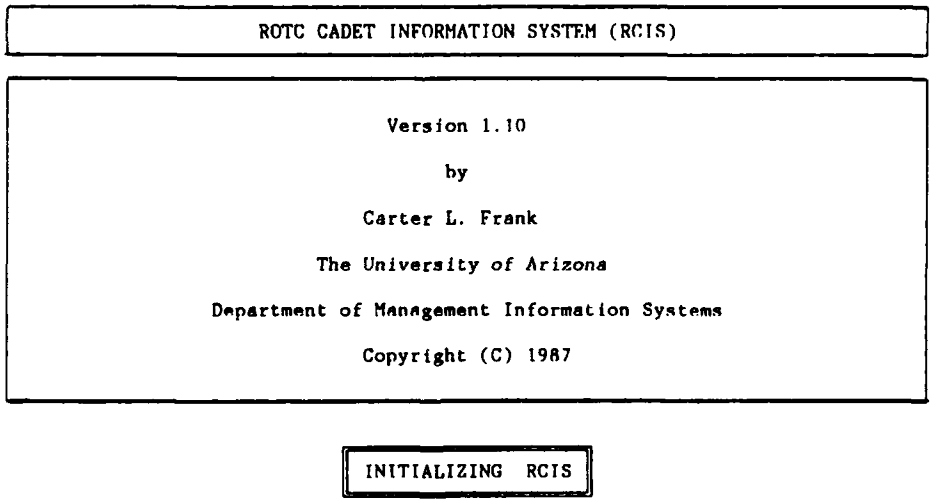
a.	Class Enrollment Totals	- Contains an entry for each aerospace studies class with an associated total enrollment for that class.
b.	Weight Standards	- Contains maximum and minimum allowable weight standards (male & female) associated with a given height.
c.	Aerobics Run Standards	- Contains maximum allowable run times (male & female) associated with a given age category.
d.	WPSS Multipliers	- Contains multiplier values used in calculating each cadet's WPSS score.

RCIS provides you with the functions required to enter, update (or edit), view, delete or transfer cadet master and pay records. The system also allows you to 'ask" questions about the information stored in the database. In the next section you'll be shown how to start RCIS and how to use basic system features.

1.2 GETTING STARTED.

To install the program, insert the RCIS system 1 diskette in drive A and type the following: COPY A:\DBASE\*.* C:\DBASE\*.* This command will copy basic program files to the dBASE III PLUS subdirectory. Next, insert the RCIS system 2 diskette in drive A and type the following: COPY A:\DBASE\*.* C:\DBASE\*.* This will copy database definition files and other required files to the dBASE III PLUS subdirectory.

To start RCIS you must load dBASE III PLUS. Ensure that the computer system is in the dBASE III PLUS subdirectory by typing the following: CD C:\DBASE When the system prompt returns simply type DBASE and wait for dBASE III PLUS to be loaded. Once dBASE III PLUS has been loaded, press the <Esc> key. This will move the cursor from the ASSIST menu and place it at the bottom left hand corner of the text window. To start RCIS, type DO RCIS. After a short delay you should see the inital RCIS screen shown below.



```
ROTC CADET INFORMATION SYSTEM (RCIS)

Version 1.10
by
Carter L. Frank
The University of Arizona
Department of Management Information Systems
Copyright (C) 1987

INITIALIZING RCIS
```

Figure 1.1 RCIS Log-on screen.

While the log-on screen is displayed, the program starts to INITIALIZE information required to operate the system. This set-up process will require about 15 seconds to complete. Once INITIALIZATION is finished, the log-on screen will be replaced by the screen shown below.

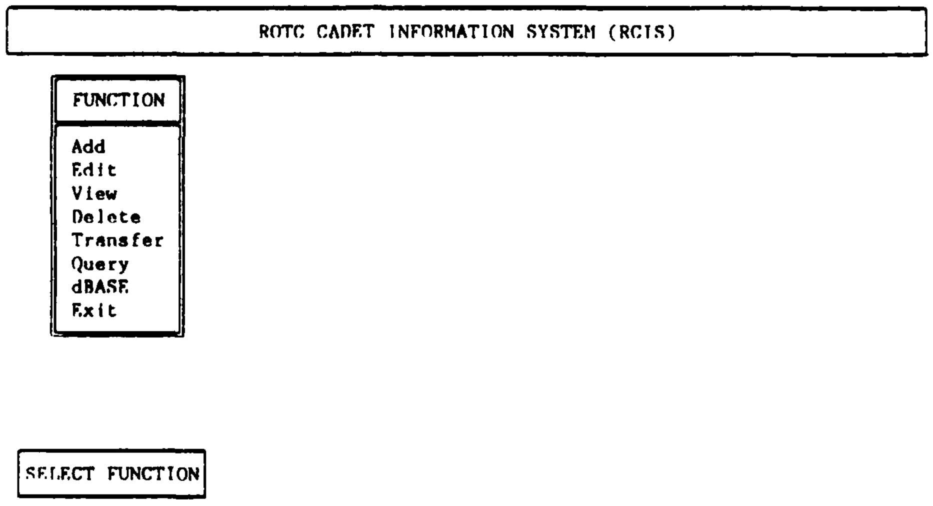


Figure 1.2 RCIS Function menu.

You've started RCIS and are now ready to begin data entry. The next sections will discuss how to access particular functions to enter or manipulate RCIS records.

2.0 THE MENU INTERFACE.

RCIS allows you to specify the type of processing you want to do by selecting from a menu. The menu interface was designed to be similar to the existing dBASE III PLUS ASSISTANT interface. This section discussed how to make selections using the menu interface.

2.1 FUNCTION MENU.

The function menu is the first menu presented to you after INITIALIZATION has been completed (see Figure 1.2). You will use this menu to designate the type activity you wish to perform. You are presented with 8 options:

a. Add - Choose this function if you wish to create a new record.

b. Edit - Select this option if you wish to update or make changes to a specific record that already exists.

c. View - Choose this option if you desire to look at a specific record, but don't want to alter any information. This function is used to prevent inadvertent data alterations that might occur if you had selected edit.

d. Delete - Select this function to delete a specific record. If a cadet master record is selected for deletion, then all associated cadet pay records for that master record are also deleted.

e. Transfer - Choose this option to move a cadet master record and all its associated pay records either from the active to the inactive file, or from the inactive to the active file.

f. Query - Select this option to perform queries on the database files.

g. dBASE - Select this option to exit RCIS and return to dBASE III PLUS.

h. Exit - Select this option to exit RCIS and return to the computer system prompt.

To select a function from the menu, press either the up arrow key or the down arrow key (located on the key pad). Continue pressing the up or down arrow key until the function you want to select is highlighted. You complete your function selection by pressing the <Enter> key. If you inadvertently made an erroneous choice, you can return to the function menu by later pressing the <Esc> key.

NOTE

If the highlight doesn't change, check the NUM LOCK light. If it is illuminated, you're in number keypad mode. Press the NUM LOCK key to activate the cursor keypads.

2.2 GROUP MENU.

After you've selected a function, another menu will appear next to the function menu (see Figure 2.1). This menu is used to select records from either the active or inactive database files. Again, press the cursor keys to highlight your choice and press the <Enter> key. If you have made a mistake in choosing either a function or a group, you can "roll-back" to a previous menu by pressing the <Esc> key until the desired menu becomes active.

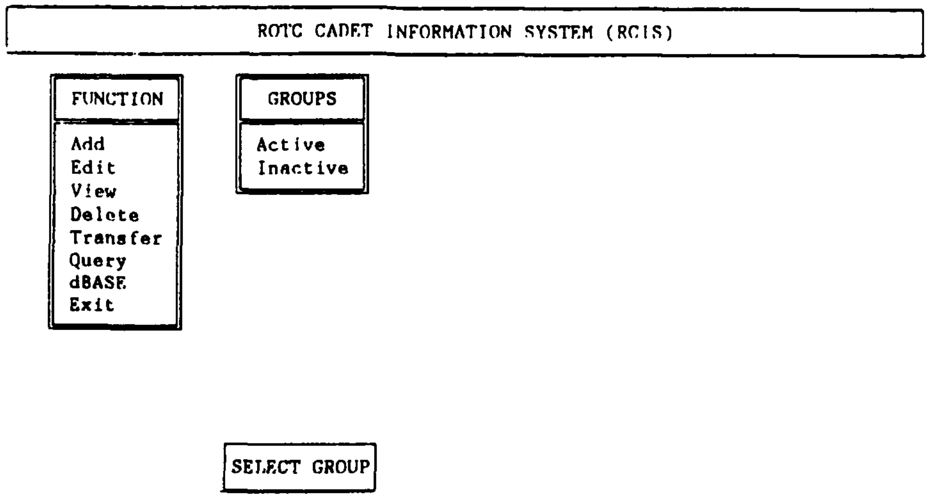


Figure 2.1 RCIS Group menu

2.3 RECORD MENU.

After selecting a database group, another menu will appear on the screen. This new menu is used to select the record type that you want to access. As shown in Figure 2.2, there are two record types to choose from (Cadet Master and Cadet Pay). Again, you select the desired record type by highlighting your choice using the cursor keys and pressing the <Enter> key. If your previous menu selections are incorrect, press the <Esc> key to "roll back" to the menu that must be corrected.

There are only two function selections that will generate a different sequence of menus than shown in Figure 2.2. If your function choice was Transfer, an access key input request will appear in the bottom lefthand corner of your screen as shown in Figure 2.3. The menu shown in Figure 2.7 will appear if you selected the Query function.

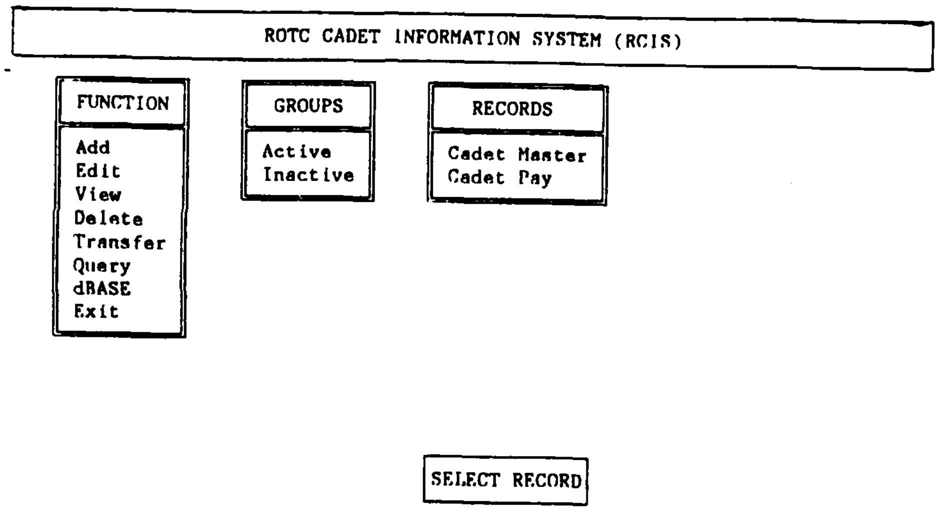


Figure 2.2 RCIS Record menu

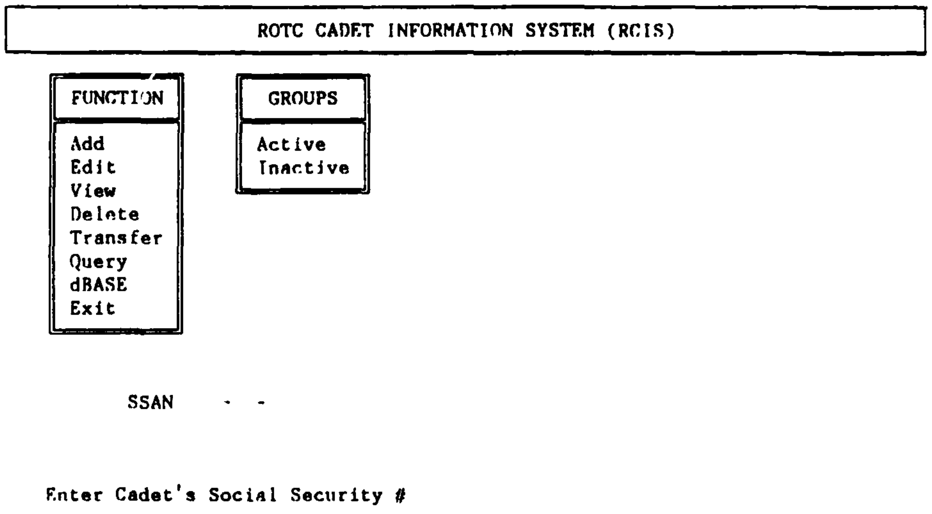


Figure 2.3 Transfer function menu sequence

2.4 ACCESS KEY INPUT.

After you have selected a record type (for Transfer function after you have selected a group type), an access key input request will appear in the bottom lefthand corner of your screen. For the Add and Transfer functions the request will appear as shown previously in Figure 2.3 and in Figure 2.4. For the Edit, View and Delete functions the request will appear as shown in Figure 2.5. The data items you will be entering (social security number, first name, middle name or last name) are known as access keys. Basically you can consider a database to be an extended file cabinet that is very thoroughly cross-referenced.

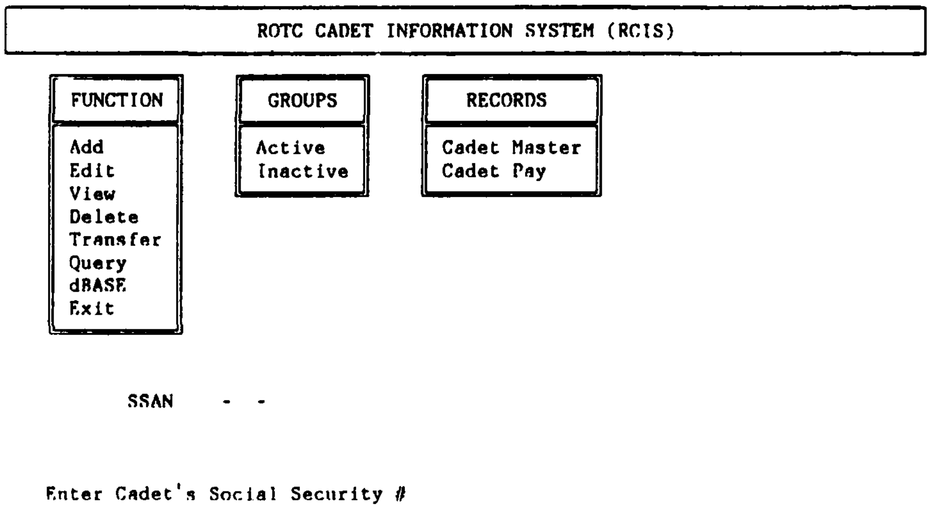
For example, you might like to locate a cadet record in your manual file system, but all you have is the social security number. If the file system is arranged alphabetically by cadet name, you might not be able to find the folder; however, if you had a card file that cross-references social security numbers with names, you could easily locate the required record. Databases use this same approach. Special files (called index files) are used to cross-reference the location of a particular record. These indices allow you to use various data items as keys to finding the desired record.

So, before we can locate a record in our database we must specify how to look for it. The access key input request allows you to locate records in two different ways (except for the Add and Transfer functions). You will be able to locate records by using the cadet's social security number or by using a portion of their name that uniquely identifies the cadet from all the others on the database. If you enter a social security number and a name, the system will default to use only the social security number.

After the access key input request appears on the screen, you can not "roll back" to a previous menu; however, you can still abort the operation by pressing the <Esc> key before entering any data in the highlighted fields.

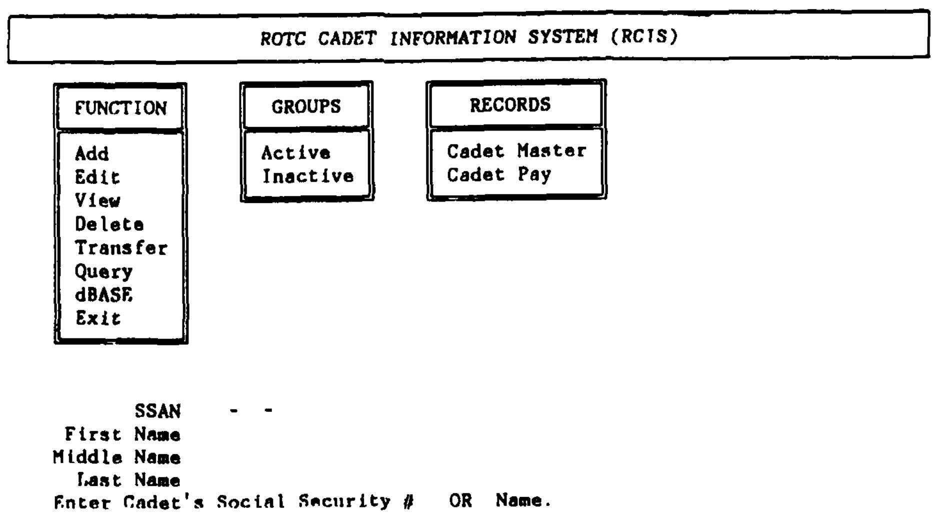
NOTE

If you have selected the Edit function and the system has successfully located the record you want to edit, the system will ask you if you would like to change the cadet's social security number (perhaps it was initially entered incorrectly). If you respond by entering a <Y> then an access key change request will appear as shown in Figure 2.6. You will be shown the current access keys (social security number and name) for the record and be given the opportunity to change only the social securtiy number.


ROTC CADET INFORMATION SYSTEM (RCIS)

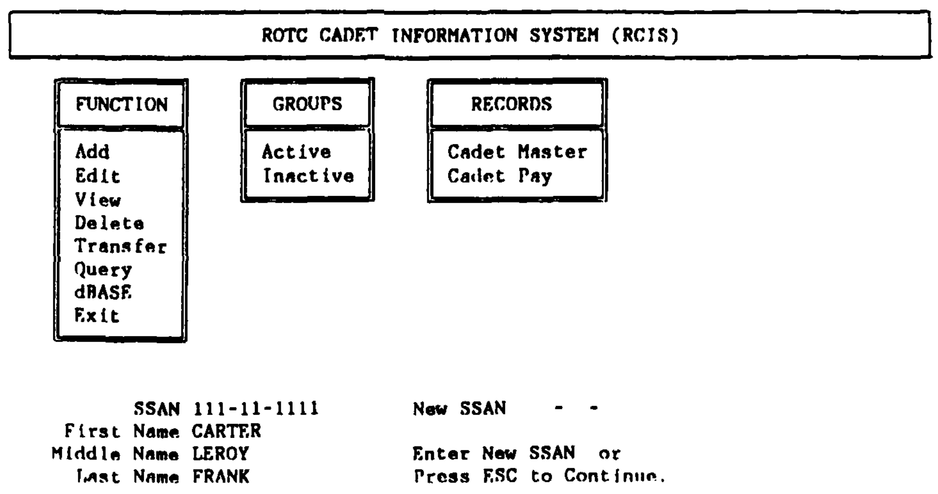
Enter Cadet's Social Security #

Figure 2.4 Add function menu sequence



```
ROTC CADET INFORMATION SYSTEM (RCIS)

FUNCTION      GROUPS      RECORDS
Add           Active      Cadet Master
Edit          Inactive    Cadet Pay
View
Delete
Transfer
Query
dBASE
Exit

         SSAN    - -
   First Name
  Middle Name
    Last Name
Enter Cadet's Social Security #   OR  Name.
```

Figure 2.5 Edit, View & Delete functions menu sequence



```
ROTC CADET INFORMATION SYSTEM (RCIS)

FUNCTION      GROUPS      RECORDS
Add           Active      Cadet Master
Edit          Inactive    Cadet Pay
View
Delete
Transfer
Query
dBASE
Exit

         SSAN 111-11-1111        New SSAN    - -
   First Name CARTER
  Middle Name LEROY              Enter New SSAN  or
    Last Name FRANK              Press ESC to Continue.
```

Figure 2.6 Edit function access key change request

2.5 QUERY SELECTION MENU.

The query selection menu will appear as shown in Figure 2.7 if you have selected the Query function. This menu allows you to select the particular query type you need to process your database questions. The method for selecting from this menu is the same as the previous menus, i.e. choose selection using the cursor keys and then press the <Enter> key and if previous menu selections are incorrect, press the <Esc> key to "roll back" to the menu that must be corrected. Each type of query has its own query input form (see Appendix A) which shows you the constraint fields for that particular type of query. These forms are discussed in more detail in Section 3.4 DATABASE QUERIES.

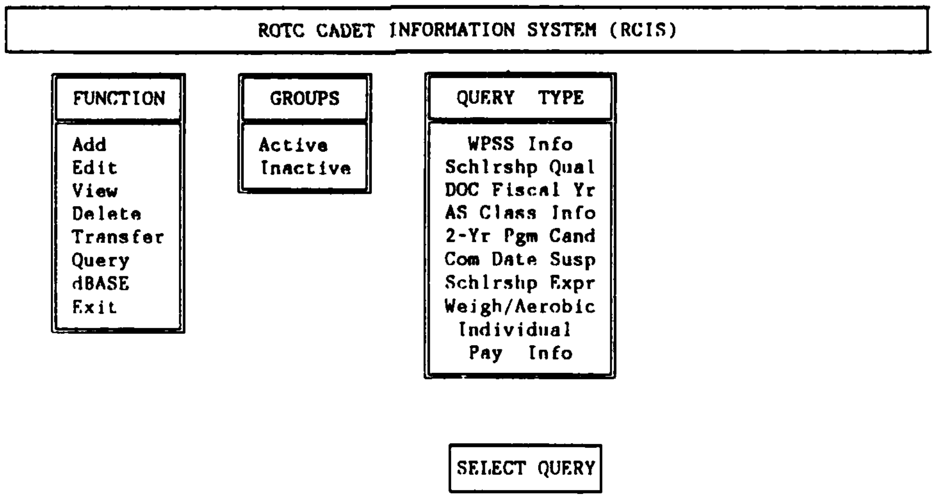


Figure 2.7 RCIS Query Selection menu

2.6 OUTPUT MEDIA MENU.

The output media menu appears after the Query selection menu as shown in Figure 2.8. This menu allows you to specify the device and format to be used to display the results of query processing. You can select from one of three options:

a.	80-column monitor	-	This option will direct all output to the screen.
b.	80-column printer	-	This option will direct all output to the printer using standard font (12 pitch) and standard paper size.
c.	132-column printer	-	This option will direct all output to the printer using compressed mode (17 pitch) and standard size paper.

The method for selecting from this menu is the same as the previous menus, i.e. choose selection using the cursor keys and then press the <Enter> key and if previous menu selections are incorrect, press the <Esc> key to "roll back" to the menu that must be corrected.

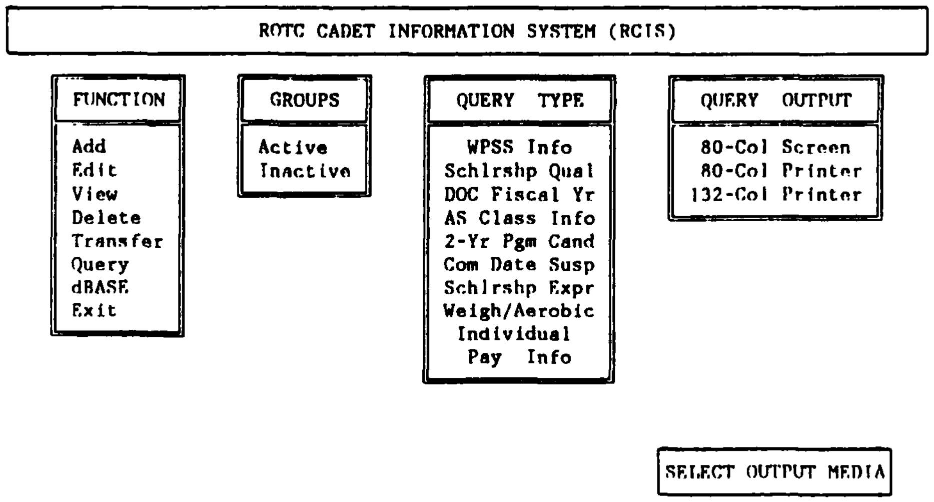


Figure 2.8 RCIS Output Media menu

3.0 SPECIFYING THE RECORD TO PROCESS.

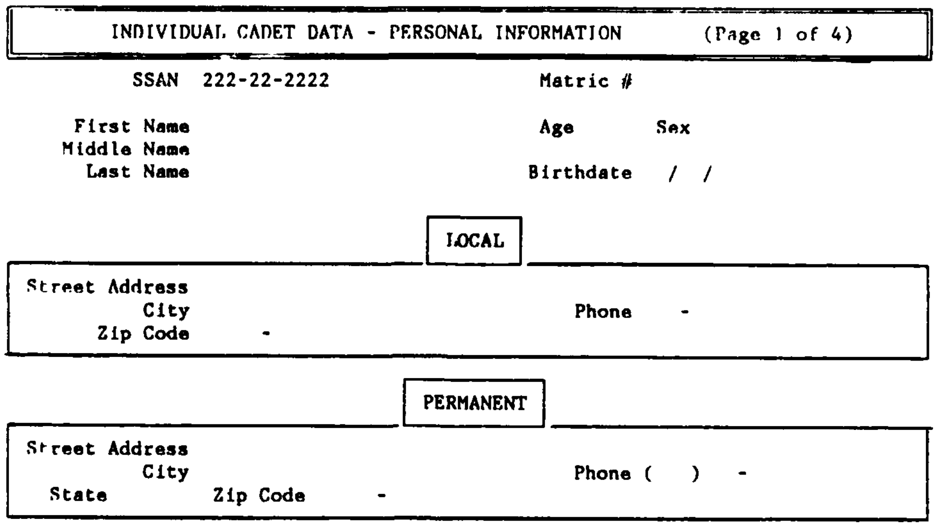
Once you have selected a function, group, record type and/or entered an access key, the system prints a message informing you that it is opening requested files and that it is searching for the designated record. If you've selected the Add function, the system will check to ensure that no duplicate record already exists because you are only permitted to create a record with a unique access key. If you've selected the Transfer function, the system will check to ensure that no duplicate record already exists on the destination file because you are not permitted to transfer a record if it would cause duplicates to exist on the destination file. For the Edit, View and Delete functions, you're searching to find a record that should already exist.

The system will inform you of the result of the search if a special case has been encountered. For example, if you've selected the Add function and a record has already been assigned to the access key you've input, the system bell will sound and an appropriate message will be displayed. In another situation, you may have selected the Edit function and the system is searching for the designated record, but was unable to locate it (usually because of a typographical error). The system bell will sound and a MASTER (or PAY) RECORD NOT FOUND message will be displayed. Another special case can occur when you've specified a non-unique access key, e.g. LAST NAME = SMITH. In this instance the system will advise you if more than one record exists.

If a system message is displayed, you are given further instructions. For example, you might be asked if you wish to try again or you may simply be asked to press any key to continue. Once you've ended a transaction, the menu screen will reappear and you'll be asked if you want to continue in the same mode. If you answer <Y>, then you'll be prompted to input a new access key value. If you answer <N>, then the system will close its working files and you'll be returned to the select function menu. At this point, you can choose another function and continue processing or you can elect to exit RCIS.

3.1 ADDING, EDITING AND VIEWING RECORDS.

If the search operation has been successfully concluded, the next screen that appears will be the initial data entry or data view screen (see Figure 3.1 for master record and Figure 3.2 for pay record). You are then free to enter data or modify data in any field that is highlighted (no highlighted data fields on the View function screens). Use the cursor keys to maneuver around the screen (cursor can only be moved to highlighted fields).



INDIVIDUAL CADET DATA - PERSONAL INFORMATION (Page 1 of 4)

SSAN 222-22-2222 Matric #

First Name
Middle Name
Last Name

Age Sex
Birthdate / /

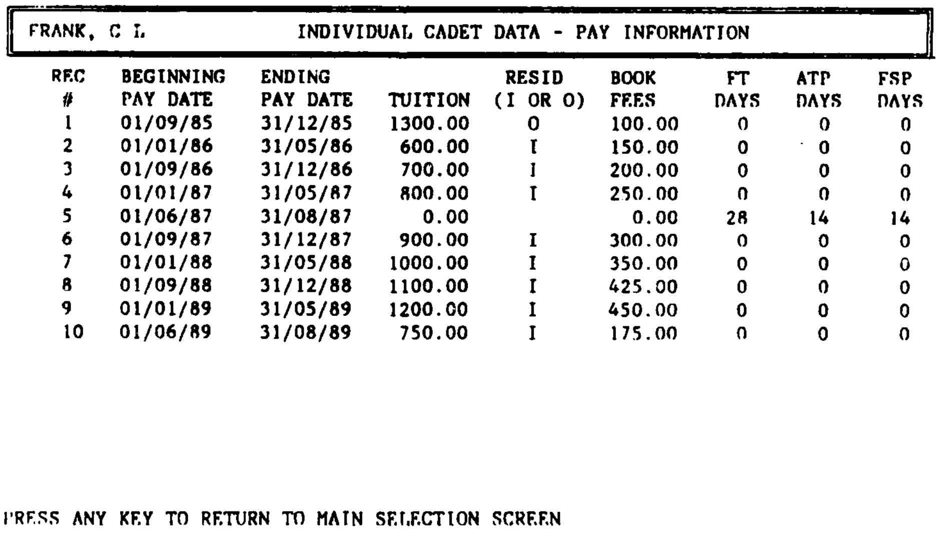
LOCAL

Street Address
City
Zip Code -
Phone -

PERMANENT

Street Address
City
State Zip Code -
Phone ( ) -

Figure 3.1 Initial data entry/view screen for Master record



FRANK, C L INDIVIDUAL CADET DATA - PAY INFORMATION

REC #	BEGINNING PAY DATE	ENDING PAY DATE	TUITION	RESID (I OR O)	BOOK FEES	FT DAYS	ATP DAYS	FSP DAYS
1	01/09/85	31/12/85	1300.00	O	100.00	0	0	0
2	01/01/86	31/05/86	600.00	I	150.00	0	0	0
3	01/09/86	31/12/86	700.00	I	200.00	0	0	0
4	01/01/87	31/05/87	800.00	I	250.00	0	0	0
5	01/06/87	31/08/87	0.00		0.00	28	14	14
6	01/09/87	31/12/87	900.00	I	300.00	0	0	0
7	01/01/88	31/05/88	1000.00	I	350.00	0	0	0
8	01/09/88	31/12/88	1100.00	I	425.00	0	0	0
9	01/01/89	31/05/89	1200.00	I	450.00	0	0	0
10	01/06/89	31/08/89	750.00	I	175.00	0	0	0

PRESS ANY KEY TO RETURN TO MAIN SELECTION SCREEN

Figure 3.2 Data view screen for Pay records

3.1.1 MASTER RECORDS.

The master record data forms are four pages (screens) long and you can advance to the next page by pressing the <PgDn> key or you can go back to the previous page by pressing the <PgUp> key. If you <PgDn> past the last page or <PgUp> past the first page, the record transaction will be terminated. Another way to terminate a record transaction is to press the <Ctrl> <End> keys. During editing, you can abort any changes and restore the record to its initial state by pressing the <Esc> key.

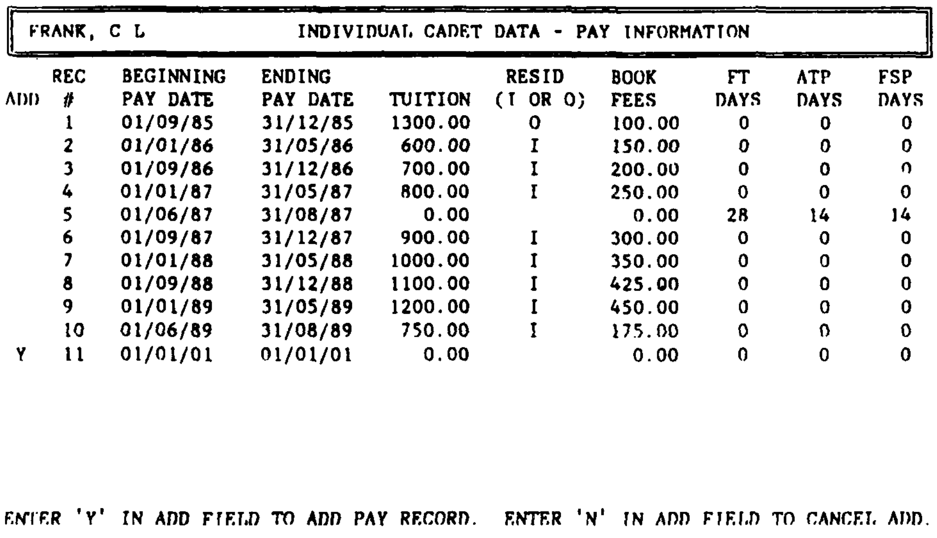
3.1.2 PAY RECORDS.

All pay records associated with the input access key will be displayed on the same screen (see Figure 3.3). If you've selected the Add function, you can add the pay record input data to the database by pressing one of the following key sequences: <PgUp>, <PgDn>, <Esc>, <Ctrl><End>. If you've selected the Edit function, the system will prompt you to enter the corresponding record number for the pay record you would like to change (record numbers are listed on the screen). After you've entered the desired record number and pressed the <Enter> key, the system will highlight the pay record you have selected. The new pay record input data can be added to the database by pressing one of the following key sequences: <PgUp>, <PgDn>, <Esc>, <Ctrl><End>. The system will unhighlight the pay record and prompt you for another selection.

NOTES

A <Y> is required in the ADD field for the pay record to be added to the database. A <N> in the ADD field will cancel the add and it is the only way to terminate this function.

The beginning and ending dates for each pay record are used to define the pay period for that record. There is extensive error checking done to ensure that these pay periods do not overlap. In other words, the system will not allow you to input pay dates which would cause pay periods to overlap.



FRANK, C L INDIVIDUAL CADET DATA - PAY INFORMATION

ADD	REC #	BEGINNING PAY DATE	ENDING PAY DATE	TUITION	RESID (I OR O)	BOOK FEES	FT DAYS	ATP DAYS	FSP DAYS
	1	01/09/85	31/12/85	1300.00	O	100.00	0	0	0
	2	01/01/86	31/05/86	600.00	I	150.00	0	0	0
	3	01/09/86	31/12/86	700.00	I	200.00	0	0	0
	4	01/01/87	31/05/87	800.00	I	250.00	0	0	0
	5	01/06/87	31/08/87	0.00		0.00	28	14	14
	6	01/09/87	31/12/87	900.00	I	300.00	0	0	0
	7	01/01/88	31/05/88	1000.00	I	350.00	0	0	0
	8	01/09/88	31/12/88	1100.00	I	425.00	0	0	0
	9	01/01/89	31/05/89	1200.00	I	450.00	0	0	0
	10	01/06/89	31/08/89	750.00	I	175.00	0	0	0
Y	11	01/01/01	01/01/01	0.00		0.00	0	0	0

ENTER 'Y' IN ADD FIELD TO ADD PAY RECORD. ENTER 'N' IN ADD FIELD TO CANCEL ADD.

Figure 3.3 Data entry screen for Pay records

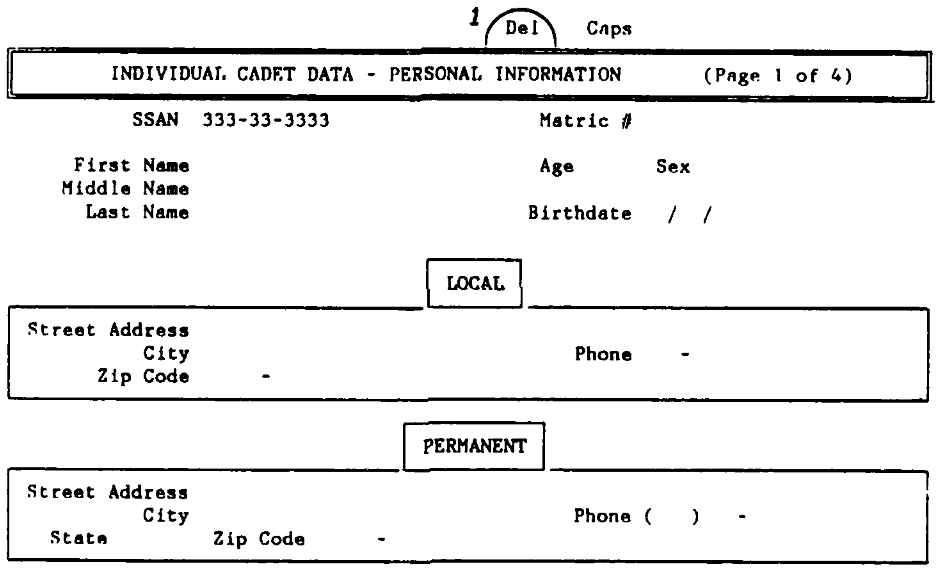
3.2 DELETING RECORDS.

The delete function has been provided to allow you to remove a record from the database. During data audits, you should look for extraneous or unwanted records. These unwanted records should be deleted from the system because they will eventually cause the system to become less efficient. Their presence will require longer search times to locate valid records for processing.

3.2.1 MASTER RECORDS.

There are two ways you can delete a master record. If you have made a lot of mistakes in entering data during record creation (Add function) or have just decided not to add it, you can delete the record before it is added to the system by pressing the <Ctrl> <U> keys. This marks the record for deletion. The system will indicate that the record was marked for deletion by placing the symbol DEL in the status line (see area labeled 1 in Figure 3.4). After you exit the data entry form, RCIS will ask you if you want to delete the record. Enter <Y> if you want to delete or enter <N> if you want to retain the record.

Once a master record has been added, the only way to remove it is by using the Delete function. To delete a master record, select the Delete function, specify the group (inactive or active) and specify Cadet Master record type. The system will prompt you to enter the access key value for the record. After conducting a record search, the system will display the record for confirmation. You can scroll through the record pages by using the <PgUp> and <PgDn> keys. When you are finished viewing the record press the <Ctrl> <End> keys or page past either end of the record pages. The system will ask if you want to delete the record. Enter <Y> to delete the record or press <N> to retain. After deleting the master record, the system will delete all pay records associated with that master record.

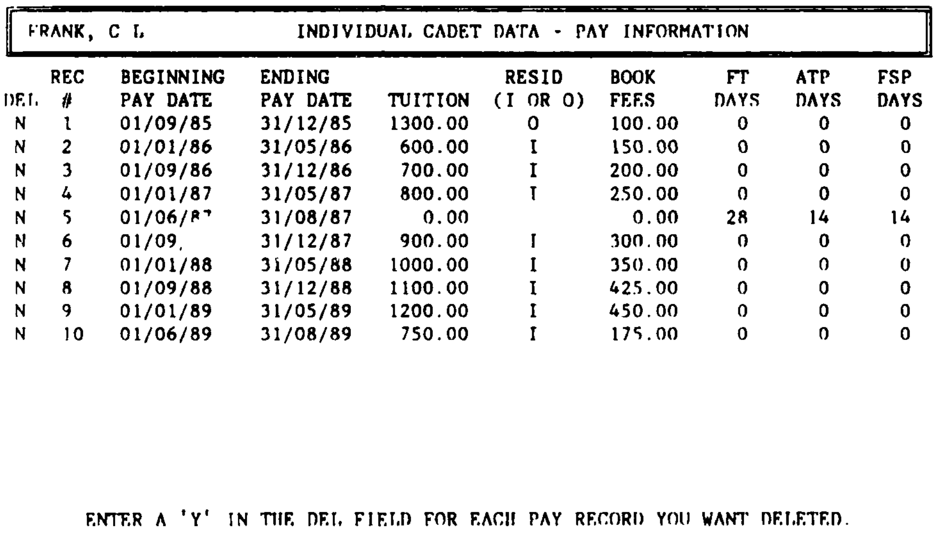


```
INDIVIDUAL CADET DATA - PERSONAL INFORMATION      (Page 1 of 4)

        SSAN  333-33-3333                 Matric #

    First Name                            Age       Sex
   Middle Name
     Last Name                           Birthdate   /  /

                             LOCAL
Street Address
          City                               Phone    -
      Zip Code      -

                           PERMANENT
Street Address
          City                               Phone (    )    -
  State          Zip Code      -
```

Figure 3.4 Deleting a Master record (from Add function)

3.2.2 PAY RECORDS.

All pay records associated with the input access key will be displayed on the same screen (see Figure 3.5). You will be prompted to enter a <Y> in the DEL field of each pay record you want to delete. When you have finished "marking" the desired pay records for deletion, press one of the following key sequences to start the deletion: <PgUp>, <PgDn>, <Esc>, or <Ctrl><End>. The system bell will sound and a ONLY DELETING "MARKED" RECORDS message will be displayed until deletion is complete.



FRANK, C L INDIVIDUAL CADET DATA - PAY INFORMATION

DEL	REC #	BEGINNING PAY DATE	ENDING PAY DATE	TUITION	RESID (I OR O)	BOOK FEES	FT DAYS	ATP DAYS	FSP DAYS
N	1	01/09/85	31/12/85	1300.00	O	100.00	0	0	0
N	2	01/01/86	31/05/86	600.00	I	150.00	0	0	0
N	3	01/09/86	31/12/86	700.00	I	200.00	0	0	0
N	4	01/01/87	31/05/87	800.00	I	250.00	0	0	0
N	5	01/06/87	31/08/87	0.00		0.00	28	14	14
N	6	01/09,	31/12/87	900.00	I	300.00	0	0	0
N	7	01/01/88	31/05/88	1000.00	I	350.00	0	0	0
N	8	01/09/88	31/12/88	1100.00	I	425.00	0	0	0
N	9	01/01/89	31/05/89	1200.00	I	450.00	0	0	0
N	10	01/06/89	31/08/89	750.00	I	175.00	0	0	0

ENTER A 'Y' IN THE DEL FIELD FOR EACH PAY RECORD YOU WANT DELETED.

Figure 3.5 Delete screen for Pay records

3.3 TRANSFERRING RECORDS.

Overall system performance can also be improved if records for disenrolled or graduated cadets are transferred to the inactive files. The system provides the capability to transfer a master record and all associated pay records. The process is very similar to deleting a master record. First, select the Transfer function and indicate the current location of the record to be transferred (active or inactive file). After entering the record access key value, the system will search for and display the record. You can scroll through the record pages by using the <PgUp> and <PgDn> keys. When you are finished viewing the record press the <Ctrl> <End> keys or page past either end of the record pages. You will also be given the option of viewing the associated pay records. The system will then ask you if you want to transfer the record. Enter <Y> to transfer or enter <N> to cancel. If you opt to transfer the record(s), the system displays advisories as it accomplishes the requested processing.

3.4 DATABASE QUERIES.

The query interface is the work horse of RCIS. It allows you to ask questions of the database without having to learn the dBASE III PLUS command language. The query input screens collect your query requirements using a simple form that allows you to set search restrictions or constraints. This means you can specify a range of values for a field to be used in the database search.

To access the query interface, select the Query function, specify the file group (active or inactive), choose a query type and select an output media. The system will then present a query input form that allows you to specify the constraints required to satisfy your question. There are six basic symbols used to specify search requirements:

a. = - Indicates you want to specify an "equal to condition" for the search. Using this symbol means "show me only those records with values equal to this condition."

b. <> - Indicates you want to specify a "not equal to condition" for the search. Using this symbol means "show me only those records with values not equal to this condition."

c. > - Indicates you want to specify a "greater than condition" for the search. Using this symbol means "show me only those records with values greater than this condition."

d. < - Indicates you want to specify a "less than condition" for the search. Using this symbol means "show me only those records with values less than this condition."

e. >= - Indicates you want to specify a "greater than or equal to condition" for the search. Using this symbol means "show me only those records with values greater than or equal to this condition."

f. <= - Indicates you want to specify a "less than or equal to condition" for the search. Using this symbol means "show me only those records with values less than or equal to this condition."

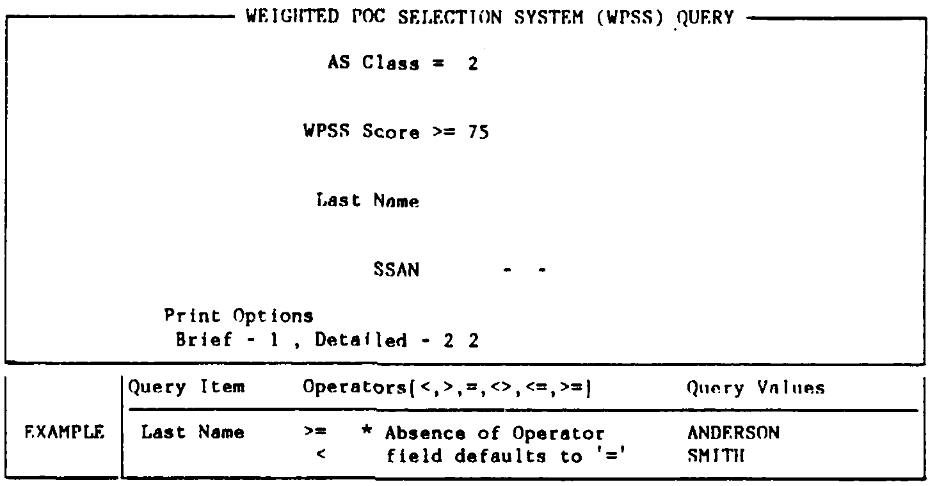
To specify a query, simply enter the appropriate symbols in the highlighted operator fields and enter the desired values in the highlighted data fields. When you are finished, press the <PgDn> key. The system will ask two questions before it processes the query. First, the system will ask you if you want to cancel your query. Enter <N> to continue or enter <Y> to cancel the query and return to the select function menu. If you choose to continue, the system will ask you if you want to make any corrections. Enter <N> to process the query or enter <Y> to return to the input form and make corrections. If you elect to submit the query, the system will then check to ensure that valid symbols were used to specify the question. If an error in symbol use is detected, you will be asked to modify the query input form. If no errors are detected, the system will process your query and display the results on the media selected for output.

Example:	The Professor of Aerospace Studies wants a detailed listing of WPSS scores (greater than or equal to 75) and related information for all sophomore cadets enrolled in the AFROTC program.
Step 1.	Select the Query function, the Active group, the WPSS Info query type and the Query Output of your choice.
Step 2.	The WPSS Query input screen will appear and you can procede to enter the required constraints for this query. Since we are only interested in sophomore cadets, we will have to constrain the AS CLASS field. In addition, we are only interested in the sophomores who have WPSS scores that are greater than or equal to 75, so, we will also have to constrain the WPSS Score field. Finally, the query requires a detailed listing so we need to enter a <2> in the Print Options field
Step 3.	Enter the constraints and options so that the query input screen looks like the one in Figure 3.6. Press the <PgDn> key when you are finished and the system will give you the opportunity to cancel the query or to make changes to your input. If you respond with a <N> for both questions, the system will attempt to process your query. If there are database records which meet your constraints, your query output will look like Figure 3.7 (80-column format) or Figure 3.8 (132-column format).

NOTE

Each of the operator field/data field constraint pairs entered on the screen will be used to form a search condition for that particular query. The system will locate only those records which satisfy all the constraints in the combined search condition, i.e. constraint 1 AND constraint 2 AND constraint 3 AND etc.

Finally, you can obtain a printed copy of screen output without selecting the printer option directly. Simply press the <Shift> <PrtSc> keys to direct screen output to the printer. Please note that you are limited to 80-column capacity when using the screen for output. The 132-column printer option will provide you with additional information associated with the particular type of query you are performing.



```
WEIGHTED POC SELECTION SYSTEM (WPSS) QUERY

AS Class =  2

WPSS Score >= 75

Last Name

SSAN       - -

Print Options
 Brief - 1 , Detailed - 2 2
```

	Query Item	Operators[<,>,=,<>,<=,>=]		Query Values
EXAMPLE	Last Name	>= <	* Absence of Operator field defaults to '='	ANDERSON SMITH

Figure 3.6 Sample Query input screen

```
                    WEIGHTED POC SELECTION SYSTEM(WPSS) REPORT

First           Last            WPSS      DC      GPA   SAT   AFOQT  AFOQT  AFOQT
Name            Name            Score     Rating  Cum   Cum   AcAp   Quan   Verb
CARTER          FRANK           103.22     7      3.50  1200  80     80     80

                               AS      AS Class   GPA   SAT   SAT    Schlr  Pilot
                               Class     Rank     Sem   Math  Verb   Type   Licns
                               3        10/  1    3.60  600   600    3.0    Y

                                                  Phys       Grad       Comm
                               DOB         Age    Date       Date       Date
                               05/10/58    28     01/03/89   01/10/86   01/10/86
--------------------------------------------------------------------------------
```

Figure 3.7 Sample Query output (80-column format)

```
                                                  WEIGHTED POC SELECTION SYSTEM(WPSS) REPORT

First                Last                 WPSS     DC      GPA   SAT   AFOQT AFOQT AFOQT AFOQT AFOQT Cat   FY            FSP
Name                 Name                 Score    Rating  Cum   Cum   AcAp  Quan  Verb  Pilot Nav   Type  Rating Major  Date
------------------------------------------------------------------------------------------------------------------------------------
CARTER               FRANK                103.22    7      3.50  1200  80    80    80    80    80    2     45     MIS      / /

                                          AS       AS Class GPA  SAT   SAT   Schlr Pilot 4-Yr  Prior Waiv
                                          Class      Rank   Sem  Math  Verb  Type  Licns Cadet Serv  Req    Race
                                          ------------------------------------------------------------------------------------------
                                          3          9/ 23  3.60 600   600   3.0   Y     N     N     N      C

                                                            Phys       Grad       Comm              Form       Corps
                                          DOB          Age  Date       Date       Date               48        Auxiliaries
                                          ------------------------------------------------------------------------------------------
                                          05/10/58     28   01/03/89   01/10/86   01/10/86          01/09/87   AA:SW:  :  :  :  :  :
------------------------------------------------------------------------------------------------------------------------------------
```

Figure 3.8 Sample Query output (132-column format)

4.0 MAINTAINING THE DATABASE.

This section discusses techniques and procedures that should be enforced to ensure the integrity of the database. These maintenance procedures include:

a. Data entry techniques.

b. Convention establishment.

c. Data audits.

d. Periodic backups.

e. Reloading the database after system disk failure.

4.1 DATA ENTRY TECHNIQUES.

The first step in ensuring the integrity of the information stored within the system is to enter it correctly initially. This is am important factor in the reliability of the database, because the computer has no idea that a cadet's social security number, for example, has been entered incorrectly. Later, when you ask the system to retrieve information using the cadet's correct social security number, it will not be able to find it. If enough data entry errors have been introduced to the system, the value of the database is compromised. Eventually, everyone will lose confidence in the system's ability to provide accurate information for their use.

While data entry is a very demanding task, it can also be a very tedious process. There are two recommendations that can help ensure that the number of entry errors are reduced or caught before moving on to the next record. First, critically review what has been entered before you commit it to the system. This simple process can help you catch typographical errors that might otherwise be entered into the system. Second, take frequent breaks. Fatigue will cause you to loose concentration. Couple this with the repetitive nature of data entry and you have a situation tha invites entry errors.

4.2 CONVENTION ESTABLISHMENT.

The second step in ensuring data integrity is to establish conventions for data entry and enforce them. A convention is simply a standardized way of entering information. For example, you might decide that the cadet's academic major (a four-character field) should be entered using standardized codes. If the same academic major is entered using different coding, the system's integrity is reduced. Essentially, the entry must be explicitly the same because computers cannot identify things in context the way that a human does. For example, the computer cannot recognize that "EENG", "EEGR", "ELEN" and "ELCE" all refer to the same academic major (Electrical Engineering).

One approach that can be taken is to create a convention book that lists the "rules" for entering data into the system. You should address the use of punctuation, abbreviations, codes and any other areas of ambiguity that can arise. Once you establish conventions, you should enforce them.

4.3 DATA AUDITS.

The third method to ensure data integrity is to accomplish a periodic data audit. This essentially means that you should obtain a listing of information in the system and examine it for typographical errors and convention violations. While there is no "hard and fast" rule governing the frequency of audits for a system, there are several general criteria that can be used. First, more frequent data audits should be performed if the data entry operatior is inexperienced. Second, if the system is frequently updated or new records are added frequently, then data audits should be more frequent. If the data entry operatior is experienced or if the database is fairly stable, then the frequency of audits can be minimized.

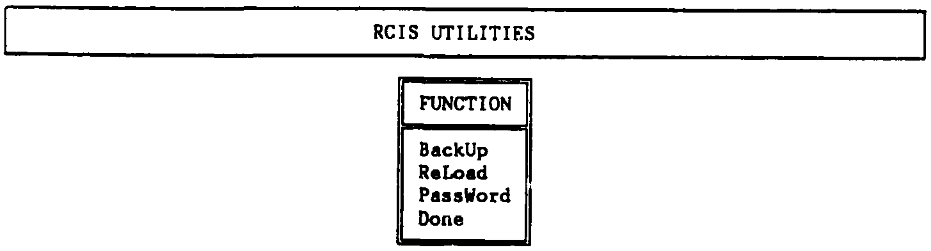
You can use the Query function to obtain listings to assist you during data audits. The advantage of using the Query function is that you can limit the number of records and fields being reviewed. For example, you can elect to audit academic data for freshman and sophomore cadets (AS_CLASS = 1 or 2) by using the SCHOLARSHIP/ACADEMIC PERFORMANCE query to limit your data output. The most important factor is that the auditor examine the data critically. If errors are detected, use the Edit function to make the required corrections.

4.4 PERIODIC BACKUPS.

Once you've expended the time and energy to enter and verify the data, you should take positive action to protect it from loss. You can do this by obtaining a backup of the entire contents of the system database files. RCIS includes a special program, RCISUTIL, that makes it very easy to obtain a full backup of essential files.

To invoke the backup utility, type DO RCISUTIL from within dBASE III PLUS. You will be presented with a menu that allows you to select either Back-up or Reload (see Figure 4.1). Select Back-up by pressing the cursor keys until the Back-up option is highlighted. Then press the <Enter> key. The system will tell you to insert a blank formatted diskette in drive A. After inserting the diskette, press any key. The program will automatically copy all required files to the backup diskette. If additional diskettes are required to obtain a full backup, the system will instruct you to insert other blank, formatted diskettes. It will continue processing until all required files have been copied.

After the backup is complete, label the diskette and enter the date of the backup. Then store the diskette in a safe place. It may be a good idea to make another backup of the system and store it in a remote location. This can prove helpful if the first backup copy is lost or destroyed.


RCIS UTILITIES

FUNCTION

BackUp
ReLoad
PassWord
Done

Figure 4.1 Database utilities menu using RCISUTIL

4.5 RELOADING THE DATABASE AFTER SYSTEM DISK FAILURE.

If there is a catastrophic failure of the system hard disk, you can recover the database by reloading the system from your backup. Once the system disk is replaced, reinstall dBASE III PLUS and the RCIS program files. Then execute the RCISUTIL program. Choose the Reload option. The system will advise you that this option will overwrite the current database. You can abort the process if you have inadvertently selected Reload. Otherwise, continue with the program. If you elect to continue, the system will ask you to enter the system password. If you enter the wrong password, the program returns to the selection menu. If you enter the correct password, the system prompts you to insert the most current backup diskette in drive A. After accomplishing this, press any key and the system will automatically copy all database files to the hard disk. if two or more diskettes were required for the backup, the system will prompt you to insert the additional diskettes.

5.0 DATABASE PROGRAM AND SUPPORT FILES.

RCIS consists of the following program files:

RCIS.PRG -	This is the main controlling RCIS program file.
RCIS_P1.PRG -	This file contains the RCIS initialization routines.
RCIS_P2.PRG -	This file contains the following RCIS function routines: Add, Edit, View, Delete and Transfer.
RCIS_P3.PRG -	This file contains all RCIS Query function routines.
RCISUTIL.PRG -	This is the main controlling program for the Backup and Reload utilities.
RCISUTL2.PRG -	This file contains the Backup and Reload function routines.

RCIS is supported by the following format files used to create the data entry and view format screens:

CDT_M.FMT

CDT_M_VU.FMT

RCIS accesses the following database and index files (where X_ symbolizes either A_ for active file or I_ for inactive file and T_ is for table files):

Database File Name	Index File Name
X_CDT_MS.DBF	X_CGDT.NDX
	X_CLAS.NDX
	X_DCFY.NDX
	X_SCHA.NDX
	X_SEDT.NDX
	X_SSAN.NDX
	X_WPSS.NDX

X_CDT_PY.DBF	X_PAY.NDX
X_CDT_CT.DBF	X_ASCL.NDX
T_CDT_HW.DBF	T_HGHT.NDX
T_CDT_RT.DBF	T_AGEC.NDX
T_CDT_WP.DBF	----------

APPENDIX

Query Input Screen

```
+---------- SCHOLARSHIP CANDIDATES/ACADEMIC PERFORMANCE QUERY ----------+
|           AS Class                         Cumulative GPA >=  .       |
|                                                                       |
|                                                AFOQT Quan >= 10       |
| Scholarship                                                           |
| Category (T, N, P)                              AFOQT Verb >= 15       |
|                                                                       |
|                                                AFOQT Pilot >= 50      |
|           Last Name                                                   |
|                                                AFOQT Nav >= 30        |
|                                                                       |
|                                            Cumulative SAT             |
|                                                                       |
+-----------------------------------------------------------------------+

+---------+-------------------------------------------------------------+
|         | Query Item   Operators[<,>,=,<>,<=,>=]       Query Values   |
|         |-------------------------------------------------------------|
| EXAMPLE |  Last Name     >=   * Absence of Operator     ANDERSON      |
|         |                 <     field defaults to '='   SMITH         |
+---------+-------------------------------------------------------------+
```

Report Formats

SCHOLARSHIP CANDIDATES/ACADEMIC PERFORMANCE REPORT

First Name	Last Name	AS Class	Cat Type	GPA Cum	SAT Cum	AFOQT Quan	Verb	Pil	Nav
CARTER	FRANK	3	2	3.50	1200	80	80	80	80

SCHOLARSHIP CANDIDATES/ACADEMIC PERFORMANCE REPORT

First Name	Last Name	AS Class	Cat Type	GPA Cum	SAT Cum	AFOQT Quan	Verb	Pil	Nav	AcAp	AFOQT Date	ACT Cum	WPSS Score	AS Class Rank	FY Rating	GPA Sem
CARTER	FRANK	3	2	3.50	1200	80	80	80	80	80	01/12/85	30	103.22	9/ 23	45	3.60

Query Input Screen

```
 ------------- DATE OF COMMISSIONING (DOC) FISCAL YEAR  QUERY ----------
|                                                                      |
|        DOC          >= 88                     Fiscal Year >= 40      |
|        Fiscal Year                            Rating                 |
|                                                                      |
|          Last Name                          Det Commander >= 6       |
|                                              Rating                  |
|                                                                      |
|               SSAN         - -                                       |
|                                                                      |
 ----------------------------------------------------------------------

 ----------------------------------------------------------------------
|          | Query Item    Operators[<,>,=,<>,<=,>=]       Query Values |
|          |------------------------------------------------------------|
| EXAMPLE  |  Last Name     >=    * Absence of Operator    ANDERSON     |
|          |                 <      field defaults to '='  SMITH        |
 ----------------------------------------------------------------------
```

Report Formats

```
                    DATE OF COMMISSIONING (DOC) FISCAL YEAR REPORT

First              Last               FY      DC     AS Class   AS     Comm
Name_______________Name_______________Rating__Rating___Rank____Class___Date________
CARTER             FRANK              45      7       9/ 23     3     Ø1/1Ø/86
```

```
                                   DATE OF COMMISSIONING (DOC) FISCAL YEAR REPORT

First        Last            FY     DC    AS Class  AS    Comm       Grad       Cat  WPSS    GPA   SAT   FT    FT
Name         Name          Rating Rating   Rank    Class  Date       Date       Type Score   Cum   Cum   Comp  Rating
CARTER       FRANK           45     7      9/ 23    3     Ø1/1Ø/86   Ø1/1Ø/86   2    1Ø3.22  3.5Ø  12ØØ   N    555.55
```

Query Input Screen

```
+---------- AIR SCIENCE CLASS GENERAL INFORMATION QUERY -----------+
|                                                                  |
|                     AS Class >= 1                               |
|                              <= 3                               |
|                                                                  |
|                Category Type    2                               |
|                                                                  |
|         Pursuing/Conditional    C                               |
|                                                                  |
|                    Last Name                                    |
|                                                                  |
|                                                                  |
|                         SSAN       -  -                         |
|                                                                  |
+------------------------------------------------------------------+

+---------+--------------------------------------------------------+
|         | Query Item    Operators[<,>,=,<>,<=,>=]   Query Values |
|         |--------------------------------------------------------|
| EXAMPLE |  Last Name     >=  * Absence of Operator  ANDERSON     |
|         |                <     field defaults to '=' SMITH       |
+---------+--------------------------------------------------------+
```

Report Formats

```
                  AIR SCIENCE CLASS GENERAL INFORMATION REPORT

First             Last               AS   Cat         Purs Schl Min  Min Min
Name______________Name_______________Class_Type__Major_Cond_Type_Math_Eng_Frl
CARTER            FRANK               3    2     MIS   P   3.Ø   N    N   N
```

```
                                AIR SCIENCE CLASS GENERAL INFORMATION REPORT

First        Last          AS    Cat        Purs Schl Min  Min Min
Name         Name          Class Type Major Cond Type Math Eng Frl SSAN         Matric Work Corps Auxiliaries
------------------------------------------------------------------------------------------------------------
CARTER       FRANK           3     2  MIS    P   3.Ø   N    N   N  111-11-1111  5Ø6291  N   AA:SW: : : : : :
```

Query Input Screen

```
┌──────── TWO-YEAR PROGRAM CANDIDATE (HORIZONTAL AXIS) QUERY ────────┐
│                        AS Class =  2                               │
│                                                                    │
│                    Category Type    3                              │
│                        Last Name                                   │
│                                                                    │
│                             SSAN        -  -                       │
└────────────────────────────────────────────────────────────────────┘

┌─────────┬──────────────────────────────────────────────────────────┐
│         │ Query Item   Operators[<,>,=,<>,<=,>=]     Query Values  │
│ EXAMPLE │ ──────────────────────────────────────────────────────── │
│         │  Last Name     >=  * Absence of Operator   ANDERSON      │
│         │                <     field defaults to '='  SMITH        │
└─────────┴──────────────────────────────────────────────────────────┘
```

Report Formats

```
                   TWO-YEAR PROGRAM CANDIDATE (HORIZONTAL AXIS) REPORT

First                Last                AS    Cat   Phys  Physical
Name                 Name                Class Type  Cat   Date      ALTU  Race
CARTER               FRANK                 3     2     2   01/03/89   N     C

                     AFOQT                               SAT                   GPA               DC
                     Quan     Verb  Pil   Nav   AcAp    Cum    Math   Verb    Cum     Sem       Rtng
                      80       80    80    80    80     1200    600    600    3.50    3.60        7
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
```

```
                              TWO-YEAR PROGRAM CANDIDATE (HORIZONTAL AXIS) REPORT

First         Last          AS    Cat  Phys Physical                  LOCAL
Name          Name          Class Type Cat  Date     ALTU Race        Street                City               Zip   Phone
CARTER        FRANK           3    2    2   01/03/89  N    C          5365 CARRIAGE HILLS   TUCSON             85746 741-0736

              AFOQT                          SAT             GPA           DC   ACT                          Form 48
              Quan  Verb Pil  Nav  AcAp      Cum  Math Verb  Cum   Sem     Rtng Cum  Math Engl NSci SSci     Date
               80    80  80   80    80       1200  600  600  3.50  3.60    7     30   30   30   30   30      01/09/87
-----------------------------------------------------------------------------------------------------------------------------
```

Query Input Screen

```
------------ GRADUATION/COMMISSIONING SUSPENSE DATES  QUERY ------------
|                                                                        |
|      AS Class    =  4                  # Days Until        >= 30       |
|                                        Commissioning Date  <= 90       |
|                                                                        |
|       Last Name                          # Days Until                  |
|                                           Graduation Date              |
|                                                                        |
|           SSAN       -  -                                              |
|                                                                        |
--------------------------------------------------------------------------
```

```
|         | Query Item     Operators[<,>,=,<>,<=,>=]            Query Values |
|         |----------------------------------------------------------------|
| EXAMPLE |  Last Name     >=   * Absence of Operator          ANDERSON    |
|         |                 <     field defaults to '='         SMITH       |
```

Report Formats

```
                GRADUATION/COMMISSIONING SUSPENSE DATES REPORT
First              Last               Comm        Grad        AS
Name_______________Name_______________Date________Date________Class___SSAN_________
CARTER             FRANK              01/10/86    01/10/86     3      111-11-1111
```

```
                              GRADUATION/COMMISSIONING SUSPENSE DATES REPORT

First        Last         Comm        Grad        AS
Name         Name         Date        Date        Class   SSAN
___________________________________________________________________________________
CARTER       FRANK        01/10/86    01/10/86     3      111-11-1111
```

Query Input Screen

```
-------------- SCHOLARSHIP EXPIRATION DATES QUERY --------------
                     AS Class >= 3


                Category Type    2

           Scholarship Type     >= 2.0
                                <= 4.0

                    Last Name


                         SSAN        -  -
```

	Query Item	Operators[<,>,=,<>,<=,>=]		Query Values
EXAMPLE	Last Name	>= <	* Absence of Operator field defaults to '='	ANDERSON SMITH

Report Formats

```
                 SCHOLARSHIP EXPIRATION DATES REPORT

First            Last             Schl Exp  Sch  Corps                     Semester
Name____________Name____________Date_____Typ__Position__________________Intrview
CARTER           FRANK            15/05/89  3.0  CORPS SGT MAJOR           01/09/87
```

```
                              SCHOLARSHIP EXPIRATION DATES REPORT

First       Last        Schl Exp  Sch  Corps              Semester  Significant
Name        Name        Date      Typ  Position           Intrview  Information
_____________________________________________________________________________________________
CARTER      FRANK       15/05/89  3.0  CORPS SGT MAJOR    01/09/87  FATHER-> VICE CMNDR FOR NATO FORCES IN EUROPE
```

Query Input Screen

```
+------------ CADET WEIGHT AND AEROBIC STANDARDS QUERY ------------+
|                                                                  |
|            AS Class >= 1                                         |
|                                                                  |
|                                                                  |
|           Last Name                                              |
|                                                                  |
|                                                                  |
|                SSAN         - -                                  |
|                                                                  |
|      Print Options                                               |
|       *Subject to constraints above*                             |
|         All Cadets - 1                                           |
|         Only Cadets in violation of standards - 2 1              |
+------------------------------------------------------------------+

+---------+--------------------------------------------------------+
|         | Query Item   Operators[<,>,=,<>,<=,>=]     Query Values |
|         |--------------------------------------------------------|
| EXAMPLE |  Last Name    >=   * Absence of Operator   ANDERSON     |
|         |               <      field defaults to '='  SMITH       |
+---------+--------------------------------------------------------+
```

Report Formats

```
                      CADET WEIGHT AND AEROBIC STANDARDS REPORT
First            Last                                Max      Min     Max Min      Max
Name____________Name___________Heigh__Weight__Weight__Weight__WT__WT__10%__RT_
CARTER           FRANK          69.25  154.00  190.25  119.00  |   |   |   |   |
                                                               |   |   |   |   |
                       AS   Cat            Run     Max         |   |   |   |   |
                      Class_Type____Age___Time___Run_Time_     |   |   |   |   |
                        3    2       28    8:30    12:00       |   |   |   |   |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~|   |   |   |   |
```

```
                                    CADET WEIGHT AND AEROBIC STANDARDS REPORT
First      Last                             Max     Min    Max Min     Max  LOCAL
Name       Name          Heigh  Weight   Weight  Weight   WT  WT  10%  RT   Street                City        Zip    Phone
CARTER     FRANK         69.25  154.00   190.25  119.00  |   |   |   |   |  5365 CARRIAGE HILLS   TUCSON      85746  741-0736
                                                         |   |   |   |   |
                AS    Cat          Run      Max          |   |   |   |   |
               Class  Type   Age   Time   Run Time       |   |   |   |   |_____________________________________________
                 3     2     28    8:30    12:00         |   |   |   |   |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~|   |   |   |   |~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
```

```
 ──────────────── INDIVIDUAL CADET QUERY ────────────────
|                                                        |
|              Enter Name or Social Security #           |
|                                                        |
|                       First Name                       |
|                      Middle Name                       |
|                        Last Name                       |
|                                                        |
|                          SSAN    -  -                  |
|                                                        |
 ────────────────────────────────────────────────────────
```

Query Input Screen

```
                         INDIVIDUAL CADET REPORT  (Press any key to continue)

First           Middle  Last                                  Birth
Name            Name    Name              SSAN        Matric  Date      Age  Sex
CARTER          LEROY   FRANK             111-11-1111 506291  05/10/58   28   M

AS  AS Class  DC   FY    FT     FT         Pil          Corps
Yr    Rank   Rtng Rtng  Rating  Cmp  ALTU  Lics  Work  Auxiliaries
 3    10/  1  7    45   555.55  N     N     Y     N    AA¦SW¦  ¦  ¦  ¦

Cat   Purs  4-Yr  Pri   Waiv  Form 48   Semester        FSP
Type  Cond  Cad.  Serv  Req   Date      Intrview  Race  Date
 2     P     N     N     N    01/09/87  01/09/87   C     /  /

                Weigh      Run   Run        Phys  Phys      Grad      Comm
Height  Weight  Date       Time  Date       Cat   Date      Date      Date
 69.25  154.00  10/10/86   8:30  10/10/86   2     01/03/89  01/10/86  01/10/86

       Schl  Schl Exp  GPA        SAT                ACT
Major  Type  Date      Cum   Sem  Cum   Math  Verb   Cum  Math  Engl  NSci  SSci
 MIS    3.0  15/05/89  3.50  3.60 1200   600   600    30   30    30    30    30

AFOQT                      AFOQT     Min Req
Quan  Verb  Pil  Nav  AcAp Date      Math  Engl  Frin
 80    80    80   80   80  01/12/85   N     N     N
```

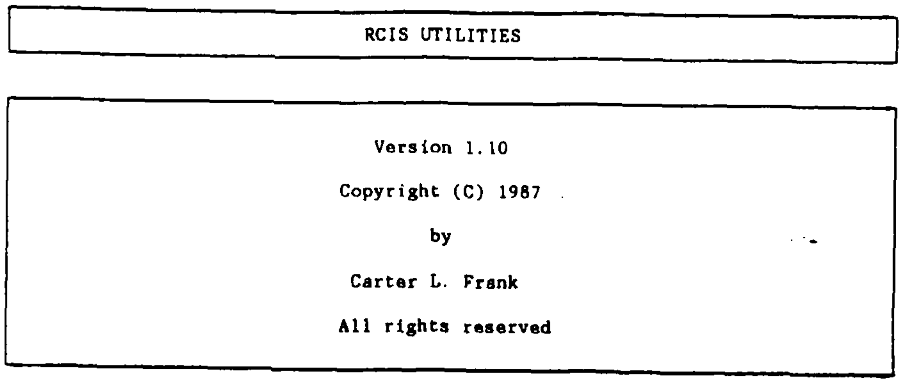
Report Format

```
 ────────────── INDIVIDUAL CADET PAY QUERY ──────────────
|                                                        |
|              Enter Name or Social Security #           |
|                                                        |
|                       First Name                       |
|                      Middle Name                       |
|                        Last Name                       |
|                                                        |
|                      SSAN 111-11-1111                  |
|                                                        |
 ────────────────────────────────────────────────────────
```

Query Input Screen

```
                     INDIVIDUAL CADET PAY REPORT  (Press any key to continue)

                                                              AS     Cat   Schl
First           Middle  Last                                                    
Name            Name    Name            SSAN         Matric  Class  Type  Type
CARTER          LEROY   FRANK           111-11-1111  506291    3      2    3.0

Pay      Start      Stop      Res                Book     FT    ATP   FSP   Num   Cum
Period  Pay Date   Pay Date   Stat   Tuition     Fees     Days  Days  Days  Days  Days
  1     01/09/85   31/12/85    0     1300.00    100.00     0     0     0    122   122
  2     01/01/86   31/05/86    I      600.00    150.00     0     0     0    151   273
  3     01/09/86   31/12/86    I      700.00    200.00     0     0     0    122   395
  4     01/01/87   31/05/87    I      800.00    250.00     0     0     0    151   546
  5     01/06/87   31/08/87             0.00      0.00    28    14    14     36   582
  6     01/09/87   31/12/87    I      900.00    300.00     0     0     0    122   704
  7     01/01/88   31/05/88    I     1000.00    350.00     0     0     0    152   856
  8     01/09/88   31/12/88    I     1100.00    425.00     0     0     0    122   978
  9     01/01/89   31/05/89    I     1200.00    450.00     0     0     0    151  1129
 10     01/06/89   31/08/89    I      750.00    175.00     0     0     0     92  1221
(Column Totals)-->                   8350.00   2400.00    28    14    14
```

Report Format


RCIS UTILITIES

Version 1.10

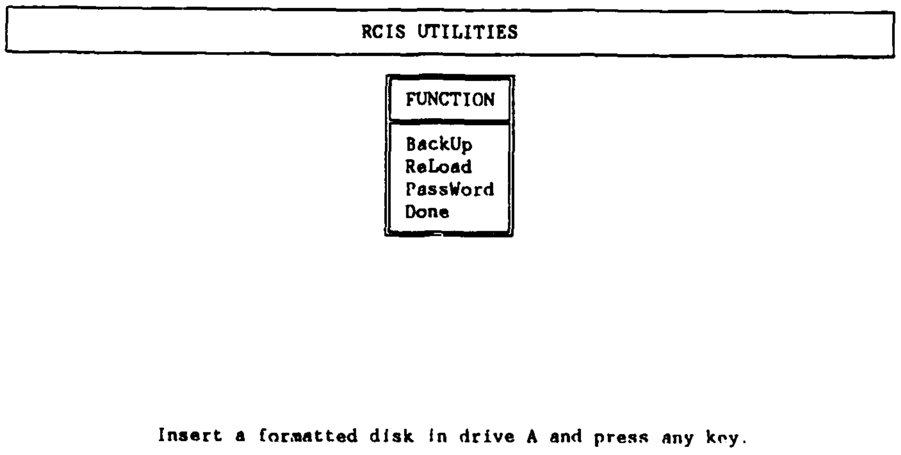
Copyright (C) 1987

by

Carter L. Frank

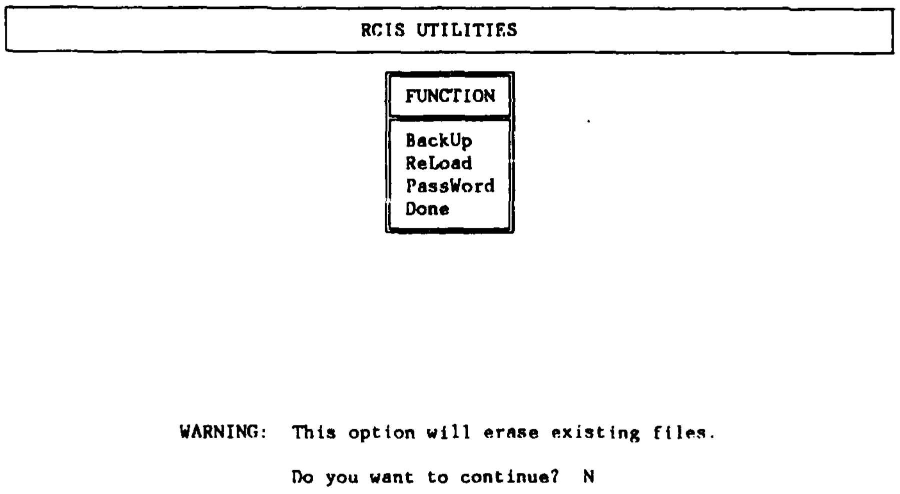
All rights reserved

Utilities
Log-on Screen


RCIS UTILITIES

Insert a formatted disk in drive A and press any key.

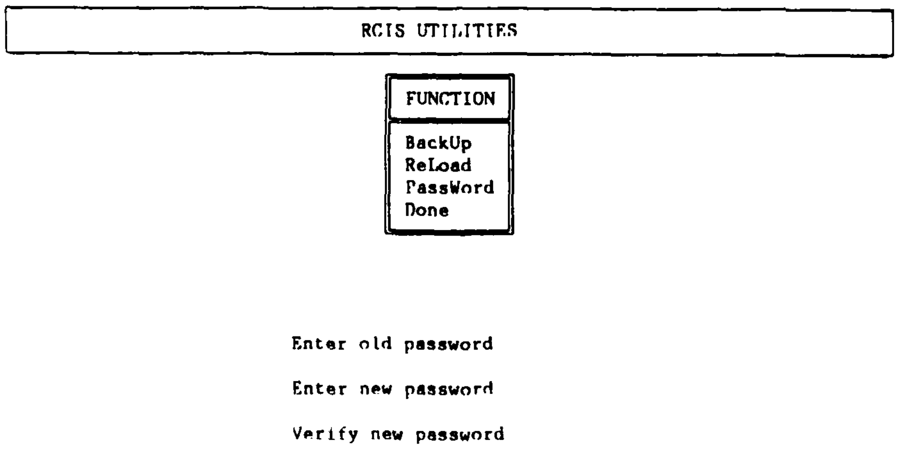
Backup
Selection
Response


RCIS UTILITIES

WARNING: This option will erase existing files.

Do you want to continue? N

Reload
Selection
Response


RCIS UTILITIES

Enter old password

Enter new password

Verify new password

Password
Selection
Response

TECHNICAL MANUAL

FOR

ROTC CADET INFORMATION SYSTEM (RCIS)

VERSION 1.10

BY

Carter L. Frank

A Report Submitted in Partial Fulfillment of the
Requirements for the Degree of Master of Science
(Management Information Systems)
in The University of Arizona

1987

Master Committee:
Dr. Sudha Ram

TABLE OF CONTENTS

TABLE OF FIGURES

1.0 INTRODUCTION.

This manual provides technical information for the ROTC Cadet Information System (RCIS) database and program source code. Section 2 focuses on the design of the database. Attachment 1 contains a copy of the documented source code for the program.

1.1 OVERVIEW.

Section 2 provides information used to ulitmately design the relations contained in the RCIS database. The section documents the activities in all four phases of the database design. Materials contained in this section include:

a. Data dictionary of attributes contained in the database.

b. Entity Relationship Diagram of the database.

c. Functional dependencies used during normalization.

d. Final relational schema and indices.

1.2 RCIS REQUIREMENTS.

RCIS was designed to be run on an IBM PC/AT or compatible under dBASE III PLUS, Version 1.1. The minimum hardware requirements for the system include:

a. 512K RAM.

b. Monochrome monitor.

c. One floppy disk drive.

d. One hard disk drive.

2.0 OVERVIEW.

This section contains documentation of the database design phases including: a data dictionary of all the attributes contained in RCIS relations, an Entity Relationship Model (ERM) of the RCIS environment, functional dependencies used to decompose and normalize the relational schema, and the final relational schemata.

2.1 DATA DICTIONARY.

AA_NUM	Type	: Numeric
	Width	: 6 Dec: 4
	Format	: 9.9999
	Remarks	: Numeric value multiplied by cadet's AFOQT Academic Aptitude score in figuring the WPSS score.
ACT_CUM	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: The cadet's cumulative ACT score.
ACT_ENGL	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: The cadet's ACT english score.
ACT_MATH	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: The cadet's ACT math score.
ACT_NSCI	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: The cadet's ACT natural science score.

```
ACT_SSCI     Type    : Numeric
             Width   : 2
             Format  : 99
             Remarks : The cadet's ACT social science score.

AFOQT_AA     Type    : Numeric
             Width   : 2
             Format  : 99
             Remarks : The cadet's AFOQT academic aptitude score.

AFOQT_DATE   Type    : Date
             Width   : 8
             Format  : 99/99/9999
             Remarks : The cadet's AFOQT test date.

AFOQT_NAV    Type    : Numeric
             Width   : 2
             Format  : 99
             Remarks : The cadet's AFOQT navigator score.

AFOQT_PLT    Type    : Numeric
             Width   : 2
             Format  : 99
             Remarks : The cadet's AFOQT pilot score.

AFOQT_QUAN   Type    : Numeric
             Width   : 2
             Format  : 99
             Remarks : The cadet's AFOQT quantitative score.

AFOQT_VERB   Type    : Numeric
             Width   : 2
             Format  : 99
             Remarks : The cadet's AFOQT verbal score.

AGE          Type    : Character
             Width   : 2
             Format  : 99
             Remarks : The cadet's age.

AGE_CAT      Type    : Character
             Width   : 1
             Format  : 9
             Remarks : The cadet's age category
                        ( 1 for < 30 yrs,  2 otherwise).
```

ALTU	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has completed the mock field training camp.
AS_CLASS	Type	: Numeric
	Width	: 1
	Format	: 9
	Remarks	: The aerospace class the cadet is enrolled in (1 = freshman, 2 = sophomore, 3 = junior, 4 = senior).
AS_CL_TOT	Type	: Numeric
	Width	: 3
	Format	: 999
	Remarks	: The total number of cadets enrolled in each specific aerospace class.
AS_RNK_POS	Type	: Numeric
	Width	: 3
	Format	: 999
	Remarks	: Aerospace studies ranking of the cadet in each aerospace studies class.
ATP_DAYS	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: Number of days the cadet attended a pilot training school.
BIRTHDATE	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Cadet's birth date.
BOOK_FEES	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: Cadet's expenses for books/notes during a specified period of time (for contract cadets only).

CAT_TYPE	Type	: Character
	Width	: 1
	Format	: PIC X
	Remarks	: Code representing the cadet's category type (M = missile, N = navigator, P = pilot, Q = nurse, R = pre-med, L = law 2 = technical, 3 = non-technical).
COM_DATE	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Cadet's commissioning date.
CORPS_AUX	Type	: Character
	Width	: 16
	Format	: XX/XX/XX/XX/XX/XX/XX/XX
	Remarks	: Two-digit codes indicating the cadet's participation in corps auxiliaries.
CORPS_POS	Type	: Character
	Width	: 25
	Format	: PIC X(25)
	Remarks	: The cadet's assigned position in the corps.
CUM_GPA	Type	: Numeric
	Width	: 4 Dec: 2
	Format	: 9.99
	Remarks	: The cadet's cumulative GPA.
DCR_NUM	Type	: Numeric
	Width	: 6 Dec: 4
	Format	: 9.9999
	Remarks	: Numeric value multiplied by cadet's Detachment Commander rating in figuring the WPSS score.
DC_RATING	Type	: Numeric
	Width	: 1
	Format	: 9
	Remarks	: The Detachment Commander's rating of each cadet.

FORM_48	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Last completion date for the cadet's most current Air Force Form 48 (degree plan).
FOUR_YR	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet is a four year AFROTC student.
FSP_DATE	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Flight screening program completion date (program for potential pilot cadets).
FSP_DAYS	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: Number of days the cadet attended the flight screening program.
FT_COMP	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has completed field training.
FT_DAYS	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: Number of days the cadet attended field training.
FT_RTNG	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: Advisor's rating of the cadet's performance at field training.

FY_RTNG	Type	:	Numeric
	Width	:	2
	Format	:	99
	Remarks	:	The cadet's fiscal year rating score.
F_NAME	Type	:	Character
	Width	:	15
	Format	:	PIC X(15)
	Remarks	:	The cadet's first name.
GPA_NUM	Type	:	Numeric
	Width	:	6 Dec: 4
	Format	:	9.9999
	Remarks	:	Numeric value multiplied by cadet's cumulative GPA in figuring the WPSS score.
GRAD_DATE	Type	:	Date
	Width	:	8
	Format	:	99/99/9999
	Remarks	:	The cadet's graduation date.
HEIGHT	Type	:	Numeric
	Width	:	5 Dec: 2
	Format	:	99.99
	Remarks	:	The cadet's height in inches and quarter inches.
LOCAL_CITY	Type	:	Character
	Width	:	20
	Format	:	PIC X(20)
	Remarks	:	City name associated with the cadet's local address.
LOCAL_PHON	Type	:	Character
	Width	:	7
	Format	:	999-9999
	Remarks	:	Cadet's local phone number.
LOCAL_STRT	Type	:	Character
	Width	:	30
	Format	:	PIC X(30)
	Remarks	:	Street name associated with cadet's local address.

LOCAL_ZIP	Type	: Character
	Width	: 9
	Format	: 99999-XXXX
	Remarks	: Zipcode associated with cadet's local address.
L_NAME	Type	: Character
	Width	: 15
	Format	: PIC X(15)
	Remarks	: Cadet's last name.
MAJOR	Type	: Character
	Width	: 4
	Format	: PIC X(4)
	Remarks	: Four-character code for the cadet's academic major.
MATRIC	Type	: Character
	Width	: 6
	Format	: 999999
	Remarks	: The cadet's six-digit matriculation number.
MAX_RT_F	Type	: Numeric
	Width	: 4
	Format	: 9999
	Remarks	: Maximum allowable time for a female cadet to run a mile and a half.
MAX_RT_M	Type	: Numeric
	Width	: 4
	Format	: 9999
	Remarks	: Maximum allowable time for a male cadet to run a mile and a half.
MAX_WT_F	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: Maximum allowable weight for a female cadet at her measured height.
MAX_WT_M	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: Maximum allowable weight for a male cadet at his measured height.

MIN_WT_F	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: Minimum allowable weight for a female cadet at her measured height.
MIN_WT_M	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: Minimum allowable weight for a male cadet at his measured height.
M_NAME	Type	: Character
	Width	: 15
	Format	: PIC X(15)
	Remarks	: The cadet's middle name.
M_R_ENGL	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has completed the minimum required english courses.
M_R_FLAN	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has completed the minimum required foreign language courses.
M_R_MATH	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has completed the minimum required math courses.
OTHER_INFO	Type	: Character
	Width	: 50
	Format	: PIC X(50)
	Remarks	: Significant information about the cadet, i.e. cadet's father is a general.

PAY_DATE1	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Beginning date for a pay period.
PAY_DATE2	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Ending date for a pay period.
PERM_CITY	Type	: Character
	Width	: 20
	Format	: PIC X(20)
	Remarks	: City name associated with the cadet's permanent address.
PERM_PHON	Type	: Character
	Width	: 10
	Format	: (999)999-9999
	Remarks	: Cadet's permanent phone number.
PERM_STAT	Type	: Character
	Width	: 2
	Format	: PIC X(2)
	Remarks	: State associated with cadet's permanent address.
PERM_STRT	Type	: Character
	Width	: 30
	Format	: PIC X(30)
	Remarks	: Street name associated with cadet's local address.
PERM_ZIP	Type	: Character
	Width	: 9
	Format	: 99999-XXXX
	Remarks	: Zipcode associated with cadet's permanent address.
PHY_CAT	Type	: Character
	Width	: 1
	Format	: PIC X
	Remarks	: The cadet's physical category type.

PHY_DATE	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: The date of the cadet's physical qualification examination.
PLT_LICENS	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has a private pilot's license.
PRIOR_SVC	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has had prior military service experience.
PC_STATUS	Type	: Character
	Width	: 1
	Format	: PIC X
	Remarks	: Code indicating whether the cadet is on pursuing [P] or conditional [S] status.
QUAN_NUM	Type	: Numeric
	Width	: 6 Dec: 4
	Format	: 9.9999
	Remarks	: Numeric value multiplied by cadet's AFOQT quantitative score in figuring the WPSS score.
RACE	Type	: Character
	Width	: 1
	Format	: PIC X
	Remarks	: Code for cadet's race.
RES_STATUS	Type	: Character
	Width	: 1
	Format	: PIC X
	Remarks	: Code for cadet's residency status, [I] for in-state, [O] for out-of-state.

RUN_DATE	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Date of the cadet's aerobics run time.
RUN_TIME	Type	: Character
	Width	: 4
	Format	: 9999
	Remarks	: The cadet's aerobics run time (first two digits are minutes, second two digits are seconds).
SAT_CUM	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: The cadet's cumulative SAT score.
SAT_MATH	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: The cadet's SAT math score.
SAT_NUM	Type	: Numeric
	Width	: 6 Dec: 4
	Format	: 9.9999
	Remarks	: Numeric value multiplied by cadet's cumulative SAT score in figuring the WPSS score.
SAT_VERB	Type	: Numeric
	Width	: 2
	Format	: 99
	Remarks	: The cadet's SAT verbal score.
SCHLR_DATE	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: The expiration date of the cadet's ROTC scholarship.
SCHLR_TYPE	Type	: Numeric
	Width	: 3 Dec: 1
	Format	: 9.9
	Remarks	: The cadet's AFROTC scholarship type, 2.5 = two and a half year scholarship.

SEM_GPA	Type	: Numeric
	Width	: 4 Dec: 2
	Format	: 9.99
	Remarks	: The cadet's most current semester GPA.
SEM_INTRVW	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Date of the cadet's most recent semester interview.
SEX	Type	: Character
	Width	: 1
	Format	: PIC X
	Remarks	: The cadet's gender.
SSAN	Type	: Character
	Width	: 9
	Format	: 999-99-9999
	Remarks	: The cadet's social security number.
TUITION	Type	: Numeric
	Width	: 7 Dec: 2
	Format	: 9999.99
	Remarks	: The cadet's tuition for a given semester (in dollars and cents).
VERB_NUM	Type	: Numeric
	Width	: 6 Dec: 4
	Format	: 9.9999
	Remarks	: Numeric value multiplied by cadet's AFOQT verbal score in figuring the WPSS score.
WAIVER_REQ	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadets has a waiver required on their physical.
WEIGHT	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: The cadet's weight in pounds and quarter pounds.

WEIGH_DATE	Type	: Date
	Width	: 8
	Format	: 99/99/9999
	Remarks	: Date the cadet's weight was measured.
WORK	Type	: Logical
	Width	: 1
	Format	: Y/N
	Remarks	: Indicates whether the cadet has a parttime job.
WPSS	Type	: Numeric
	Width	: 6 Dec: 2
	Format	: 999.99
	Remarks	: Numerical score calculated using the following data: DC_RTNG, DCR_NUM, CUM_GPA, GPA_NUM, SAT_CUM, SAT_NUM, AFOQT_AA, AA_NUM, AFOQT_QUAN, QUAN_NUM AFOQT_VERB, VERB_NUM

2.2 ENTITY RELATIONSHIP DIAGRAM.

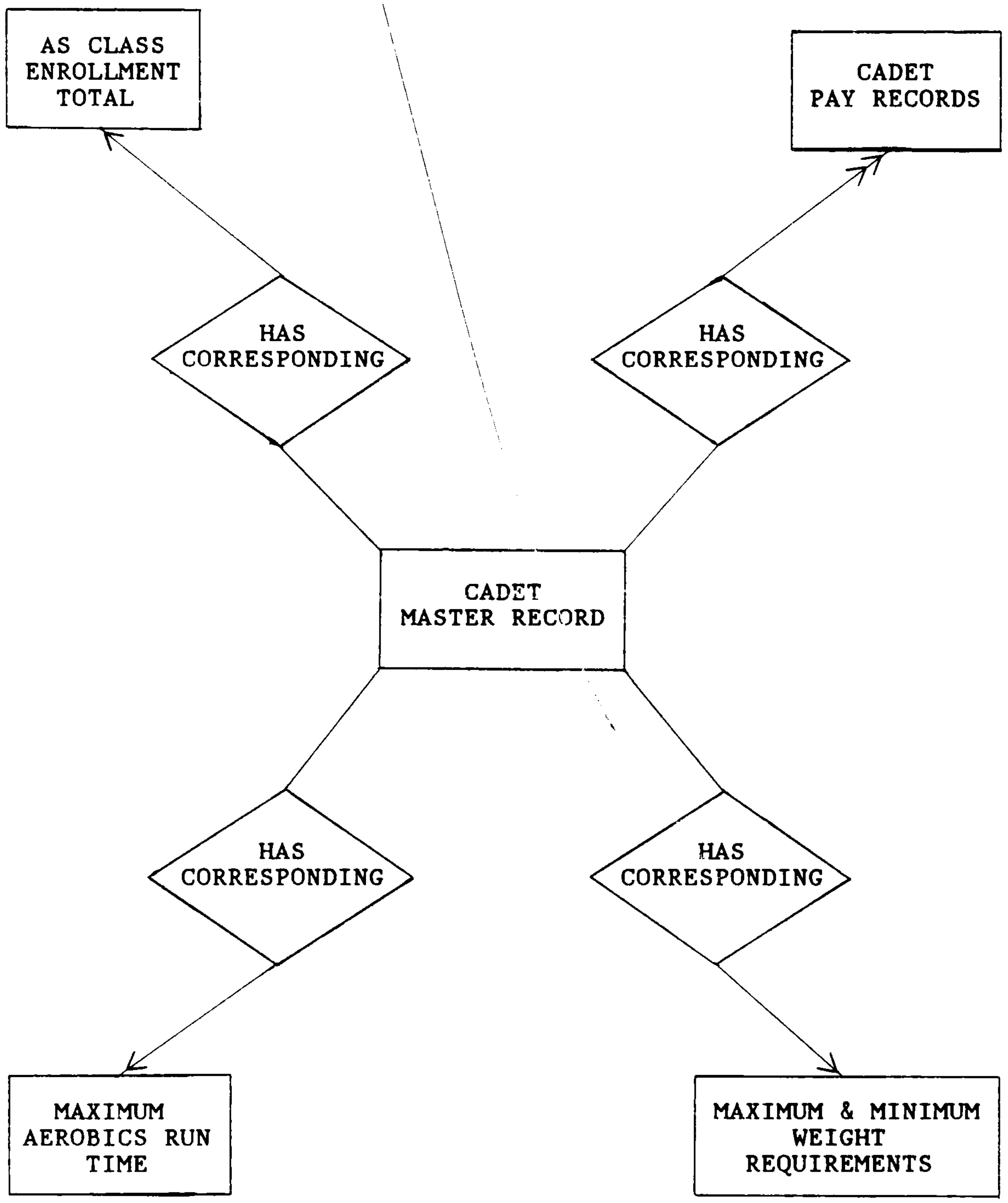


Figure 2.1 RCIS Environment

2.3 NORMALIZATION.

This section presents the functional dependencies (FDs) used to normalize RCIS relations by the decomposition approach. The notation X --> Y is used to indicate a functional relationship between the attribute X and Y. The notation X -->> Y is used to denote a multivalued dependency.

2.3.1 A_CDT_MS.DBF AND I_CDT_MS.DBF

SSAN -->	ACT_CUM	SSAN -->	L_NAME
	ACT_ENGL		MAJOR
	ACT_MATH		MATRIC
	ACT_NSCI		M_NAME
	ACT_SSCI		M_R_ENGL
	AFOQT_AA		M_R_FLAN
	AFOQT_DATE		M_R_MATH
	AFOQT_NAV		OTHER_INFO
	AFOQT_PLT		PERM_CITY
	AFOQT_QUAN		PERM_PHON
	AFOQT_VERB		PERM_STAT
	AGE		PERM_STRT
	ALTU		PERM_ZIP
	AS_CLASS		PHY_CAT
	AS_RNK_POS		PHY_DATE
	BIRTHDATE		PLT_LICENS
	CAT_TYPE		PRIOR_SVC
	COM_DATE		PC_STATUS
	CORPS_AUX		RACE
	CORPS_POS		RUN_DATE
	CUM_GPA		RUN_TIME
	DC_RTNG		SAT_CUM
	FORM_48		SAT_MATH
	FOUR_YR		SAT_VERB
	FSP_DATE		SCHLR_DATE
	FT_COMP		SCHLR_TYPE
	FT_RTNG		SEM_GPA
	FY_RTNG		SEM_INTRVW
	F_NAME		SEX
	GRAD_DATE		WAIVER_REQ
	HEIGHT		WEIGHT
	LOCAL_CITY		WEIGH_DATE
	LOCAL_PHON		WORK
	LOCAL_STRT		WPSS
	LOCAL_ZIP		

ANALYSIS: This relation is in 4NF. See the RCIS User's Guide for a discussion of the indices created to support this relation.

2.3.2 A_CDT_PY.DBF AND I_CDT_PY.DBF

```
SSAN, PAY_DATE1 --> ATP_DAYS
                    BOOK_FEES
                    FSP_DAYS
                    FT_DAYS
                    PAY_DATE2
                    RES_STATUS
                    TUITION
```

ANALYSIS: This relation is in 4NF. See the RCIS User's Guide for a discussion of the indices created to support this relation.

2.3.3 A_CDT_CT.DBF AND I_CDT_CT.DBF

```
AS_CLASS --> AS_CL_TOT
```

ANALYSIS: This relation is in 4NF. See the RCIS User's Guide for a discussion of the indices created to support this relation.

2.3.4 T_CDT_RT.DBF

```
AGE_CAT --> MAX_RT_F
            MAX_RT_M
```

ANALYSIS: This table is in 4NF. The AGE_CAT field is determined inside the program source code by using the AGE field of the relation in section 2.3.1 (AGE_CAT = 1 when AGE < 30; AGE_CAT = 2 when AGE >= 30). See the RCIS User's Guide for a discussion of the indices created to support this relation.

2.3.5 T_CDT_HW.DBF

```
HEIGHT --> MAX_WT_F
           MAX_WT_M
           MIN_WT_F
           MIN_WT_M
```

ANALYSIS: This table is in 4NF. The appropriate MAX_WT and MIN_WT are determined inside the program source code by using the SEX field of the relation in section 2.3.1 (SEX = 'F' then use MAX_WT_F and MIN_WT_F; SEX = 'M' then use MAX_WT_M and MIN_WT_M). The following FDs make up an alternate design for this table:

```
SEX, HEIGHT --> MAX_WT
                MIN_WT
```

This design would give us a relation of less degree (lower number of columns) but it would double the cardinality (twice as many rows). The decision not to use this design was based on the idea that a micro-based system normally has limited processing capabilities therefore smaller files are processed faster. See the RCIS User's Guide for a discussion of the indices created to support this relation.

2.3.6 T_CDT_WP.DBF

```
AA_NUM
DCR_NUM
GPA_NUM
QUAN_NUM
SAT_NUM
VERB_NUM
```

ANALYSIS: This table is in is not in any normal form since it has no key and is merely a convenient storage location for this one record of WPSS multiplier values.

2.4 DATABASE STRUCTURES FOR RCIS.

This section presents the final RCIS relations and identifies the primary and secondary access keys. The primary key is denoted by the symbol "$" and the secondary keys are indicated by the symbol "*". The number of bytes/record for each relation is also presented.

2.4.1 A_CDT_MS.DBF AND I_CDT_MS.DBF

474 bytes/record

$	SSAN		LOCAL_ZIP
	ACT_CUM	*	L_NAME
	ACT_ENGL		MAJOR
	ACT_MATH		MATRIC
	ACT_NSCI	*	M_NAME
	ACT_SSCI		M_R_ENGL
	AFOQT_AA		M_R_FLAN
	AFOQT_DATE		M_R_MATH
	AFOQT_NAV		OTHER_INFO
	AFOQT_PLT		PERM_CITY
	AFOQT_QUAN		PERM_PHON
	AFOQT_VERB		PERM_STAT
	AGE		PERM_STRT
	ALTU		PERM_ZIP
	AS_CLASS		PHY_CAT
	AS_RNK_POS		PHY_DATE
	BIRTHDATE		PLT_LICENS
	CAT_TYPE		PRIOR_SVC
	COM_DATE		PC_STATUS
	CORPS_AUX		RACE
	CORPS_POS		RUN_DATE
	CUM_GPA		RUN_TIME
	DC_RTNG		SAT_CUM
	FORM_48		SAT_MATH
	FOUR_YR		SAT_VERB
	FSP_DATE		SCHLR_DATE
	FT_COMP		SCHLR_TYPE
	FT_RTNG		SEM_GPA
	FY_RTNG		SEM_INTRVW
*	F_NAME		SEX
	GRAD_DATE		WAIVER_REQ
	HEIGHT		WEIGHT
	LOCAL_CITY		WEIGH_DATE
	LOCAL_PHON		WORK
	LOCAL_STRT		WPSS

2.4.2 A_CDT_PY.DBF AND I_CDT_PY.DBF

46 bytes/record

```
$ SSAN, PAY_DATE1 (Composite primary key)
  ATP_DAYS
  BOOK_FEES
  FSP_DAYS
  FT_DAYS
  PAY_DATE2
  RES_STATUS
  TUITION
```

2.4.3 A_CDT_CT.DBF AND I_CDT_CT.DBF

5 bytes/record

```
$ AS_CLASS
  AS_CL_TOT
```

2.4.4 T_CDT_RT.DBF

10 bytes/record

```
$ AGE_CAT
  MAX_RT_F
  MAX_RT_M
```

2.4.5 T_CDT_HW.DBF

30 bytes/record

```
$ HEIGHT
  MAX_WT_F
  MAX_WT_M
  MIN_WT_F
  MIN_WT_M
```

2.4.6 T_CDT_WP.DBF

37 bytes/record

AA_NUM
DCR_NUM
GPA_NUM
SAT_NUM
QUAN_NUM
VERB_NUM

ATTACHMENT 1

(SOURCE CODE LISTING)

SOURCE CODE LISTING

TABLE OF CONTENTS

SOURCE CODE LISTING

TABLE OF CONTENTS, CONTINUED

```
*------------------------------------------------------------------------*
*                        BEGINNING OF RCIS.PRG                           *
*------------------------------------------------------------------------*
*                                                                        *
* SUMMARY:                                                               *
*       RCIS.PRG is the main driver for the ROTC Cadet Information System *
*       (RCIS) developed for the executive and administrative staff at the *
*       AFROTC Detachment 020, University of Arizona.  This module ini-   *
*       tializes program variables, activates pop-up menus to determine   *
*       user processing requirements, and invokes procedures to add, edit, *
*       delete, or transfer records.  In addition, this module invokes the *
*       query facilities that allow the user to specify ad hoc database   *
*       queries using form-like query input screens.                      *
*                                                                        *
* CALLED PROCEDURES:                                                     *
*                                Procedure Name             Location     *
*                                --------------             -------------- *
*                                INIT                       RCIS_P1.PRG   *
*                                MENU                       MENU.BIN      *
*                                ADD_REC                    RCIS_P2.PRG   *
*                                EDIT_REC                   RCIS_P2.PRG   *
*                                VIEW_REC                   RCIS_P2.PRG   *
*                                DEL_REC                    RCIS_P2.PRG   *
*                                TRANS_REC                  RCIS_P2.PRG   *
*                                QUERIES                    RCIS_P3.PRG   *
*                                                                        *
* VARIABLE DECLARATIONS:                                                 *
*                                                                        *
*    Variable Name     Status                   Purpose                  *
*    -------------     ------     -----------------------------------------*
*      F_PARA          GLOBAL     Parameter for MENU.BIN that passes pop-up*
*                                 function menu descriptions and returns  *
*                                 with user selection.  A more detailed   *
*                                 discussion of this parameter is provided *
*                                 in RCIS_P1.PRG.                         *
*                                                                        *
*      G_PARA          GLOBAL     Parameter for MENU.BIN that passes pop-up*
*                                 group menu descriptions and returns with *
*                                 user selection of active or inactive data*
*                                 base.  A more detailed discussion of this*
*                                 parameter is provided in RCIS_P1.PRG.   *
*                                                                        *
*      R_PARA          GLOBAL     Parameter for MENU.BIN that passes pop-up*
*                                 record menu descriptions and returns with*
*                                 user database selection.  A more detailed*
*                                 discussion of this parameter is provided *
*                                 in RCIS_P1.PRG.                         *
*                                                                        *
*      QS_PARA         GLOBAL     Parameter for MENU.BIN that passes pop-up*
*                                 query selection menu descriptions and re-*
*                                 turns with user selection.  A more de-  *
*                                 tailed discussion of this parameter is  *
*                                 provided in RCIS_P1.PRG.                *
*                                                                        *
*      QO_PARA         GLOBAL     Parameter for MENU.BIN that passes pop-up*
*                                   query output menu descriptions and re-    *
*                                   turns with user selection.  A more de-    *
*                                   tailed discussion of this parameter is    *
*                                   provided in RCIS_P1.PRG.                  *
*                                                                             *
*       F_SELECT        GLOBAL      Holds the character indicating the func-  *
*                                   tion selected by the user.                *
*                                                                             *
*       G_SELECT        GLOBAL      Holds the character indicating the rela-  *
*                                   tion selected by the user.                *
*                                                                             *
*       R_SELECT        GLOBAL      Holds the character indicating the group  *
*                                   (active or inactive) selected by the user*
*                                                                             *
*       QS_SELECT       GLOBAL      Holds the character indicating the query  *
*                                   type selected by the user.                *
*                                                                             *
*       QO_SELECT       GLOBAL      Holds the character indicating the output*
*                                   media selected by the user.               *
*                                                                             *
*       QUIT_KEY        GLOBAL      Boolean variable that is set to TRUE if   *
*                                   the user either enters a null string or   *
*                                   presses the <Esc> key when prompted for   *
*                                   an access key.  If the variable is set to*
*                                   TRUE, the system discontinues processing *
*                                   the current function and returns to the   *
*                                   main menu.                                *
*                                                                             *
*       M_CHOICE        GLOBAL      Boolean variable used to flag desire to   *
*                                   continue with a selected processing mode.*
*                                                                             *
*       P_CHOICE        GLOBAL      Boolean variable used to flag desire to   *
*                                   add additional Pay records to the         *
*                                   selected Master record.                   *
*                                                                             *
*       VP_CHOICE       GLOBAL      Boolean variable used to flag desire to   *
*                                   view all associated Pay records for the   *
*                                   selected Master record.                   *
*                                                                             *
*       TQ_CHOICE       GLOBAL      Boolean variable used to flag desire to   *
*                                   transfer records from active to inactive *
*                                   files or vice versa.                      *
*                                                                             *
*       FILT_STR        GLOBAL      String variable used to hold filter cond-*
*                                   itions required to properly locate the    *
*                                   desired records.                          *
*                                                                             *
*       T_FOR_STR       GLOBAL      String variable used to hold secondary    *
*                                   filter conditions (in this case, name     *
*                                   variables only) required to properly lo-  *
*                                   cate the desired records.                 *
*                                                                             *
*       EMPTY_M         GLOBAL      Boolean variable used to flag the condi-  *
*                                   tion of an empty Master file.             *
*                                                                             *
*       EMPTY_P         GLOBAL     Boolean variable used to flag the condi- *
*                                  tion of an empty Pay file.               *
*                                                                           *
*       REC_NUM         GLOBAL     Used to store the database system record *
*                                  number for the record currently being    *
*                                  processed.                               *
*                                                                           *
*       DEL_FLAG        GLOBAL     Boolean variable set to TRUE when the    *
*                                  current Master record has been marked for*
*                                  deletion.                                *
*                                                                           *
*       FIRST_TIME      GLOBAL     Boolean variable used in many procedures *
*                                  when the first pass through a code seg-  *
*                                  ment requires some "first time" initial- *
*                                  izations.                                *
*                                                                           *
*       IN_SSAN         GLOBAL     Used as a holding area for the primary   *
*                                  key input by the user.                   *
*                                                                           *
*       IN_FNAM         GLOBAL     Used as a holding area for one of the    *
*                                  secondary keys input by the user.        *
*                                                                           *
*       IN_MNAM         GLOBAL     Used as a holding area for one of the    *
*                                  secondary keys input by the user.        *
*                                                                           *
*       IN_LNAM         GLOBAL     Used as a holding area for one of the    *
*                                  secondary keys input by the user.        *
*                                                                           *
*       T_PATH          GLOBAL     Used to store a code value indicating    *
*                                  whether the user would like to try an-   *
*                                  other record transfer or exit back to    *
*                                  the function select menu.                *
*                                                                           *
*       NDX_LIST        GLOBAL     String variable used to store the list of*
*                                  index files that will be updated whenever*
*                                  a record is added or deleted.            *
*                                                                           *
*       M_FILE          GLOBAL     String variable used to store the name of*
*                                  the Master file being used (no extension)*
*                                                                           *
*       P_FILE          GLOBAL     String variable used to store the name of*
*                                  the Pay file being used (no extension).  *
*                                                                           *
*       CT_FILE         GLOBAL     String variable used to store the name of*
*                                  the Enrollment totals file being used    *
*                                  (no extension).                          *
*                                                                           *
*       M_NDX           GLOBAL     String variable used to store the name of*
*                                  the primary index file for the Master    *
*                                  file (no extension).                     *
*                                                                           *
*       P_NDX           GLOBAL     String variable used to store the name of*
*                                  the primary index file for the Pay file  *
*                                  (no extension).                          *
*                                                                           *
*       CT_NDX          GLOBAL     String variable used to store the name of*
*                                  the primary index file for the Enrollment*
*                                  totals file (no extension).              *
*                                                                           *
*       M_NDX_F         GLOBAL     String variable used to store the name of*
*                                  the primary index file for the Master    *
*                                  file (with extension).                   *
*                                                                           *
*       P_NDX_F         GLOBAL     String variable used to store the name of*
*                                  the primary index file for the Pay file  *
*                                  (with extension).                        *
*                                                                           *
*       CT_NDX_F        GLOBAL     String variable used to store the name of*
*                                  the primary index file for the Enrollment*
*                                  totals file (with extension).            *
*                                                                           *
*       M_NDX_STR       GLOBAL     String variable used to hold names of the*
*                                  database variables to key on when the    *
*                                  Master file index is "set".              *
*                                                                           *
*       P_NDX_STR       GLOBAL     String variable used to hold names of the*
*                                  database variables to key on when the    *
*                                  Pay file index is "set".                 *
*                                                                           *
*       M_FORM_STR      GLOBAL     String variable used to hold the name of *
*                                  format files to be displayed when the    *
*                                  full screen edit commands are issued.    *
*                                                                           *
*       DEST_FILE       GLOBAL     String variable used to hold the text    *
*                                  name of the target file (active or       *
*                                  inactive).                               *
*                                                                           *
*       T_M_FILE        GLOBAL     String variable used to store the name of*
*                                  the target Master file being used (no    *
*                                  extension)                               *
*                                                                           *
*       T_P_FILE        GLOBAL     String variable used to store the name of*
*                                  the target Pay file being used (no       *
*                                  extension).                              *
*                                                                           *
*       T_CT_FILE       GLOBAL     String variable used to store the name of*
*                                  the target Enrollment totals file being  *
*                                  used (no extension).                     *
*                                                                           *
*       T_M_NDX         GLOBAL     String variable used to store the name of*
*                                  the primary index file for the target    *
*                                  Master file (no extension).              *
*                                                                           *
*       T_P_NDX         GLOBAL     String variable used to store the name of*
*                                  the primary index file for the target Pay*
*                                  file (no extension).                     *
*                                                                           *
*       T_CT_NDX        GLOBAL     String variable used to store the name of*
*                                  the primary index file for the target    *
*                                  Enrollment totals file (no extension).   *
*                                                                        *
*       T_M_NDX_F       GLOBAL      String variable used to store the name of*
*                                   the primary index file for the target    *
*                                   Master file (with extension).            *
*                                                                        *
*       T_P_NDX_F       GLOBAL      String variable used to store the name of*
*                                   the primary index file for the target Pay*
*                                   file (with extension).                   *
*                                                                        *
*       T_CT_NDX_F      GLOBAL      String variable used to store the name of*
*                                   the primary index file for the target    *
*                                   Enrollment totals file (with extension). *
*                                                                        *
*       LINE_NUM        GLOBAL      Variable used to keep track of the number*
*                                   of pay records that have been displayed  *
*                                   on the screen.                           *
*                                                                        *
*       DISP_LINE       GLOBAL      Variable used to hold the value which    *
*                                   corresponds to the specific line on the  *
*                                   screen where the data will be displayed. *
*                                                                        *
*       SAV_REC1 -      GLOBAL      Used to save the database record numbers *
*       SAV_REC16                   of the Pay records associated with the   *
*                                   selected Master record.                  *
*                                                                        *
*       FLAG_REC1 -     GLOBAL      Boolean variables used to indicate which *
*       FLAG_REC16                  associated Pay records the user has      *
*                                   marked for deletion.                     *
*                                                                        *
*       ED_REC_NUM      GLOBAL      Used to save the database record number  *
*                                   of the Pay record the user has selected  *
*                                   for editing.                             *
*                                                                        *
*       LOW_DATE        GLOBAL      Used to save the ending date of the pay  *
*                                   period for the Pay record which precedes *
*                                   the Pay record currently being processed.*
*                                                                        *
*       HIGH_DATE       GLOBAL      Used to save the beginning date of the   *
*                                   pay period for the Pay record which fol- *
*                                   lows the Pay record currently being pro- *
*                                   cessed.                                  *
*                                                                        *
*       GOOD_RO         GLOBAL      Boolean variable used to indicate whether*
*                                   all input relational operators are valid.*
*                                                                        *
*       BAD_SSAN        GLOBAL      Boolean variable used to indicate whether*
*                                   the input primary key is valid.          *
*                                                                        *
*       S2-S7,S17,      GLOBAL      Used as spacing variables in the print   *
*       S26,S31                     format string variables.                 *
*                                                                        *
*       DCR_VAL         GLOBAL      Used to store the value multiplied by the*
*                                   DC_RATING (database variable) in deter-  *
*                                   mining the WPSS score.                   *
*                                                                        *
*       GPA_VAL         GLOBAL     Used to store the value multiplied by the*
*                                  CUM_GPA (database variable) in deter-    *
*                                  mining the WPSS score.                   *
*                                                                           *
*       SAT_VAL         GLOBAL     Used to store the value multiplied by the*
*                                  SAT_CUM (database variable) in deter-    *
*                                  mining the WPSS score.                   *
*                                                                           *
*       AA_VAL          GLOBAL     Used to store the value multiplied by the*
*                                  AFOQT_AA (database variable) in deter-   *
*                                  mining the WPSS score.                   *
*                                                                           *
*       QUAN_VAL        GLOBAL     Used to store the value multiplied by the*
*                                  AFOQT_QUAN (database variable) in deter- *
*                                  mining the WPSS score.                   *
*                                                                           *
*       VERB_VAL        GLOBAL     Used to store the value multiplied by the*
*                                  AFOQT_VERB (database variable) in deter- *
*                                  mining the WPSS score.                   *
*                                                                           *
*       LOOP_CNTRL      LOCAL      Used to control exit from the main pro-  *
*                                  gram loop.  While TRUE, control remains  *
*                                  within the loop.  The variable is set to *
*                                  FALSE by either selecting options to re- *
*                                  turn to dBASE III or to return to DOS.   *
*                                                                           *
*---------------------------------------------------------------------------*


 PUBLIC  F_PARA
 PUBLIC  G_PARA
 PUBLIC  R_PARA
 PUBLIC  QO_PARA
 PUBLIC  QS_PARA
 PUBLIC  F_SELECT
 PUBLIC  G_SELECT
 PUBLIC  R_SELECT
 PUBLIC  QO_SELECT
 PUBLIC  QS_SELECT
 PUBLIC  QUIT_KEY
 PUBLIC  M_CHOICE
 PUBLIC  P_CHOICE
 PUBLIC  VP_CHOICE
 PUBLIC  TQ_CHOICE
 PUBLIC  FILT_STR
 PUBLIC  T_FOR_STR
 PUBLIC  EMPTY_M
 PUBLIC  EMPTY_P
 PUBLIC  REC_NUM
 PUBLIC  DEL_FLAG
 PUBLIC  FIRST_TIME
 PUBLIC  IN_SSAN
 PUBLIC  IN_FNAM
 PUBLIC  IN_MNAM
 PUBLIC  IN_LNAM
PUBLIC  T_PHON
PUBLIC  T_PATH
PUBLIC  M_FILE
PUBLIC  P_FILE
PUBLIC  CT_FILE
PUBLIC  NDX_LIST
PUBLIC  M_NDX
PUBLIC  P_NDX
PUBLIC  CT_NDX
PUBLIC  M_NDX_F
PUBLIC  P_NDX_F
PUBLIC  CT_NDX_F
PUBLIC  M_NDX_STR
PUBLIC  P_NDX_STR
PUBLIC  M_FORM_STR
PUBLIC  DEST_FILE
PUBLIC  T_M_FILE
PUBLIC  T_P_FILE
PUBLIC  T_CT_FILE
PUBLIC  T_M_NDX
PUBLIC  T_P_NDX
PUBLIC  T_CT_NDX
PUBLIC  T_M_NDX_F
PUBLIC  T_P_NDX_F
PUBLIC  T_CT_NDX_F
PUBLIC  LINE_NUM
PUBLIC  DISP_LINE
PUBLIC  SAV_REC1
PUBLIC  SAV_REC2
PUBLIC  SAV_REC3
PUBLIC  SAV_REC4
PUBLIC  SAV_REC5
PUBLIC  SAV_REC6
PUBLIC  SAV_REC7
PUBLIC  SAV_REC8
PUBLIC  SAV_REC9
PUBLIC  SAV_REC10
PUBLIC  SAV_REC11
PUBLIC  SAV_REC12
PUBLIC  SAV_REC13
PUBLIC  SAV_REC14
PUBLIC  SAV_REC15
PUBLIC  SAV_REC16
PUBLIC  FLAG_REC1
PUBLIC  FLAG_REC2
PUBLIC  FLAG_REC3
PUBLIC  FLAG_REC4
PUBLIC  FLAG_REC5
PUBLIC  FLAG_REC6
PUBLIC  FLAG_REC7
PUBLIC  FLAG_REC8
PUBLIC  FLAG_REC9
PUBLIC  FLAG_REC10
PUBLIC  FLAG_REC11
PUBLIC  FLAG_REC12
PUBLIC  FLAG_REC13
PUBLIC  FLAG_REC14
PUBLIC  FLAG_REC15
PUBLIC  FLAG_REC16
PUBLIC  ED_REC_NUM
PUBLIC  LOW_DATE
PUBLIC  HIGH_DATE
PUBLIC  GOOD_RO
PUBLIC  BAD_SSAN
PUBLIC  S2
PUBLIC  S3
PUBLIC  S4
PUBLIC  S5
PUBLIC  S6
PUBLIC  S7
PUBLIC  S17
PUBLIC  S26
PUBLIC  S31
PUBLIC  DCR_VAL
PUBLIC  GPA_VAL
PUBLIC  SAT_VAL
PUBLIC  AA_VAL
PUBLIC  QUAN_VAL
PUBLIC  VERB_VAL
PRIVATE LOOP_CNTRL

*  Start program code.  *

*  Set dBASE III PLUS status line off.  *

SET STATUS OFF

*  Set dBASE III PLUS bottom line off.  *

SET SCOREBOARD OFF

*  Display initial screen.  *

@  1, 0 TO  3,79
@  2,22 SAY 'ROTC CADET INFORMATION SYSTEM (RCIS)'
@  4, 0 TO 18,79
@  6,33 SAY 'Version 1.10'
@  8,38 SAY 'by'
@ 10,31 SAY 'Carter L. Frank'
@ 12,27 SAY 'The University of Arizona'
@ 14,18 SAY 'Department of Management Information Systems'
@ 16,31 SAY 'Copyright (C) 1987'
@ 20,29 TO 22,50 DOUBLE

*  Set video attributes to blink.  *

SET COLOR TO W*/N
@ 21,30 SAY ' INITIALIZING  RCIS '
@ 24,0
```

```
* Initialize RCIS. *

* Designate RCIS_P1.PRG as active procedure file. *

SET PROCEDURE TO RCIS_P1

* Call procedure INIT from RCIS_P1.PRG *

DO INIT
A_SELECT = ''
LOOP_CNTRL = .T.

* Restore default video attributes. *

SET COLOR TO
@ 4, 0 CLEAR TO 24,79
PROC_VAL = 0

* Main Program Loop for RCIS. *

DO WHILE (LOOP_CNTRL)

   * If the function sequence code is not "escape", reset sequence code  *
   * to start and reset function selected code to "add".                 *

   IF (SUBSTR(F_PARA,1,1) <> 'C')
      F_PARA = STUFF(F_PARA,1,1,'A')
      F_PARA = STUFF(F_PARA,6,1,'H')
   ENDIF

   * While a function has not been selected, do the following. *

   DO WHILE (SUBSTR(F_PARA,1,1) <> 'B')

      * Clear menus to the right of the function menu. *

      @ 4,19 CLEAR TO 24,79

      * Clear the text display area. *

      @ 18, 0 CLEAR TO 24,79

      * Display "Select Function" box. *

      @ 20, 1 TO 22,17
      @ 21, 2 SAY 'SELECT FUNCTION'

      * Call menu assembly routine, passing function menu parameter. *

      CALL MENU WITH F_PARA
      @ 24, 0

      * Get function choice from returned parameter. *

      F_SELECT = SUBSTR(F_PARA,6,1)
```

```
DO CASE

   *  If function selected is not "Return to dBASE" or "Exit to DOS" *
   *  continue with the following.                                    *

   CASE F_SELECT <= 'M'

        *  Initialize group menu sequence code and starting position.*

        G_PARA = STUFF(G_PARA,1,1,'A')
        G_PARA = STUFF(G_PARA,6,1,'H')

        *  While a group has not been selected, do the following: *

        DO WHILE SUBSTR(G_PARA,1,1) <> 'B'

           *  Clear text display area and display "Select Group" box.*

           @ 18, 0 CLEAR TO 24,79
           @ 20,19 TO 22,32
           @ 21,20 SAY 'SELECT GROUP'

           *  Call menu assembly routine, passing group parameter.  *

           CALL MENU WITH G_PARA
           @ 24,0

           *  Get group selected code.  *

           G_SELECT = SUBSTR(G_PARA,6,1)

           *  If no group selected, then "escape" sequence has been *
           *  pressed.  Set function sequence code to "escape" and  *
           *  exit this loop.  Control returns to select function   *
           *  loop above.                                           *

           IF SUBSTR(G_PARA,1,1) = 'A'
              F_PARA = STUFF(F_PARA,1,1,'C')
              EXIT
           ENDIF
           QS_SELECT = ''

           *  If function select is Query, continue with the  *
           *  following:                                      *

           IF (F_SELECT = 'M')

              *  Initialize query select menu sequence code and  *
              *  starting position.                              *

              QS_PARA = STUFF(QS_PARA,1,1,'A')
              QS_PARA = STUFF(QS_PARA,6,1,'H')

              *  While a query type has not been selected, do the  *
              *  following:                                        *
```

```
DO WHILE SUBSTR(QS_PARA,1,1) <> 'B'

   *  Clear text display area and display  *
   *  "Select Query" box.                  *

   @ 18, 0 CLEAR TO 24, 79
   @ 20,38 TO 22,51
   @ 21,39 SAY 'SELECT QUERY'

   *  Call menu assembly routine, passing query select *
   *  parameter.                                       *

   CALL MENU WITH QS_PARA
   @ 24,0

   *  Get query selected code.  *

   QS_SELECT = SUBSTR(QS_PARA,6,1)

   *  If no query selected, then "escape" sequence has *
   *  been pressed.  Set function sequence code to     *
   *  "escape" and exit this loop.  Control returns to *
   *  select group loop above.                         *

   IF SUBSTR(QS_PARA,1,1) = 'A'
      G_PARA = STUFF(G_PARA,1,1,'C')
      EXIT
   ENDIF

   *  Initialize query output menu sequence code and  *
   *  starting position.                              *

   QO_PARA = STUFF(QO_PARA,1,1,'A')
   QO_PARA = STUFF(QO_PARA,6,1,'H')

   *  While a query output has not been selected, do  *
   *  the following:                                  *

   DO WHILE SUBSTR(QO_PARA,1,1) <> 'B'

      *  Clear text display area and display  *
      *  "Select Output Media" box.           *

      @ 18, 0 CLEAR TO 24, 79
      @ 20,56 TO 22,76
      @ 21,57 SAY 'SELECT OUTPUT MEDIA'

      *  Call menu assembly routine, passing query  *
      *  output parameter.                          *

      CALL MENU WITH QO_PARA
      @ 24,0

      *  Get query output media code.  *
```

```
               QO_SELECT = SUBSTR(QO_PARA,6,1)

               *  If no query output selected, then "escape"    *
               *  sequence has been pressed.  Set function      *
               *  sequence code to "escape" and exit this loop.*
               *  Control returns to select query loop above.   *

               IF SUBSTR(QO_PARA,1,1) = 'A'
                  QS_PARA = STUFF(QS_PARA,1,1,'C')
                  EXIT
               ENDIF
            ENDDO
         ENDDO

      *  If function select is not Query and not Transfer,  *
      *  continue with the following:                       *

      ELSE
         IF (F_SELECT <> 'L')

            *  Initialize record menu sequence code and  *
            *  starting position.                        *

            R_PARA = STUFF(R_PARA,1,1,'A')
            R_PARA = STUFF(R_PARA,6,1,'H')

            *  While a record has not been selected, do  *
            *  the following:                            *

            DO WHILE SUBSTR(R_PARA,1,1) <> 'B'

               *  Clear text display area and display  *
               *  "Select Record" box.                 *

               @ 18, 0 CLEAR TO 24,79
               @ 20,36 TO 22,50
               @ 21,37 SAY 'SELECT RECORD'

               *  Call menu assembly routine, passing query  *
               *  output parameter.                          *

               CALL MENU WITH R_PARA
               @ 24,0

               *  Get record code.  *

               R_SELECT = SUBSTR(R_PARA,6,1)

               *  If no record selected, then "escape" sequence *
               *  has been pressed.  Set function sequence code *
               *  to "escape" and exit this loop.  Control      *
               *  returns to select group loop above.           *

               IF SUBSTR(R_PARA,1,1) = 'A'
```

```
                  G_PARA = STUFF(G_PARA,1,1,'C')
                  EXIT
               ENDIF
            ENDDO
         ENDIF
      ENDIF
   ENDDO

   *  If a function has been selected, then transfer control  *
   *  to the appropriate procedure file.                      *

   IF SUBSTR(F_PARA,1,1) = 'B'

      *  If the function selected was either "Add" or "Edit",  *
      *  then pull in the WPSS multiplier values to be used by *
      *  those functions.                                      *

      IF (F_SELECT = 'H')  .OR.  (F_SELECT = 'I')
         SELECT 1
         USE T_CDT_WP
         GO TOP
         DCR_VAL  = DCR_NUM
         GPA_VAL  = GPA_NUM
         SAT_VAL  = SAT_NUM
         AA_VAL   = AA_NUM
         QUAN_VAL = QUAN_NUM
         VERB_VAL = VERB_NUM
         SELECT 1
         USE
      ENDIF

      *  If the function selected was previous to "Query" and  *
      *  and RCIS_P2.PRG is not the active procedure file,     *
      *  designate RCIS_P2.PRG as active and clear the bottom  *
      *  of the screen.                                        *

      IF ((F_SELECT <= 'L')  .AND.  (PROC_VAL <> 2))
         SET PROCEDURE TO RCIS_P2
         PROC_VAL = 2
         @ 18, 0 CLEAR TO 24,79
         @ 21,33 SAY 'OPENING FILES'
         @ 24, 0
      ENDIF
      DO CASE
         CASE F_SELECT = 'H'
              DO ADD_REC
         CASE F_SELECT = 'I'
              DO EDIT_REC
         CASE F_SELECT = 'J'
              DO VIEW_REC
         CASE F_SELECT = 'K'
              DO DEL_REC
         CASE F_SELECT = 'L'
              DO TRANS_REC
         CASE F_SELECT = 'M'
```

```
                                 @ 18, 0 CLEAR TO 24,79
                                @ 23,18 SAY 'BUILDING QUERY INPUT MENU.  PLEASE WAIT.'
                                 @ 24, 0

                                 *  If the function selected was "Query" and       *
                                 *  RCIS_P3.PRG is not the active procedure file,  *
                                 *  designate RCIS_P3.PRG as active and call query *
                                 *  main driver procedure.                         *

                                 IF (PROC_VAL <> 3)
                                    SET PROCEDURE TO RCIS_P3
                                    PROC_VAL = 3
                                 ENDIF
                                 DO QUERIES
                           ENDCASE
                        ENDIF

                    *  If either "Exit to dBASE" or "Exit to DOS" was selected, then *
                    *  exit the main control loop.                                   *

                    CASE (F_SELECT = 'N') .OR. (F_SELECT = 'O')
                         LOOP_CNTRL = .F.
                         EXIT
              ENDCASE
           ENDDO
        ENDDO

        *  Decouple MENU.BIN from the program.  *

        RELEASE MODULE MENU

        *  If "Exit to dBASE" was selected, restore initial dBASE environment.  *
        *  Otherwise return to DOS.                                             *

        IF F_SELECT = 'N'
           SET CONFIRM OFF
           SET SCOREBOARD ON
           SET TALK ON
           SET ESCAPE ON
           SET SAFETY ON
           SET BELL ON
           SET STATUS ON
           CLEAR ALL
        ELSE
           CLEAR ALL
           QUIT
        ENDIF

       *  End of Main Program.  *

       RETURN
```

```
*----------------------------------------------------------------------*
*                   BEGINNING OF RCIS_P1.PRG                           *
*----------------------------------------------------------------------*
*----------------------------------------------------------------------*
*                              INIT                                    *
*----------------------------------------------------------------------*
*                                                                      *
* SUMMARY:                                                             *
*       INIT is the main initialization procedure for RCIS.  It calls  *
*       routines that initialize variables accessed by the RCIS main   *
*       program.                                                       *
*                                                                      *
* CALLED PROCEDURES:                                                   *
*                             Procedure Name         Location          *
*                             --------------         --------------    *
*                             SET_MENU               RCIS_P1.PRG       *
*                             BOX_CHAR               RCIS_P1.PRG       *
*                             F_MENU                 RCIS_P1.PRG       *
*                             G_MENU                 RCIS_P1.PRG       *
*                             R_MENU                 RCIS_P1.PRG       *
*                             QS_MENU                RCIS_P1.PRG       *
*                             QO_MENU                RCIS_P1.PRG       *
*                                                                      *
*----------------------------------------------------------------------*


PROCEDURE INIT
*
DO SET_MENU
DO BOX_CHAR
DO F_MENU
DO G_MENU
DO R_MENU
DO QS_MENU
DO QO_MENU
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                  SET_MENU                                   *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       The SET_MENU procedure establishes the application program            *
*       environment.  The environment includes the following features:       *
*                                                                             *
*         1.  Deleted records are not displayed.                              *
*         2.  The user must press enter to "confirm" input is complete.       *
*         3.  Date variables do not display the century.                      *
*         4.  The system bell is turned off.                                  *
*         5.  Interactive system messages are turned off.                     *
*         6.  Files will be overwritten without system warning prompts.       *
*         7.  The assembly routine, MENU.BIN, is coupled to the program as    *
*             a callable subroutine.                                          *
*                                                                             *
*-----------------------------------------------------------------------------*

PROCEDURE SET_MENU
*
SET DELETED OFF
SET CONFIRM ON
SET CENTURY OFF
SET BELL OFF
SET TALK OFF
SET ESCAPE OFF
SET SAFETY OFF
SET DATE BRITISH
LOAD MENU
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                                  BOX_CHAR                                 *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*         The BOX_CHAR procedure initializes variables that define the      *
*         special graphics characters used to create the menu boxes         *
*         imbedded in the parameter string passed to MENU.BIN.              *
*                                                                           *
* VARIABLE DECLARATIONS:                                                    *
*                                                                           *
*     Variable Name    Status                    Purpose                    *
*     -------------    ------    ---------------------------------------- *
*       TL_BOX         GLOBAL    Defines top left corner of menu box.       *
*                                                                           *
*       TR_BOX         GLOBAL    Defines top right corner of menu box.      *
*                                                                           *
*       BL_BOX         GLOBAL    Defines bottom left corner of menu box.    *
*                                                                           *
*       BR_BOX         GLOBAL    Defines bottom right corner of menu box.   *
*                                                                           *
*       LM_BOX         GLOBAL    Defines left T-bar used to separate the    *
*                                menu title from the menu body.             *
*                                                                           *
*       RM_BOX         GLOBAL    Defines right T-bar used to separate the   *
*                                menu title from the menu body.             *
*                                                                           *
*       V_BAR          GLOBAL    Defines a vertical bar.                    *
*                                                                           *
*       X_BAR          GLOBAL    Defines 5 character double horizontal bar*
*                                                                           *
*       X_BAR1         GLOBAL   Defines 10 character double horizontal bar*
*                                                                           *
*       X_BAR2         GLOBAL   Defines 12 character double horizontal bar*
*                                                                           *
*       X_BAR3         GLOBAL   Defines 14 character double horizontal bar*
*                                                                           *
*       X_BAR4         GLOBAL   Defines 15 character double horizontal bar*
*                                                                           *
*       X_BAR5         GLOBAL   Defines 17 character double horizontal bar*
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE BOX_CHAR
*
PUBLIC TL_BOX
PUBLIC TR_BOX
PUBLIC BL_BOX
PUBLIC BR_BOX
PUBLIC LM_BOX
PUBLIC RM_BOX
PUBLIC V_BAR
PUBLIC X_BAR
PUBLIC X_BAR1
PUBLIC X_BAR2
PUBLIC X_BAR3
PUBLIC X_BAR4
PUBLIC X_BAR5
*
* ASSIGN SPECIAL GRAPHICS CHARACTERS
*
TL_BOX  = CHR(201)
TR_BOX  = CHR(187)
BL_BOX  = CHR(200)
BR_BOX  = CHR(188)
LM_BOX  = CHR(204)
RM_BOX  = CHR(185)
V_BAR   = CHR(186)
X_BAR   = CHR(205) + CHR(205) + CHR(205) + CHR(205) + CHR(205)
X_BAR1  = X_BAR + X_BAR
X_BAR2  = X_BAR1 + CHR(205) + CHR(205)
X_BAR3  = X_BAR2 + CHR(205) + CHR(205)
X_BAR4  = X_BAR3 + CHR(205)
X_BAR5  = X_BAR4 + CHR(205) + CHR(205)
*
RETURN
```

```
*--------------------------------------------------------------------------*
*                                 F_MENU                                   *
*--------------------------------------------------------------------------*
*                                                                          *
* SUMMARY:                                                                 *
*       The F_MENU procedure initializes the string parameter, F_PARA,    *
*       that is passed to MENU.BIN to create the function menu.  The      *
*       string parameter consists of two parts.  The first seven charac-  *
*       ters constitute a header that provides control information for the*
*       assembly routine.  These control functions are discussed in detail*
*       within the VARIABLE DECLARATION section that follows.  The remain-*
*       ing characters (up to 237) constitute text data that represents   *
*       the actual menu box that will be displayed by the assembly menu   *
*       driver routine.                                                    *
*                                                                          *
* VARIABLE DECLARATIONS:                                                   *
*                                                                          *
*    Variable Name     Status                   Purpose                    *
*    -------------     ------    --------------------------------------*
*      SEQ_1           LOCAL     The first character of the header is the *
*                                sequence code.  The menu driver responds *
*                                to the following codes:                  *
*                                                                          *
*                                 A = Initial sequence. Paint the menu and*
*                                     accept user input.  If this code is *
*                                     returned from MENU.BIN, it means the*
*                                     user pressed the <Esc> key to abort *
*                                     menu selection.  In this event, a   *
*                                     "roll back" to the previous menu is *
*                                     initiated.                           *
*                                                                          *
*                                 B = This code is returned when a menu   *
*                                     selection was made by the user.  If *
*                                     this code is sent to MENU.BIN, the  *
*                                     menu box is repainted and an early  *
*                                     exit is made without accepting user *
*                                     input.                               *
*                                                                          *
*                                 C = This code is sent to MENU.BIN to    *
*                                     signal a "roll back" to a previous  *
*                                     menu.  The menu driver will erase   *
*                                     menu frames to the right of the     *
*                                     current menu, and new user input is *
*                                     accepted.                            *
*                                                                          *
*      ACT_1           LOCAL     The second character in the header is the*
*                                active menu flag.  It is used by MENU.BIN*
*                                to determin whether "roll back" will be  *
*                                recognized by pressing the <Esc> key.    *
*                                The only menu that does not permit       *
*                                "roll back" is the function menu. Setting*
*                                this flag to A indicates the "roll back" *
*                                is disabled.                              *
*                                                                          *
*      SROW_1          LOCAL     The third character in the header is the *
*                                             row to start the menu box.  The value is *
*                                             computed relative to A = 0.              *
*                                                                                      *
*       SCOL_1          LOCAL                 The fourth character in the header is the*
*                                             column to start the menu box.  Its value *
*                                             is also computed relative to A = 0.      *
*                                                                                      *
*       BROW_1          LOCAL                 The fifth character in the header is the *
*                                             bottom row of the menu box.  Its value is*
*                                             also computed relative to A = 0.         *
*                                                                                      *
*       AROW_1          LOCAL                 The sixth character in the header is the *
*                                             row that was active when the user either *
*                                             pressed the <Enter> key for selecting a  *
*                                             function or pressed the <Esc> key to     *
*                                             abort the current menu.  By inspection   *
*                                             this position, the program can determine *
*                                             the menu item that the user selected.    *
*                                                                                      *
*       SLEN_1          LOCAL                 The seventh character in the header is   *
*                                             the menu field width(or character length)*
*                                             Total width includes the two graphic box *
*                                             characters.  The value is also computed  *
*                                             relative to A = 0.                       *
*                                                                                      *
*--------------------------------------------------------------------------------------*

PROCEDURE F_MENU
*
* ASSIGN FUNCTION MENU PARAMETER
*
PRIVATE SEQ_1
PRIVATE ACT_1
PRIVATE SROW_1
PRIVATE SCOL_1
PRIVATE BROW_1
PRIVATE AROW_1
PRIVATE SLEN_1
*
SEQ_1   = CHR(65 +  0)
ACT_1   = CHR(64 +  1)
SROW_1  = CHR(65 +  4)
SCOL_1  = CHR(65 +  4)
BROW_1  = CHR(65 + 15)
AROW_1  = CHR(65 +  7)
SLEN_1  = CHR(65 + 12)
*
F_PARA = SEQ_1 + ACT_1 + SROW_1 + SCOL_1 + BROW_1 + AROW_1 + SLEN_1
F_PARA = F_PARA + TL_BOX + X_BAR1 + TR_BOX
F_PARA = F_PARA + V_BAR  + ' FUNCTION ' + V_BAR
F_PARA = F_PARA + LM_BOX + X_BAR1 + RM_BOX
F_PARA = F_PARA + V_BAR  + ' Add       ' + V_BAR
F_PARA = F_PARA + V_BAR  + ' Edit      ' + V_BAR
F_PARA = F_PARA + V_BAR  + ' View      ' + V_BAR
F_PARA = F_PARA + V_BAR  + ' Delete    ' + V_BAR
F_PARA = F_PARA + V_BAR  + ' Transfer ' + V_BAR
F_PARA = F_PARA + V_BAR  + ' Query    ' + V_BAR
F_PARA = F_PARA + V_BAR  + ' dBASE    ' + V_BAR
F_PARA = F_PARA + V_BAR  + ' Exit     ' + V_BAR
F_PARA = F_PARA + BL_BOX + X_BAR1 + BR_BOX
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                 G_MENU                                      *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*         The G_MENU procedure initializes the string parameter, G_PARA,      *
*         that is passed to MENU.BIN to create the group menu.  The string    *
*         parameter construction is identical to that specified in F_MENU     *
*         for the function menu.                                              *
*                                                                             *
*-----------------------------------------------------------------------------*

PROCEDURE G_MENU
*
* ASSIGN GROUP MENU PARAMETERS
*
PRIVATE SEQ_1
PRIVATE ACT_1
PRIVATE SROW_1
PRIVATE SCOL_1
PRIVATE BROW_1
PRIVATE AROW_1
PRIVATE SLEN_1
*
SEQ_1   = CHR(65 +  0)
ACT_1   = CHR(64 +  2)
SROW_1  = CHR(65 +  4)
SCOL_1  = CHR(65 + 20)
BROW_1  = CHR(65 +  9)
AROW_1  = CHR(65 +  7)
SLEN_1  = CHR(65 + 12)
*
G_PARA = SEQ_1 + ACT_1 + SROW_1 + SCOL_1 + BROW_1 + AROW_1 + SLEN_1
G_PARA = G_PARA + TL_BOX + X_BAR1 + TR_BOX
G_PARA = G_PARA + V_BAR  + '  GROUPS  ' + V_BAR
G_PARA = G_PARA + LM_BOX + X_BAR1 + RM_BOX
G_PARA = G_PARA + V_BAR  + ' Active    ' + V_BAR
G_PARA = G_PARA + V_BAR  + ' Inactive ' + V_BAR
G_PARA = G_PARA + BL_BOX + X_BAR1 + BR_BOX
*
RETURN
```

```
*------------------------------------------------------------------------------*
*                                 R_MENU                                       *
*------------------------------------------------------------------------------*
*                                                                              *
* SUMMARY:                                                                     *
*         The R_MENU procedure initializes the string parameter, R_PARA,       *
*         that is passed to MENU.BIN to create the group menu.  The string     *
*         parameter construction is identical to that specified in F_MENU      *
*         for the function menu.                                               *
*                                                                              *
*------------------------------------------------------------------------------*

PROCEDURE R_MENU
*
* ASSIGN RECORD MENU PARAMETERS
*
PRIVATE SEQ_1
PRIVATE ACT_1
PRIVATE SROW_1
PRIVATE SCOL_1
PRIVATE BROW_1
PRIVATE AROW_1
PRIVATE SLEN_1
*
SEQ_1   = CHR(65 +  0)
ACT_1   = CHR(64 +  3)
SROW_1  = CHR(65 +  4)
SCOL_1  = CHR(65 + 36)
BROW_1  = CHR(65 +  9)
AROW_1  = CHR(65 +  7)
SLEN_1  = CHR(65 + 16)
*
R_PARA = SEQ_1 + ACT_1 + SROW_1 + SCOL_1 + BROW_1 + AROW_1 + SLEN_1
R_PARA = R_PARA + TL_BOX + X_BAR3 + TR_BOX
R_PARA = R_PARA + V_BAR  + '    RECORDS     ' + V_BAR
R_PARA = R_PARA + LM_BOX + X_BAR3 + RM_BOX
R_PARA = R_PARA + V_BAR  + ' Cadet Master ' + V_BAR
R_PARA = R_PARA + V_BAR  + ' Cadet Pay    ' + V_BAR
R_PARA = R_PARA + BL_BOX + X_BAR3 + BR_BOX
*
RETURN
```

```
*----------------------------------------------------------------------*
*                              QS_MENU                                 *
*----------------------------------------------------------------------*
*                                                                      *
* SUMMARY:                                                             *
*         The QS_MENU procedure initializes the string parameter, QS_PARA, *
*         that is passed to MENU.BIN to create the group menu.  The string *
*         parameter construction is identical to that specified in F_MENU  *
*         for the function menu.                                       *
*                                                                      *
*----------------------------------------------------------------------*

PROCEDURE QS_MENU
*
* ASSIGN QUERY SELECTION MENU PARAMETERS
*
PRIVATE SEQ_1
PRIVATE ACT_1
PRIVATE SROW_1
PRIVATE SCOL_1
PRIVATE BROW_1
PRIVATE AROW_1
PRIVATE SLEN_1
*
SEQ_1   = CHR(65 +  0)
ACT_1   = CHR(64 +  4)
SROW_1  = CHR(65 +  4)
SCOL_1  = CHR(65 + 36)
BROW_1  = CHR(65 + 17)
AROW_1  = CHR(65 +  7)
SLEN_1  = CHR(65 + 17)
*
QS_PARA  = SEQ_1  + ACT_1  + SROW_1 + SCOL_1 + BROW_1 + AROW_1 + SLEN_1
QS_PARA  = QS_PARA + TL_BOX + X_BAR4 + TR_BOX
QS_PARA  = QS_PARA + V_BAR  + '  QUERY  TYPE  ' + V_BAR
QS_PARA  = QS_PARA + LM_BOX + X_BAR4 + RM_BOX
QS_PARA  = QS_PARA + V_BAR  + '   WPSS Info   ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + ' Schlrshp Qual ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + ' DOC Fiscal Yr ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + ' AS Class Info ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + ' 2-Yr Pgm Cand ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + ' Com Date Susp ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + ' Schlrshp Expr ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + ' Weigh/Aerobic ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + '  Individual   ' + V_BAR
QS_PARA  = QS_PARA + V_BAR  + '   Pay  Info   ' + V_BAR
QS_PARA  = QS_PARA + BL_BOX + X_BAR4 + BR_BOX
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                   QO_MENU                                   *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*         The QO_MENU procedure initializes the string parameter, QO_PARA,   *
*         that is passed to MENU.BIN to create the group menu.  The string   *
*         parameter construction is identical to that specified in F_MENU    *
*         for the function menu.                                              *
*                                                                             *
*-----------------------------------------------------------------------------*

PROCEDURE QO_MENU
*
* ASSIGN QUERY OUTPUT MENU PARAMETERS
*
PRIVATE SEQ_1
PRIVATE ACT_1
PRIVATE SROW_1
PRIVATE SCOL_1
PRIVATE BROW_1
PRIVATE AROW_1
PRIVATE SLEN_1
*
SEQ_1   = CHR(65 +  0)
ACT_1   = CHR(64 +  3)
SROW_1  = CHR(65 +  4)
SCOL_1  = CHR(65 + 57)
BROW_1  = CHR(65 + 10)
AROW_1  = CHR(65 +  7)
SLEN_1  = CHR(65 + 19)
*
QO_PARA = SEQ_1 + ACT_1 + SROW_1 + SCOL_1 + BROW_1 + AROW_1 + SLEN_1
QO_PARA = QO_PARA  + TL_BOX + X_BAR5 + TR_BOX
QO_PARA = QO_PARA  + V_BAR  + '  QUERY  OUTPUT  ' + V_BAR
QO_PARA = QO_PARA  + LM_BOX + X_BAR5 + RM_BOX
QO_PARA = QO_PARA  + V_BAR  + '  80-Col Screen  ' + V_BAR
QO_PARA = QO_PARA  + V_BAR  + '  80-Col Printer ' + V_BAR
QO_PARA = QO_PARA  + V_BAR  + ' 132-Col Printer ' + V_BAR
QO_PARA = QO_PARA  + BL_BOX + X_BAR5 + BR_BOX
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                          BEGINNING OF RCIS_P2.PRG                           *
*-----------------------------------------------------------------------------*
*-----------------------------------------------------------------------------*
*                                  ADD_REC                                    *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*          The ADD_REC procedure adds new records to relations within RCIS.  *
*          It ensures that duplicate records are not created by searching a  *
*          given relation for an existing primary key.  If the key does not  *
*          exist in the relation, then the record is appended and prepared   *
*          for data entry.  For adding records to subordinate relations      *
*          (ADD_PAY Procedure), the system ensures that a "master" record    *
*          for the key value exists.  If a "master" record does not exist,   *
*          the new subordinate record is not appended.  Once data entry has  *
*          begun the user can abort adding the appended record by pressing   *
*          the <Ctrl> <U> keys (Master record only).  This effectively marks*
*          the record for deletion. Once data entry has been terminated, the*
*          system checks to see if the new record is marked. If it is marked*
*          for deletion, the system asks if the record should be deleted.    *
*                                                                             *
* CALLED PROCEDURES:                                                          *
*                                Procedure Name         Location              *
*                                --------------         -------------         *
*                                DB3_ERR                RCIS_P2.PRG           *
*                                SET_UP                 RCIS_P2.PRG           *
*                                INIT_DB                RCIS_P2.PRG           *
*                                BLD_NDX                RCIS_P2.PRG           *
*                                HGHT_CHK               RCIS_P2.PRG           *
*                                RCIS_HDR               RCIS_P2.PRG           *
*                                D_PROMPT               RCIS_P2.PRG           *
*                                ADD_PAY                RCIS_P2.PRG           *
*                                ERR_RE                 RCIS_P2.PRG           *
*                                ERR_NF                 RCIS_P2.PRG           *
*                                M_PROMPT               RCIS_P2.PRG           *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE ADD_REC
*
 ON ERROR DO DB3_ERR WITH ERROR(), MESSAGE()
 M_CHOICE = .T.
 FIRST_TIME = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *
 *  Loop until user chooses to terminate this Add function mode.    *

 DO WHILE (M_CHOICE)
    DO SET_UP

    *  If the user has pressed the <Esc> key, exit this function and  *
    *  return to the select function menu.                             *
```

```
IF (QUIT_KEY)
   EXIT
ENDIF
DO INIT_DB
SELECT 1
IF (EMPTY_M)
   DO CASE

      *  If the Master file is empty and the user has selected a  *
      *  Master record for processing, build the index list and   *
      *  continue processing the users database request.          *

      CASE  R_SELECT = 'H'
            IF (.NOT. FILE(M_NDX_F))
               INDEX ON &M_NDX_STR TO &M_NDX
            ENDIF
            DO BLD_NDX WITH M_NDX
            SET INDEX TO &NDX_LIST

      *  If the Master file is empty and the user has selected a  *
      *  Pay record for processing, automatically exit this func- *
      *  tion and return to the select function menu.             *

      CASE  R_SELECT = 'I'
            @ 22, 0
            ? CHR(7)
            @ 23, 4 SAY 'MASTER FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
            WAIT ''
            EXIT
   ENDCASE
ENDIF
SET FILTER TO &FILT_STR

*  Issue dBASE III PLUS command to go to the record which matches  *
*  the primary key value.                                          *

SEEK IN_SSAN
DO CASE

   *  If a matching Master record is found, set up the screen format *
   *  and prepare all files required to process the record display.  *

   CASE EOF()
        DO CASE

           *  If the user has selected to process a Master record,   *
           *  issue the dBASE III PLUS commands that coordinate the  *
           *  interaction between the supporting files and the main  *
           *  file.                                                  *

           CASE  R_SELECT = 'H'
                 @ 22, 0
                 @ 23, 0
                 @ 23,20 SAY 'PREPARING DATABASE FILE FOR NEW RECORD.'
                 SET FORMAT TO &M_FORM_STR
        APPEND BLANK
        REC_NUM = RECNO()
        REPLACE SSAN WITH IN_SSAN
        SET SCOREBOARD ON
        SET ESCAPE OFF
        SET CONFIRM OFF
        CLAS_NUM = ' ? '

        *  Issue 'CHANGE' command to display the record data. *

        CHANGE
        SET CONFIRM ON
        GOTO REC_NUM
        IF PERM_STRT = 'SAME'
            REPLACE PERM_STRT WITH LOCAL_STRT
            REPLACE PERM_CITY WITH LOCAL_CITY
            REPLACE PERM_STAT WITH 'AZ'
            REPLACE PERM_ZIP  WITH LOCAL_ZIP
            T_PHON = '602' + LOCAL_PHON
            REPLACE PERM_PHON WITH T_PHON
        ENDIF
    REPLACE WPSS WITH ((DC_RTNG*DCR_VAL)+(CUM_GPA*100.00*GPA_VAL);
      + (SAT_CUM*SAT_VAL)+(AFOQT_AA*AA_VAL)+(AFOQT_QUAN*QUAN_VAL);
      + (AFOQT_VERB*VERB_VAL))
        DO HGHT_CHK
        IN_FNAM = F_NAME
        IN_MNAM = M_NAME
        IN_LNAM = L_NAME
        DO RCIS_HDR

        *  If Master record was deleted by pressing the   *
        *  <Ctrl> <U> keys, then prompt the user to see   *
        *  if they really want to delete the record.  If  *
        *  they do, delete it; if not, recall is back to  *
        *  current status.                                *

        IF DELETED()
           DO D_PROMPT
           IF P_CHOICE
              @ 23, 0
              @ 23,23 SAY 'DELETING MASTER RECORD'
              PACK
              DEL_FLAG = .T.
           ELSE
              RECALL RECORD REC_NUM
              P_CHOICE = .T.
              GOTO REC_NUM
           ENDIF
        ENDIF
        IF (.NOT. DEL_FLAG)
           CLAS_VAL = AS_CLASS
           SET FILTER TO
           COUNT FOR AS_CLASS = CLAS_VAL TO CLAS_TOT
*
           SELECT 3
```

```
                  SEEK CLAS_VAL
                  IF (.NOT. EOF())
                     REPLACE AS_CL_TOT WITH CLAS_TOT
                  ENDIF
               ENDIF
               IF (.NOT. DELETED())  .AND.  (.NOT. DEL_FLAG)
                  DO P_PROMPT
                  IF (P_CHOICE)
                     DO ADD_PAY
                  ENDIF
               ENDIF

           *  If a Master record was not found for the input primary *
           *  key and the user has selected a Pay record for pro-    *
           *  cessing, prompt the user to either try again or to     *
           *  exit this function.                                    *

          CASE R_SELECT = 'I'
               @ 22, 0
               @ 23, 4 SAY 'MASTER '
               DO ERR_NF
               IF (M_CHOICE)
                  LOOP
               ELSE
                  EXIT
               ENDIF
       ENDCASE
*
   CASE (.NOT. EOF())
       DO CASE

          *  If a matching Master record is found and the user has  *
          *  selected a Master record for processing, prompt the    *
          *  user to either try again or to exit the function.      *

          CASE (R_SELECT = 'H')
               DO ERR_RE
               IF (M_CHOICE)
                  LOOP
               ELSE
                  EXIT
               ENDIF

          *  If a matching Master record is found and the user has    *
          *  selected a Pay record for processing, invoke the ADD_PAY *
          *  procedure and continue processing the user's request.    *

          CASE (R_SELECT = 'I')
               IN_FNAM = F_NAME
               IN_MNAM = M_NAME
               IN_LNAM = L_NAME
               @ 22, 0
               @ 23, 0
           @ 23,20 SAY 'SEARCHING DATABASE FILE FOR EXISTING PAY RECORDS.'
               DO ADD_PAY
```

```
            ENDCASE
        ENDCASE

        *  Give the user the opportunity to execute this function again.  *

        DO M_PROMPT
     ENDDO

     *  Close the database files used in this function.  *

     SELECT 3
     USE
     SELECT 2
     USE
     SELECT 1
     USE
     CLOSE FORMAT
    *
     F_PARA = STUFF(F_PARA,1,1,'C')
     @ 21, 0
     ON ERROR
    *
    RETURN
```

```
*----------------------------------------------------------------------------*
*                                  ADD_PAY                                   *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*         The ADD_PAY procedure adds new subordinate (Pay) records to rela-*
*         tions within RCIS.  This procedure is controlled by the ADD_REC  *
*         procedure and is only envoked after the controlling procedure has*
*         determined that all required conditions have been met.  This pro-*
*         cedure edit checks the pay date periods to ensure they don't over*
*         lap and it allows the user to add up to 16 (maximum) Pay records *
*         to any one Master record.  This procedure is terminated when the *
*         user enters a <N> in the ADD field displayed on the screen.      *
*                                                                            *
* CALLED PROCEDURES:                                                         *
*                               Procedure Name           Location           *
*                               --------------           --------------     *
*                               RCIS_HDR                 RCIS_P2.PRG        *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*    Variable Name     Status                     Purpose                   *
*    -------------     ------     ---------------------------------------*
*      END_DATE        LOCAL      Used to save the ending pay date from the*
*                                 previous pay period so it can be compared*
*                                 to the current beginning date.            *
*                                                                            *
*      ADD_MORE        LOCAL      Boolean flag which indicates whether to  *
*                                 add the input pay record or to terminate *
*                                 the add and the procedure.                *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE ADD_PAY
*
 PRIVATE END_DATE
 PRIVATE ADD_MORE
*
 SELECT 2

 *  If the Pay file is empty, set up the index file and    *
 *  continue processing the users database request.        *

 IF (EMPTY_P)
    IF (.NOT. FILE(P_NDX_F))
       INDEX ON &P_NDX_STR TO &P_NDX
    ENDIF
    SET INDEX TO &P_NDX
 ENDIF
 SET SCOREBOARD ON
 SET ESCAPE ON
 CLEAR TYPEAHEAD

 *  Build the screen header for this function.  *
```

```
@  1, 0 TO  3,79 DOUBLE
@  2,25 SAY 'INDIVIDUAL CADET DATA - PAY INFORMATION'
@  2, 2 SAY TRIM(LEFT(IN_LNAM,10))+', '+LEFT(IN_FNAM,1)+' '+LEFT(IN_MNAM,1)
@  4, 0 SAY '     REC   BEGINNING   ENDING               RESID    BOOK  ' ;
        + '    FT     ATP    FSP '
@  5, 0 SAY 'ADD  #     PAY DATE    PAY DATE   TUITION  (I OR O)  FEES  ' ;
        + '   DAYS    DAYS   DAYS'
DISP_LINE = 1
LINE_NUM  = 6
END_DATE  = CTOD('01/01/01')
SET FILTER TO &FILT_STR

*  Issue dBASE III PLUS command to go to the record which matches  *
*  the primary key value.                                          *

SEEK IN_SSAN
IF (.NOT. EOF())

   *  Display the associated Pay records that already exist.  *

   DO WHILE ((.NOT. EOF()) .AND. (LINE_NUM <= 22))
      @ LINE_NUM, 5 SAY LTRIM(STR(DISP_LINE))
      @ LINE_NUM,10 SAY PAY_DATE1
      @ LINE_NUM,22 SAY PAY_DATE2
      @ LINE_NUM,33 SAY TUITION
      @ LINE_NUM,45 SAY RES_STATUS
      @ LINE_NUM,52 SAY BOOK_FEES
      @ LINE_NUM,62 SAY FT_DAYS
      @ LINE_NUM,69 SAY ATP_DAYS
      @ LINE_NUM,76 SAY FSP_DAYS
      DISP_LINE = DISP_LINE + 1
      LINE_NUM  = LINE_NUM  + 1
      END_DATE = PAY_DATE2

      *  Go to the next database record which matches the primary key.  *

      SKIP
   ENDDO
ENDIF
ADD_MORE = .T.
IF (LINE_NUM > 22)
   ? CHR(7)
   @ 23, 0 SAY 'MAX # OF PAY RECORDS HAVE BEEN ADDED. PRESS ANY KEY TO' ;
           + ' CONTINUE.'
ELSE
   IN_PD1      = CTOD('01/01/01')
   IN_PD2      = CTOD('01/01/01')
   IN_TUITION = 0.00
   IN_RESTAT  = ' '
   IN_BOOKFEE = 0.00
   IN_FTDAY   = 0
   IN_ATPDAY  = 0
   IN_FSPDAY  = 0
```

```
*  Allow additional Pay records to be added by highlighting the next   *
*  available line and accepting user inputs for that record.  Continue *
*  the loop until user enters an <N> in the ADD field.                 *

DO WHILE ((ADD_MORE)  .AND.  (LINE_NUM <= 22))
   @ 23, 0
   @ 23, 0 SAY "ENTER 'Y' IN ADD FIELD TO ADD PAY RECORD.  ENTER 'N'";
          + " IN ADD FIELD TO CANCEL ADD."
   @ LINE_NUM, 1 GET ADD_MORE PICTURE 'Y'
   @ LINE_NUM, 5 SAY LTRIM(STR(DISP_LINE))
   @ LINE_NUM,10 GET IN_PD1
   @ LINE_NUM,22 GET IN_PD2
   @ LINE_NUM,33 GET IN_TUITION PICTURE '9999.99'
   @ LINE_NUM,45 GET IN_RESTAT  PICTURE '!'
   @ LINE_NUM,52 GET IN_BOOKFEE PICTURE '999.99'
   @ LINE_NUM,62 GET IN_FTDAY   PICTURE '99'
   @ LINE_NUM,69 GET IN_ATPDAY  PICTURE '99'
   @ LINE_NUM,76 GET IN_FSPDAY  PICTURE '99'
   CLEAR TYPEAHEAD

   *  Accept user inputs for the new Pay record.  *

   READ
*
   IF (ADD_MORE)
      IF (IN_PD2 >= IN_PD1)
         IF (IN_PD1 > END_DATE)

            *  Add a new record to the file and fill it with the  *
            *  validated input.                                    *

            APPEND BLANK
            REPLACE SSAN       WITH IN_SSAN
            REPLACE PAY_DATE1  WITH IN_PD1
            REPLACE PAY_DATE2  WITH IN_PD2
            REPLACE TUITION    WITH IN_TUITION
            REPLACE RES_STATUS WITH IN_RESTAT
            REPLACE BOOK_FEES  WITH IN_BOOKFEE
            REPLACE FT_DAYS    WITH IN_FTDAY
            REPLACE ATP_DAYS   WITH IN_ATPDAY
            REPLACE FSP_DAYS   WITH IN_FSPDAY
            @ LINE_NUM, 1 SAY ' '
            @ LINE_NUM, 5 SAY LTRIM(STR(DISP_LINE))
            @ LINE_NUM,10 SAY PAY_DATE1
            @ LINE_NUM,22 SAY PAY_DATE2
            @ LINE_NUM,33 SAY TUITION
            @ LINE_NUM,45 SAY RES_STATUS
            @ LINE_NUM,52 SAY BOOK_FEES
            @ LINE_NUM,62 SAY FT_DAYS
            @ LINE_NUM,69 SAY ATP_DAYS
            @ LINE_NUM,76 SAY FSP_DAYS
            END_DATE  = PAY_DATE2
            LINE_NUM  = LINE_NUM  + 1
            DISP_LINE = DISP_LINE + 1
            IN_PD1     = CTOD('01/01/01')
```

```
                IN_PD2      = CTOD('01/01/01')
                IN_TUITION = 0.00
                IN_RESTAT  = ' '
                IN_BOOKFEE = 0.00
                IN_FTDAY   = 0
                IN_ATPDAY  = 0
                IN_FSPDAY  = 0
                @ 23, 0
             ELSE
                @ 23, 0
                ? CHR(7)
                @ 23, 0 SAY 'BEGINNING PAY DATE  < OR =  LAST ENDING PAY' ;
                          + ' DATE.  PRESS ANY KEY & TRY AGAIN.'
                WAIT ''
             ENDIF
          ELSE
             @ 23, 0
             ? CHR(7)
             @ 23, 0 SAY 'ENDING PAY DATE  <  BEGINNING PAY DATE.' ;
                       + '  PRESS ANY KEY & TRY AGAIN.'
             WAIT ''
          ENDIF
       ENDIF
    ENDDO
 ENDIF
 DO RCIS_HDR
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                 EDIT_REC                                   *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*        The EDIT_REC procedure is used to update system records. The edit*
*        form screens let the user type over previous entries. During edit*
*        ing, the user can abort any changes and restore the record to its*
*        initial state by pressing the <Esc> key.  The system prevents in-*
*        advertant deletion of records by "recalling" all records marked  *
*        for deletion.  If a non-unique access key (common Last Name) has *
*        been entered, the system will advise you to reenter a unique key *
*        for the desired record.                                             *
*                                                                            *
* CALLED PROCEDURES:                                                         *
*                               Procedure Name        Location              *
*                               --------------        -------------         *
*                               DB3_ERR               RCIS_P2.PRG           *
*                               SET_UP                RCIS_P2.PRG           *
*                               INIT_DB               RCIS_P2.PRG           *
*                               EDIT_SSAN             RCIS_P2.PRG           *
*                               HGHT_CHK              RCIS_P2.PRG           *
*                               RCIS_HDR              RCIS_P2.PRG           *
*                               EDIT_PAY              RCIS_P2.PRG           *
*                               ERR_NF                RCIS_P2.PRG           *
*                               M_PROMPT              RCIS_P2.PRG           *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE EDIT_REC
*
 ON ERROR DO DB3_ERR WITH ERROR(), MESSAGE()
 M_CHOICE = .T.
 FIRST_TIME = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *
 *  Loop until user chooses to terminate this edit function mode.   *

 DO WHILE (M_CHOICE)
    DO SET_UP

    *  If the user has pressed the <Esc> key, exit this function and  *
    *  return to the select function menu.                            *

    IF (QUIT_KEY)
       EXIT
    ENDIF
    @ 22, 0
    @ 23, 0
    @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
    DO INIT_DB

    *  If the Master file is empty, automatically exit this function and  *
    *  return to the select function menu.                                *
```

```
IF (EMPTY_M)
   @ 22, 0
   ? CHR(7)
   @ 23, 4 SAY 'MASTER FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
   WAIT ''
   EXIT
ENDIF

*  If the Pay file is empty and a Pay record has been selected for  *
*  processing, automatically exit this function and return to the   *
*  select function menu.                                            *

IF (R_SELECT = 'I'  .AND.  EMPTY_P)
   @ 22, 0
   ? CHR(7)
   @ 23, 7 SAY 'PAY FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
   WAIT ''
   EXIT
ENDIF
SELECT 1

*  If the user doesn't enter the primary key (IN_SSAN), use   *
*  the secondary key value (T_FOR_STR) which is composed of   *
*  the cadet's first and/or middle and/or last name.          *

IF (LEN(LTRIM(IN_SSAN)) = 0)
   SET FILTER TO &T_FOR_STR

   *  Issue dBASE III PLUS command to go to the first record in the  *
   *  file which matches the secondary key value.                    *

   GOTO TOP
ELSE
   SET FILTER TO &FILT_STR

   *  Issue dBASE III PLUS command to go to the record which matches  *
   *  the primary key value.                                          *

   SEEK IN_SSAN
ENDIF
DO CASE

   *  If a matching Master record is found, set up the screen format *
   *  and prepare all files required to process the record display.  *

   CASE  .NOT. EOF()
         IN_SSAN = SSAN
         IN_FNAM = F_NAME
         IN_MNAM = M_NAME
         IN_LNAM = L_NAME
         DO CASE

            *  If the user has selected to process a Master record,   *
            *  issue the dBASE III PLUS commands that coordinate the  *
            *  interaction between the supporting files and the main  *
            *  file.                                                  *

            CASE  R_SELECT = 'H'
                  REC_NUM = RECNO()
                  DO EDIT_SSAN
                  ASCL_B4 = AS_CLASS
*
                  SELECT 3
                  SEEK ASCL_B4
                  IF (.NOT. EOF())
                     CLAS_NUM = STR(AS_CL_TOT,3)
                  ELSE
                     CLAS_NUM = ' ? '
                  ENDIF
*
                  SELECT 1
                  GOTO REC_NUM
                  SET FORMAT TO &M_FORM_STR
                  SET SCOREBOARD ON
                  SET ESCAPE ON
                  CLEAR TYPEAHEAD
                  SET CONFIRM OFF

                  *  Issue 'CHANGE' command to display the record data. *

                  CHANGE
                  SET CONFIRM ON
                  GOTO REC_NUM
                  IF PERM_STRT = 'SAME'
                      REPLACE PERM_STRT WITH LOCAL_STRT
                      REPLACE PERM_CITY WITH LOCAL_CITY
                      REPLACE PERM_STAT WITH 'AZ'
                      REPLACE PERM_ZIP  WITH LOCAL_ZIP
                      T_PHON = '602' + LOCAL_PHON
                      REPLACE PERM_PHON WITH T_PHON
                  ENDIF
             REPLACE WPSS WITH ((DC_RTNG*DCR_VAL)+(CUM_GPA*100.00*GPA_VAL);
               + (SAT_CUM*SAT_VAL)+(AFOQT_AA*AA_VAL)+(AFOQT_QUAN*QUAN_VAL);
               + (AFOQT_VERB*VERB_VAL))
                  DO HGHT_CHK
                  IF (AS_CLASS <> ASCL_B4)
                     CLAS_VAL = AS_CLASS
                     SET FILTER TO
                     COUNT FOR AS_CLASS = CLAS_VAL TO CLAS_TOT
*
                     SELECT 3
                     SEEK CLAS_VAL
                     IF (.NOT. EOF())
                        REPLACE AS_CL_TOT WITH CLAS_TOT
                     ENDIF
*
                     SELECT 1
                  ENDIF
                  GOTO REC_NUM
                  *  If Master record was inadvertantly deleted, recall *
                  *  it back to a current status.                       *

                  IF DELETED()
                     RECALL RECORD REC_NUM
                  ENDIF
                  DO RCIS_HDR

                  *  If the Pay file is not empty, invoke the proce-  *
                  *  dures which will give the user the opportunity   *
                  *  to view any Pay records associated with the se-  *
                  *  lected Master record.                            *

                  IF (.NOT. EMPTY_P)
                     DO EDIT_PAY
                     IF (VP_CHOICE)
                        IF (M_CHOICE)
                           LOOP
                        ELSE
                           EXIT
                        ENDIF
                     ENDIF
                  ENDIF

            *  If the user has selected to process a Pay record,  *
            *  invoke the EDIT_PAY procedure and process its      *
            *  return response.                                   *

            CASE  R_SELECT = 'I'
                  DO EDIT_PAY
                  IF (M_CHOICE)
                     LOOP
                  ELSE
                     EXIT
                  ENDIF
         ENDCASE

   *  If no matching Master record is found, give the user the option *
   *  to try again or to terminate this function.                     *

   CASE  EOF()
         @ 22, 0
         @ 23, 4 SAY 'MASTER '
         DO ERR_NF
         IF (M_CHOICE)
            LOOP
         ELSE
            EXIT
         ENDIF
ENDCASE

*  Give the user the opportunity to execute this function again.  *

DO M_PROMPT
```

```
 ENDDO

 *  Close the database files used in this function.  *

 SELECT 3
 USE
 SELECT 2
 USE
 SELECT 1
 USE
 CLOSE FORMAT
*
 F_PARA = STUFF(F_PARA,1,1,'C')
 @ 21, 0
 ON ERROR
*
RETURN
```

```
*-----------------------------------------------------------------------*
*                              EDIT_SSAN                                *
*-----------------------------------------------------------------------*
*                                                                       *
* SUMMARY:                                                              *
*          The EDIT_SSAN procedure allows the user to change the primary key*
*          (SSAN).  This procedure is controlled by the EDIT_REC procedure *
*          and is only envoked after the controlling procedure has located *
*          the Master record.  The primary(SSAN) and secondary (F_NAME,    *
*          M_NAME & L_NAME) keys for the current record will be displayed on*
*          the screen and the system will allow the user to change the pri- *
*          mary key if desired. This procedure is only envoked when the user*
*          has selected a Master record to edit.  If the primary key is    *
*          changed, this procedure will also check the Pay record file for *
*          any corresponding Pay records and change them to match the new  *
*          key. The system checks to see if the new key already exists     *
*          before it makes any changes.                                    *
*                                                                       *
* VARIABLE DECLARATIONS:                                                *
*                                                                       *
*     Variable Name     Status                 Purpose                  *
*     -------------     ------     -------------------------------------*
*       NEW_SSAN        LOCAL      Used to store the new value for the  *
*                                  primary key.                         *
*                                                                       *
*       ES_CHOICE       LOCAL      Boolean flag which indicates whether the *
*                                  user wants to change the primary key *
*                                  (SSAN).                              *
*                                                                       *
*       DONE            LOCAL      Boolean flag which indicates whether the *
*                                  procedure has completed processing the *
*                                  changes or has encountered an error. *
*                                                                       *
*                                                                       *
*-----------------------------------------------------------------------*


PROCEDURE EDIT_SSAN
*
 ES_CHOICE = .F.
 @ 22, 0
 @ 23, 0
 ? CHR(7)
 @ 23, 4 SAY "MASTER RECORD FOUND.  DO YOU WANT TO CHANGE THIS CADET'S SSAN" ;
          + " [Y/N]? "  GET ES_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
 IF (ES_CHOICE)
    DONE = .F.
    NEW_SSAN = '         '

    *  Continue loop until user enters a valid primary key change or a  *
    *  valid exit sequence.                                              *

    DO WHILE (.NOT. DONE)
```

```
@ 18, 0 CLEAR TO 24,79
@ 18,11 SAY 'SSAN'
@ 18,16 SAY IN_SSAN                  PICTURE '@R 999-99-9999'
@ 19, 5 SAY 'First Name'
@ 19,16 SAY IN_FNAM                  PICTURE '!!!!!!!!!!!!!!!'
@ 20, 4 SAY 'Middle Name'
@ 20,16 SAY IN_MNAM                  PICTURE '!!!!!!!!!!!!!!!'
@ 21, 6 SAY 'Last Name'
@ 21,16 SAY IN_LNAM                  PICTURE '!!!!!!!!!!!!!!!'
@ 18,35 SAY 'New SSAN'  GET NEW_SSAN  PICTURE '@R 999-99-9999'
@ 20,35 SAY 'Enter New SSAN  or '
@ 21,35 SAY 'Press ESC to Continue.'
CLEAR TYPEAHEAD

*  Accept user's input for primary key change.  *

READ
DONE = .T.

*  If the input wasn't null and it wasn't equal to the existing  *
*  one, then continue with the following:                        *

IF (LEN(LTRIM(NEW_SSAN)) <> 0)  .AND.  (SSAN <> NEW_SSAN)
   DO SSAN_CHK WITH NEW_SSAN

   *  Continue if input syntax is correct.  *

   IF (.NOT. BAD_SSAN)
      SET FILTER TO
      SEEK NEW_SSAN

      *  Continue if new input key doesn't already exist.  *

      IF (EOF())
         IF (.NOT. (EMPTY_P))
            SELECT 2
            SET FILTER TO &FILT_STR
            SEEK IN_SSAN

            *  Continue loop until all associated Pay records have  *
            *  been reassigned the new key value.                   *

            DO WHILE (.NOT. EOF())
               REPLACE SSAN WITH NEW_SSAN
               SEEK IN_SSAN
            ENDDO
         ENDIF
         SELECT 1
         GOTO REC_NUM

         *  Reassign selected Master record with new key value.  *

         REPLACE SSAN WITH NEW_SSAN
         IN_SSAN = SSAN
         IN_FNAM = F_NAME
```

```
                  IN_MNAM = M_NAME
                  IN_LNAM = L_NAME
               ELSE
                  @ 23, 0
                  ? CHR(7)
                  @ 23, 0 SAY 'SSAN ALREADY ASSIGNED TO ANOTHER RECORD.  PRESS';
                       + ' ANY KEY AND TRY AGAIN.'
                  WAIT ''
                  DONE = .F.
                  LOOP
               ENDIF
            ELSE
               @ 23, 0
               ? CHR(7)
               @ 23, 0 SAY 'SSAN FIELD MUST HAVE NINE (9) DIGITS.  PRESS ANY';
                    + ' KEY AND TRY AGAIN.'
               WAIT ''
               @ 23, 0
               DONE = .F.
               LOOP
            ENDIF
         ENDIF
      ENDDO
   ENDIF
   SET FILTER TO &FILT_STR
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                              EDIT_PAY                                     *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*        The EDIT_PAY procedure allows the user to update Pay records al-  *
*        ready on file.  This procedure is controlled by the EDIT_REC pro-*
*        cedure and is only envoked after the controlling procedure has lo*
*        cated a corresponding Master record.  This procedure edit checks *
*        the newly entered pay date periods to ensure they don't overlap  *
*        and it allows the user to view all Pay records on the same screen*
*        (16 maximum).  The user is asked to enter the number which corres*
*        ponds to the record they want to update and the system highlights*
*        the selected record.  This procedure is terminated when the user *
*        enters a <0> in the prompt field.                                 *
*                                                                           *
* CALLED PROCEDURES:                                                        *
*                              Procedure Name           Location            *
*                              --------------           --------------      *
*                              ERR_NF                   RCIS_P2.PRG         *
*                              VP_PROMPT                RCIS_P2.PRG         *
*                              INIT_SAV                 RCIS_P2.PRG         *
*                              SAV_RECS                 RCIS_P2.PRG         *
*                              EDT_LINE                 RCIS_P2.PRG         *
*                              RCIS_HDR                 RCIS_P2.PRG         *
*                              M_PROMPT                 RCIS_P2.PRG         *
*                                                                           *
* VARIABLE DECLARATIONS:                                                    *
*                                                                           *
*    Variable Name     Status                    Purpose                    *
*    -------------     ------    ---------------------------------------*
*      ED_REC_CHR      LOCAL     Used to store the user's input record     *
*                                number.                                    *
*                                                                           *
*      ED_REC_NUM      LOCAL     Used to store the numeric equivalent of   *
*                                ED_REC_CHR.                                *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE EDIT_PAY
*
 SELECT 2
 SET FILTER TO &FILT_STR

 *  Issue dBASE III PLUS command to go to the record which matches  *
 *  the primary key value.                                           *

 SEEK IN_SSAN
 DO CASE

    *  If no matching Pay records are found, give the user the option *
    *  to try again or to terminate this function.                    *

    CASE  EOF()
```

```
        IF (R_SELECT = 'I')
           @ 22, 0
           @ 23, 7 SAY 'PAY '
           DO ERR_NF
        ENDIF

*  If matching Pay records are found, build Edit Pay records screen   *
*  and display all the current associated Pay records.                *

CASE .NOT. EOF()
     VP_CHOICE = .F.
     IF (R_SELECT = 'H')
        DO VP_PRMPT
     ENDIF
     IF (VP_CHOICE)  .OR.  (R_SELECT = 'I')
        SET SCOREBOARD ON
        SET ESCAPE ON
        CLEAR TYPEAHEAD
        @  1, 0 TO  3,79 DOUBLE
        @  2,25 SAY 'INDIVIDUAL CADET DATA - PAY INFORMATION'
        INITIALS = LEFT(IN_FNAM,1)+' '+LEFT(IN_MNAM,1)
        @  2, 2 SAY TRIM(LEFT(IN_LNAM,10))+', '+INITIALS
        @  4, 0 SAY '    REC   BEGINNING   ENDING              RESID    ';
                  + 'BOOK      FT     ATP     FSP '
        @  5, 0 SAY '     #     PAY DATE    PAY DATE   TUITION  (I OR O)   ';
                  + 'FEES     DAYS    DAYS    DAYS'
        DO INIT_SAV
        DISP_LINE = 1
        LINE_NUM  = 6

        *  Continue loop until all associated Pay records have been   *
        *  displayed.                                                 *

        DO WHILE ((.NOT. EOF()) .AND. (LINE_NUM <= 22))
           @ LINE_NUM, 5 SAY LTRIM(STR(DISP_LINE))
           @ LINE_NUM,10 SAY PAY_DATE1
           @ LINE_NUM,22 SAY PAY_DATE2
           @ LINE_NUM,33 SAY TUITION
           @ LINE_NUM,45 SAY RES_STATUS
           @ LINE_NUM,52 SAY BOOK_FEES
           @ LINE_NUM,62 SAY FT_DAYS
           @ LINE_NUM,69 SAY ATP_DAYS
           @ LINE_NUM,76 SAY FSP_DAYS
           DO SAV_RECS
           DISP_LINE = DISP_LINE + 1
           LINE_NUM  = LINE_NUM  + 1
           SKIP
        ENDDO
        ED_REC_NUM =  1

        *  Continue loop until user enters the termination value of   *
        *  <0> in the response field.                                 *

        DO WHILE (ED_REC_NUM <> 0)
           ED_REC_CHR = '0 '
```

```
                  @ 23, 0
                  @ 23, 0 SAY 'ENTER THE REC# OF PAY RECORD TO BE EDITED (OR 0';
                           + ' TO EXIT) -> '  GET ED_REC_CHR  PICTURE '99'
                  CLEAR TYPEAHEAD
                  READ
                  ED_REC_CHR = LTRIM(RTRIM(ED_REC_CHR))
                  ED_REC_NUM = INT(VAL(ED_REC_CHR))
                  IF (ED_REC_NUM <> 0)
                     DO EDT_LINE
                     IF LINE_NUM > 0
                        @ LINE_NUM, 5 SAY LTRIM(STR(ED_REC_NUM))
                        @ LINE_NUM,10 SAY PAY_DATE1
                        @ LINE_NUM,22 SAY PAY_DATE2
                        @ LINE_NUM,33 SAY TUITION
                        @ LINE_NUM,45 SAY RES_STATUS
                        @ LINE_NUM,52 SAY BOOK_FEES
                        @ LINE_NUM,62 SAY FT_DAYS
                        @ LINE_NUM,69 SAY ATP_DAYS
                        @ LINE_NUM,76 SAY FSP_DAYS
                     ELSE
                        @ 23, 0
                        ? CHR(7)
                        @ 23, 0 SAY 'ENTERED AN INVALID REC#.  PRESS ANY KEY &' ;
                              + ' TRY AGAIN.'
                        WAIT ''
                     ENDIF
                  ENDIF
               ENDDO
               DO RCIS_HDR

               *  Give the user the opportunity to execute this function again.*

               DO M_PROMPT
            ENDIF
 ENDCASE
*
RETURN
```

```
*-------------------------------------------------------------------------*
*                              EDT_LINE                                   *
*-------------------------------------------------------------------------*
*                                                                         *
* SUMMARY:                                                                *
*         The EDT_LINE procedure searches through previously saved record *
*         number values and locates the Pay records which are before and  *
*         after current record.  It saves the date boundaries from those  *
*         records so the system can ensure that the updates do not cause  *
*         any of the pay periods to overlap.  This procedure is also      *
*         controlled by the EDIT_REC procedure.                           *
*                                                                         *
* CALLED PROCEDURES:                                                      *
*                               Procedure Name            Location        *
*                               --------------            --------------  *
*                               ED_GETS                   RCIS_P2.PRG     *
*                                                                         *
*-------------------------------------------------------------------------*


PROCEDURE EDT_LINE
*
 LINE_NUM  = 0
 LOW_DATE  = CTOD ('01/01/01')
 HIGH_DATE = CTOD ('12/31/99')
 DO CASE
    CASE  ED_REC_NUM = 1
          IF SAV_REC1 > 0
             IF SAV_REC2 > 0
                GOTO SAV_REC2
                HIGH_DATE = PAY_DATE1
             ENDIF
             LINE_NUM = ED_REC_NUM + 5
             GOTO SAV_REC1
             DO ED_GETS
          ENDIF
    CASE  ED_REC_NUM = 2
          IF SAV_REC2 > 0
             IF SAV_REC1 > 0
                GOTO SAV_REC1
                LOW_DATE  = PAY_DATE2
             ENDIF
             IF SAV_REC3 > 0
                GOTO SAV_REC3
                HIGH_DATE = PAY_DATE1
             ENDIF
             LINE_NUM = ED_REC_NUM + 5
             GOTO SAV_REC2
             DO ED_GETS
          ENDIF
    CASE  ED_REC_NUM = 3
          IF SAV_REC3 > 0
             IF SAV_REC2 > 0
                GOTO SAV_REC2
                LOW_DATE  = PAY_DATE2
```

```
            ENDIF
            IF SAV_REC4 > 0
               GOTO SAV_REC4
               HIGH_DATE = PAY_DATE1
            ENDIF
            LINE_NUM = ED_REC_NUM + 5
            GOTO SAV_REC3
            DO ED_GETS
         ENDIF
   CASE  ED_REC_NUM = 4
         IF SAV_REC4 > 0
            IF SAV_REC3 > 0
               GOTO SAV_REC3
               LOW_DATE  = PAY_DATE2
            ENDIF
            IF SAV_REC5 > 0
               GOTO SAV_REC5
               HIGH_DATE = PAY_DATE1
            ENDIF
            LINE_NUM = ED_REC_NUM + 5
            GOTO SAV_REC4
            DO ED_GETS
         ENDIF
   CASE  ED_REC_NUM = 5
         IF SAV_REC5 > 0
            IF SAV_REC4 > 0
               GOTO SAV_REC4
               LOW_DATE  = PAY_DATE2
            ENDIF
            IF SAV_REC6 > 0
               GOTO SAV_REC6
               HIGH_DATE = PAY_DATE1
            ENDIF
            LINE_NUM = ED_REC_NUM + 5
            GOTO SAV_REC5
            DO ED_GETS
         ENDIF
   CASE  ED_REC_NUM = 6
         IF SAV_REC6 > 0
            IF SAV_REC5 > 0
               GOTO SAV_REC5
               LOW_DATE  = PAY_DATE2
            ENDIF
            IF SAV_REC7 > 0
               GOTO SAV_REC7
               HIGH_DATE = PAY_DATE1
            ENDIF
            LINE_NUM = ED_REC_NUM + 5
            GOTO SAV_REC6
            DO ED_GETS
         ENDIF
   CASE  ED_REC_NUM = 7
         IF SAV_REC7 > 0
            IF SAV_REC6 > 0
               GOTO SAV_REC6
```

```
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC8 > 0
                  GOTO SAV_REC8
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC7
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 8
            IF SAV_REC8 > 0
               IF SAV_REC7 > 0
                  GOTO SAV_REC7
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC9 > 0
                  GOTO SAV_REC9
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC8
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 9
            IF SAV_REC9 > 0
               IF SAV_REC8 > 0
                  GOTO SAV_REC8
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC10 > 0
                  GOTO SAV_REC10
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC9
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 10
            IF SAV_REC10 > 0
               IF SAV_REC9 > 0
                  GOTO SAV_REC9
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC11 > 0
                  GOTO SAV_REC11
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC10
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 11
            IF SAV_REC11 > 0
               IF SAV_REC10 > 0
```

```
                  GOTO SAV_REC10
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC12 > 0
                  GOTO SAV_REC12
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC11
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 12
            IF SAV_REC12 > 0
               IF SAV_REC11 > 0
                  GOTO SAV_REC11
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC13 > 0
                  GOTO SAV_REC13
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC12
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 13
            IF SAV_REC13 > 0
               IF SAV_REC12 > 0
                  GOTO SAV_REC12
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC14 > 0
                  GOTO SAV_REC14
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC13
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 14
            IF SAV_REC14 > 0
               IF SAV_REC13 > 0
                  GOTO SAV_REC13
                  LOW_DATE  = PAY_DATE2
               ENDIF
               IF SAV_REC15 > 0
                  GOTO SAV_REC15
                  HIGH_DATE = PAY_DATE1
               ENDIF
               LINE_NUM = ED_REC_NUM + 5
               GOTO SAV_REC14
               DO ED_GETS
            ENDIF
      CASE  ED_REC_NUM = 15
            IF SAV_REC15 > 0
```

```
                  IF SAV_REC14 > 0
                     GOTO SAV_REC14
                     LOW_DATE  = PAY_DATE2
                  ENDIF
                  IF SAV_REC16 > 0
                     GOTO SAV_REC16
                     HIGH_DATE = PAY_DATE1
                  ENDIF
                  LINE_NUM = ED_REC_NUM + 5
                  GOTO SAV_REC15
                  DO ED_GETS
               ENDIF
        CASE  ED_REC_NUM = 16
               IF SAV_REC16 > 0
                  IF SAV_REC15 > 0
                     GOTO SAV_REC15
                     LOW_DATE = PAY_DATE2
                  ENDIF
                  LINE_NUM = ED_REC_NUM + 5
                  GOTO SAV_REC16
                  DO ED_GETS
               ENDIF
      ENDCASE
     *
     RETURN
```

```
*-----------------------------------------------------------------------------*
*                              ED_GETS                                        *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*        The ED_GETS procedure highlights the record selected for the        *
*        update, accepts the user's changes and executes the commands        *
*        which actually change the database files.                           *
*                                                                             *
* VARIABLE DECLARATIONS:                                                      *
*                                                                             *
*     Variable Name     Status                   Purpose                      *
*     -------------     ------    ----------------------------------------*
*       IN_SSAN         LOCAL     Used to store user update inputs.          *
*       IN_PD1            "                      "                           *
*       IN_PD2            "                      "                           *
*       IN_TUITION        "                      "                           *
*       IN_RESTAT         "                      "                           *
*       IN_BOOKFEE        "                      "                           *
*       IN_FTDAY          "                      "                           *
*       IN_ATPDAY         "                      "                           *
*       IN_FSPDAY         "                      "                           *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE ED_GETS
*
 PRIVATE BAD_ENTRY
*
 BAD_ENTRY = .T.
 IN_PD1     = PAY_DATE1
 IN_PD2     = PAY_DATE2
 IN_TUITION = TUITION
 IN_RESTAT  = RES_STATUS
 IN_BOOKFEE = BOOK_FEES
 IN_FTDAY   = FT_DAYS
 IN_ATPDAY  = ATP_DAYS
 IN_FSPDAY  = FSP_DAYS

 *  Continue loop until all changes for the selected Pay record have been  *
 *  validated and the entire entry is determined to be a "Good Entry".     *

 DO WHILE (BAD_ENTRY)
    @ LINE_NUM, 5 SAY LTRIM(STR(ED_REC_NUM))
    @ LINE_NUM,10 GET IN_PD1
    @ LINE_NUM,22 GET IN_PD2
    @ LINE_NUM,33 GET IN_TUITION PICTURE '9999.99'
    @ LINE_NUM,45 GET IN_RESTAT  PICTURE '!'
    @ LINE_NUM,52 GET IN_BOOKFEE PICTURE '999.99'
    @ LINE_NUM,62 GET IN_FTDAY   PICTURE '99'
    @ LINE_NUM,69 GET IN_ATPDAY  PICTURE '99'
    @ LINE_NUM,76 GET IN_FSPDAY  PICTURE '99'
*
    CLEAR TYPEAHEAD
    *  Accept the user's input for this Pay record change.  *

    READ
*
    IF IN_PD1  <=  IN_PD2
       IF IN_PD1  >  LOW_DATE
          IF IN_PD2  <  HIGH_DATE

             *  Update the Pay record with the validated information.  *

             REPLACE SSAN        WITH IN_SSAN
             REPLACE PAY_DATE1   WITH IN_PD1
             REPLACE PAY_DATE2   WITH IN_PD2
             REPLACE TUITION     WITH IN_TUITION
             REPLACE RES_STATUS  WITH IN_RESTAT
             REPLACE BOOK_FEES   WITH IN_BOOKFEE
             REPLACE FT_DAYS     WITH IN_FTDAY
             REPLACE ATP_DAYS    WITH IN_ATPDAY
             REPLACE FSP_DAYS    WITH IN_FSPDAY
             BAD_ENTRY = .F.
          ELSE
             @ 23, 0
             ? CHR(7)
             @ 23, 0 SAY 'ENDING PAY DATE  >  NEXT BEGINNING PAY DATE.';
                       + '  PRESS ANY KEY & TRY AGAIN.'
             WAIT ''
          ENDIF
       ELSE
          @ 23, 0
          ? CHR(7)
          @ 23, 0 SAY 'BEGINNING PAY DATE  <  PREVIOUS ENDING PAY DATE.';
                    + '  PRESS ANY KEY & TRY AGAIN.'
          WAIT ''
       ENDIF
    ELSE
       @ 23, 0
       ? CHR(7)
       @ 23, 0 SAY 'BEGINNING PAY DATE  > OR =  ENDING PAY DATE.';
                 + '  PRESS ANY KEY & TRY AGAIN.'
       WAIT ''
    ENDIF
 ENDDO
*
RETURN
```

```
*--------------------------------------------------------------------------*
*                               DEL_REC                                    *
*--------------------------------------------------------------------------*
*                                                                          *
* SUMMARY:                                                                 *
*        The DEL_REC procedure allows the user to delete records from the *
*        system.  The user is asked to confirm that the record selected   *
*        should be deleted.  For Master records, all subordinate Pay      *
*        records are also deleted.                                        *
*                                                                          *
* CALLED PROCEDURES:                                                       *
*                            Procedure Name          Location             *
*                            --------------          --------------       *
*                            DB3_ERR                 RCIS_P2.PRG          *
*                            SET_UP                  RCIS_P2.PRG          *
*                            INIT_DB                 RCIS_P2.PRG          *
*                            RCIS_HDR                RCIS_P2.PRG          *
*                            D_PROMPT                RCIS_P2.PRG          *
*                            DEL_PAY                 RCIS_P2.PRG          *
*                            ERR_NF                  RCIS_P2.PRG          *
*                            M_PROMPT                RCIS_P2.PRG          *
*                                                                          *
*--------------------------------------------------------------------------*


PROCEDURE DEL_REC
*
 ON ERROR DO DB3_ERR WITH ERROR(), MESSAGE()
 M_CHOICE = .T.
 FIRST_TIME = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvvv  *
 *  Loop until user chooses to terminate this delete function mode. *

 DO WHILE (M_CHOICE)
    DO SET_UP

    *  If the user has pressed the <Esc> key, exit this function and  *
    *  return to the select function menu.                            *

    IF (QUIT_KEY)
       EXIT
    ENDIF
    @ 22, 0
    @ 23, 0
    @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
    DO INIT_DB

    *  If the Master file is empty, automatically exit this function and  *
    *  return to the select function menu.                                 *

    IF (EMPTY_M)
       @ 22, 0
       ? CHR(7)
       @ 23, 4 SAY 'MASTER FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
```

```
   WAIT ''
   EXIT
ENDIF

*  If the Pay file is empty and a Pay record has been selected for  *
*  processing, automatically exit this function and return to the  *
*  select function menu.                                            *

IF (R_SELECT = 'I'  .AND.  EMPTY_P)
   @ 22, 0
   ? CHR(7)
   @ 23, 7 SAY 'PAY FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
   WAIT ''
   EXIT
ENDIF
SELECT 1

*  If the user doesn't enter the primary key (IN_SSAN), use   *
*  the secondary key value (T_FOR_STR) which is composed of   *
*  the cadet's first and/or middle and/or last name.          *

IF (LEN(LTRIM(IN_SSAN)) = 0)
   SET FILTER TO &T_FOR_STR

   *  Issue dBASE III PLUS command to go to the first record in the  *
   *  file which matches the secondary key value.                    *

   GOTO TOP
ELSE
   SET FILTER TO &FILT_STR

   *  Issue dBASE III PLUS command to go to the record which matches  *
   *  the primary key value.                                          *

   SEEK IN_SSAN
ENDIF
DO CASE

   *  If a matching Master record is found, set up the screen format *
   *  and prepare all files required to process the record display.  *

   CASE  .NOT. EOF()
         IN_SSAN = SSAN
         IN_FNAM = F_NAME
         IN_MNAM = M_NAME
         IN_LNAM = L_NAME
         DO CASE

            *  If the user has selected to process a Master record,   *
            *  issue the dBASE III PLUS commands that coordinate the  *
            *  interaction between the supporting files and the main  *
            *  file.                                                  *

            CASE  R_SELECT = 'H'
                  REC_NUM = RECNO()
```

```
                      @ 22, 0
                      @ 23, 0
                      ? CHR(7)
                      @ 23, 4 SAY 'MASTER RECORD FOUND.  PRESS ANY KEY TO' ;
                                + ' VIEW RECORD.'
                      CLEAR TYPEAHEAD
                      WAIT ''
                      CLAS_VAL = AS_CLASS
*
                      SELECT 3
                      SEEK CLAS_VAL
                      IF (.NOT. EOF())
                         CT_REC_NUM = RECNO()
                         CLAS_NUM = STR(AS_CL_TOT,3)
                      ELSE
                         CLAS_NUM = ' ? '
                      ENDIF
*
                      SELECT 1
                      GOTO REC_NUM
                      SET FORMAT TO &M_FORM_STR
                      SET SCOREBOARD ON
                      SET ESCAPE ON
                      CLEAR TYPEAHEAD
                      SET CONFIRM OFF

                      *  Issue 'CHANGE' command to display the record data. *

                      CHANGE
                      SET CONFIRM ON
                      DO RCIS_HDR
                      DO D_PROMPT

                      *  If user confirms their deletion request, then  *
                      *  delete the Master record plus any associated   *
                      *  Pay records and readjust the enrollment totals *
                      *  relation.                                      *

                      IF (P_CHOICE)
                         @ 23, 0
                         @ 23,13 SAY 'DELETING MASTER RECORD AND ';
                                   + 'ALL ASSOCIATED PAY RECORDS.'
                         GOTO REC_NUM
                         IF (CLAS_NUM <> ' ? ')
                            CLAS_VAL = AS_CLASS
                            SET FILTER TO
                            COUNT FOR AS_CLASS = CLAS_VAL TO CLAS_TOT
*
                            SELECT 3
                            GOTO CT_REC_NUM
                            REPLACE AS_CL_TOT WITH (CLAS_TOT - 1)
*
                            SELECT 1
                            GOTO REC_NUM
                         ENDIF
```

```
                        DELETE
                        PACK

                        *  If the Pay file is not empty, proceed to delete *
                        *  all associated Pay records.                     *

                        IF (.NOT. EMPTY_P)
                           SELECT 2
                           SET FILTER TO &FILT_STR
                           SEEK IN_SSAN
                           DO WHILE (.NOT. EOF())
                              DELETE
                              SKIP
                           ENDDO
                           PACK
                        ENDIF
                     ENDIF
                     DO RCIS_HDR

               *  If the user has selected to process a Pay record,  *
               *  invoke the DEL_PAY procedure and process its       *
               *  return response.                                   *

               CASE  R_SELECT = 'I'
                     DO DEL_PAY
                     IF (M_CHOICE)
                        LOOP
                     ELSE
                        EXIT
                     ENDIF
            ENDCASE

      *  If no matching Master record is found, give the user the option *
      *  to try again or to terminate this function.                     *

      CASE  EOF()
            @ 22, 0
            @ 23, 4 SAY 'MASTER '
            DO ERR_NF
            IF (M_CHOICE)
               LOOP
            ELSE
               EXIT
            ENDIF
   ENDCASE

   *  Give the user the opportunity to execute this function again.  *

   DO M_PROMPT
ENDDO

*  Close the database files used in this function.  *

SELECT 3
USE
```

```
 SELECT 2
 USE
 SELECT 1
 USE
 CLOSE FORMAT
*
 F_PARA = STUFF(F_PARA,1,1,'C')
 @ 21, 0
 ON ERROR
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                                 DEL_PAY                                   *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*         The DEL_PAY procedure allows the user to delete Pay records from *
*         the system.  This procedure is controlled by the DEL_REC proce-  *
*         dure and is only envoked after the controlling procedure has lo- *
*         cated a corresponding Master record.  This procedure allows the  *
*         user to view all Pay records on the same screen (16 maximum). The*
*         user is asked to enter a <Y> next to each record they want to    *
*         "mark" for deletion.  When the user is finished "marking" records*
*         for deletion, they must press the <Enter> key to process their   *
*         input.  The system bell will sound and all "marked" records will *
*         be deleted.                                                       *
*                                                                           *
* CALLED PROCEDURES:                                                        *
*                              Procedure Name           Location            *
*                              --------------           --------------      *
*                              ERR_NF                   RCIS_P2.PRG         *
*                              INIT_SAV                 RCIS_P2.PRG         *
*                              SAV_RECS                 RCIS_P2.PRG         *
*                              INIT_FLG                 RCIS_P2.PRG         *
*                              DEL_FLGS                 RCIS_P2.PRG         *
*                              RCIS_HDR                 RCIS_P2.PRG         *
*                              M_PROMPT                 RCIS_P2.PRG         *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE DEL_PAY
*
 SELECT 2

 *  Issue dBASE III PLUS command to go to the record which matches  *
 *  the primary key value.                                          *

 SET FILTER TO &FILT_STR
 SEEK IN_SSAN
 DO CASE

    *  If no matching Pay records are found, give the user the option *
    *  to try again or to terminate this function.                    *

    CASE  EOF()
          @ 22, 0
          @ 23, 7 SAY 'PAY '
          DO ERR_NF

    *  If matching Pay records are found, build Edit Pay records screen  *
    *  and display all the current associated Pay records.               *

    CASE  .NOT. EOF()
          SET SCOREBOARD ON
          SET ESCAPE ON
          CLEAR TYPEAHEAD
          @  1, 0 TO  3,79 DOUBLE
          @  2,25 SAY 'INDIVIDUAL CADET DATA - PAY INFORMATION'
          INITIALS = LEFT(IN_FNAM,1)+' '+LEFT(IN_MNAM,1)
          @  2, 2 SAY TRIM(LEFT(IN_LNAM,10))+', '+INITIALS
          @  4, 0 SAY '     REC   BEGINNING   ENDING              RESID    ' ;
                 + 'BOOK      FT     ATP     FSP '
          @  5, 0 SAY 'DEL  #     PAY DATE    PAY DATE   TUITION  (I OR O)  ' ;
                 + 'FEES     DAYS    DAYS    DAYS'
          DO INIT_SAV
          DISP_LINE = 1
          LINE_NUM  = 6

          *  Continue loop until all associated Pay records have been  *
          *  displayed.                                                *

          DO WHILE ((.NOT. EOF()) .AND. (LINE_NUM <= 22))
             @ LINE_NUM, 5 SAY LTRIM(STR(DISP_LINE))
             @ LINE_NUM,10 SAY PAY_DATE1
             @ LINE_NUM,22 SAY PAY_DATE2
             @ LINE_NUM,33 SAY TUITION
             @ LINE_NUM,45 SAY RES_STATUS
             @ LINE_NUM,52 SAY BOOK_FEES
             @ LINE_NUM,62 SAY FT_DAYS
             @ LINE_NUM,69 SAY ATP_DAYS
             @ LINE_NUM,76 SAY FSP_DAYS
             DO SAV_RECS
             DISP_LINE = DISP_LINE + 1
             LINE_NUM  = LINE_NUM  + 1

             *  Issue dBASE III PLUS command to go to the next record  *
             *  that matches the primary key value

             SKIP
          ENDDO
          @ 23, 0
          @ 23, 7 SAY "ENTER A 'Y' IN THE DEL FIELD FOR EACH PAY RECORD";
                 + " YOU WANT DELETED."
          DO INIT_FLG
          DO DEL_FLGS
          DO RCIS_HDR

          *  Give the user the opportunity to execute this function again.*

          DO M_PROMPT
 ENDCASE
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                  DEL_FLGS                                  *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*         The DEL_FLGS procedure highlights the record deletion fields,      *
*         processes the user's deletion requests and deletes the appro-      *
*         priate Pay records.                                                *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE DEL_FLGS
*
 LINE_NUM = 6
 IF (SAV_REC1 > 0)
    @ LINE_NUM, 1  GET FLAG_REC1  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC2 > 0)
    @ LINE_NUM, 1  GET FLAG_REC2  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC3 > 0)
    @ LINE_NUM, 1  GET FLAG_REC3  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC4 > 0)
    @ LINE_NUM, 1  GET FLAG_REC4  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC5 > 0)
    @ LINE_NUM, 1  GET FLAG_REC5  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC6 > 0)
    @ LINE_NUM, 1  GET FLAG_REC6  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC7 > 0)
    @ LINE_NUM, 1  GET FLAG_REC7  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC8 > 0)
    @ LINE_NUM, 1  GET FLAG_REC8  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC9 > 0)
    @ LINE_NUM, 1  GET FLAG_REC9  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
 IF (SAV_REC10 > 0)
    @ LINE_NUM, 1  GET FLAG_REC10  PICTURE 'Y'
    LINE_NUM = LINE_NUM + 1
 ENDIF
```

```
IF (SAV_REC11 > 0)
   @ LINE_NUM, 1  GET FLAG_REC11  PICTURE 'Y'
   LINE_NUM = LINE_NUM + 1
ENDIF
IF (SAV_REC12 > 0)
   @ LINE_NUM, 1  GET FLAG_REC12  PICTURE 'Y'
   LINE_NUM = LINE_NUM + 1
ENDIF
IF (SAV_REC13 > 0)
   @ LINE_NUM, 1  GET FLAG_REC13  PICTURE 'Y'
   LINE_NUM = LINE_NUM + 1
ENDIF
IF (SAV_REC14 > 0)
   @ LINE_NUM, 1  GET FLAG_REC14  PICTURE 'Y'
   LINE_NUM = LINE_NUM + 1
ENDIF
IF (SAV_REC15 > 0)
   @ LINE_NUM, 1  GET FLAG_REC15  PICTURE 'Y'
   LINE_NUM = LINE_NUM + 1
ENDIF
IF (SAV_REC16 > 0)
   @ LINE_NUM, 1  GET FLAG_REC16  PICTURE 'Y'
   LINE_NUM = LINE_NUM + 1
ENDIF
*
CLEAR TYPEAHEAD

*  Accept the user's Pay record deletion requests.  *

READ
*
@ 23, 0
? CHR(7)
@ 23, 0 SAY "ONLY DELETING MARKED ('Y') PAY RECORDS."
*
IF (FLAG_REC1)
   GOTO SAV_REC1
   DELETE
ENDIF
IF (FLAG_REC2)
   GOTO SAV_REC2
   DELETE
ENDIF
IF (FLAG_REC3)
   GOTO SAV_REC3
   DELETE
ENDIF
IF (FLAG_REC4)
   GOTO SAV_REC4
   DELETE
ENDIF
IF (FLAG_REC5)
   GOTO SAV_REC5
   DELETE
ENDIF
```

```
  IF (FLAG_REC6)
     GOTO SAV_REC6
     DELETE
  ENDIF
  IF (FLAG_REC7)
     GOTO SAV_REC7
     DELETE
  ENDIF
  IF (FLAG_REC8)
     GOTO SAV_REC8
     DELETE
  ENDIF
  IF (FLAG_REC9)
     GOTO SAV_REC9
     DELETE
  ENDIF
  IF (FLAG_REC10)
     GOTO SAV_REC10
     DELETE
  ENDIF
  IF (FLAG_REC11)
     GOTO SAV_REC11
     DELETE
  ENDIF
  IF (FLAG_REC12)
     GOTO SAV_REC12
     DELETE
  ENDIF
  IF (FLAG_REC13)
     GOTO SAV_REC13
     DELETE
  ENDIF
  IF (FLAG_REC14)
     GOTO SAV_REC14
     DELETE
  ENDIF
  IF (FLAG_REC15)
     GOTO SAV_REC15
     DELETE
  ENDIF
  IF (FLAG_REC16)
     GOTO SAV_REC16
     DELETE
  ENDIF
*
  PACK
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                              VIEW_REC                                       *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*         The VIEW_REC procedure is used to view system records.  This        *
*         procedure only allows the user to view the contents of the record*
*         fields, i.e. no updating is allowed. The system prevents inadver-*
*         tant deletion of records by "recalling" all records marked for      *
*         deletion.  If a non-unique access key (common Last Name) has been*
*         entered the system will advise you to reenter a unique key for      *
*         the desired record.                                                 *
*                                                                             *
* CALLED PROCEDURES:                                                          *
*                              Procedure Name            Location             *
*                              --------------            --------------       *
*                              DB3_ERR                   RCIS_P2.PRG          *
*                              SET_UP                    RCIS_P2.PRG          *
*                              INIT_DB                   RCIS_P2.PRG          *
*                              RCIS_HDR                  RCIS_P2.PRG          *
*                              VIEW_PAY                  RCIS_P2.PRG          *
*                              ERR_NF                    RCIS_P2.PRG          *
*                              M_PROMPT                  RCIS_P2.PRG          *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE VIEW_REC
*
 ON ERROR DO DB3_ERR WITH ERROR(), MESSAGE()
 M_CHOICE = .T.
 FIRST_TIME = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *
 *  Loop until user chooses to terminate this view function mode.   *

 DO WHILE (M_CHOICE)
    DO SET_UP

    *  If the user has pressed the <Esc> key, exit this function and  *
    *  return to the select function menu.                            *

    IF (QUIT_KEY)
       EXIT
    ENDIF
    @ 22, 0
    @ 23, 0
    @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
    DO INIT_DB

    *  If the Master file is empty, automatically exit this function and  *
    *  return to the select function menu.                                *

    IF (EMPTY_M)
       @ 22, 0
```

```
   ? CHR(7)
   @ 23, 4 SAY 'MASTER FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
   WAIT ''
   EXIT
ENDIF

*  If the Pay file is empty and a Pay record has been selected for  *
*  processing, automatically exit this function and return to the   *
*  select function menu.                                            *

IF (R_SELECT = 'I'  .AND.  EMPTY_P)
   @ 22, 0
   ? CHR(7)
   @ 23, 7 SAY 'PAY FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
   WAIT ''
   EXIT
ENDIF
SELECT 1

*  If the user doesn't enter the primary key (IN_SSAN), use    *
*  the secondary key value (T_FOR_STR) which is composed of    *
*  the cadet's first and/or middle and/or last name.           *

IF (LEN(LTRIM(IN_SSAN)) = 0)
   SET FILTER TO &T_FOR_STR

   *  Issue dBASE III PLUS command to go to the first record in the  *
   *  file which matches the secondary key value.                    *

   GOTO TOP
ELSE
   SET FILTER TO &FILT_STR

   *  Issue dBASE III PLUS command to go to the record which matches  *
   *  the primary key value.                                          *

   SEEK IN_SSAN
ENDIF
DO CASE

   *  If a matching Master record is found, set up the screen format *
   *  and prepare all files required to process the record display.  *

   CASE  .NOT. EOF()
         IN_SSAN = SSAN
         IN_FNAM = F_NAME
         IN_MNAM = M_NAME
         IN_LNAM = L_NAME
         DO CASE

            *  If the user has selected to process a Master record,    *
            *  issue the dBASE III PLUS commands that coordinate the   *
            *  interaction between the supporting files and the main   *
            *  file.                                                   *
```

```
                    CASE  R_SELECT = 'H'
                          REC_NUM = RECNO()
                          @ 22, 0
                          @ 23, 0
                          ? CHR(7)
                          @ 23, 4 SAY 'MASTER RECORD FOUND.  PRESS ANY KEY TO' ;
                                     + ' VIEW RECORD.'
                          CLEAR TYPEAHEAD
                          WAIT ''
                          CLAS_VAL = AS_CLASS
*
                          SELECT 3
                          SEEK CLAS_VAL
                          IF (.NOT. EOF())
                             CLAS_NUM = STR(AS_CL_TOT,3)
                          ELSE
                             CLAS_NUM = ' ? '
                          ENDIF
*
                          SELECT 1
                          GOTO REC_NUM
                          SET FORMAT TO &M_FORM_STR
                          SET SCOREBOARD ON
                          SET ESCAPE ON
                          CLEAR TYPEAHEAD
                          SET CONFIRM OFF

                          *  Issue 'CHANGE' command to display the record data. *

                          CHANGE
                          SET CONFIRM ON
                          GOTO REC_NUM

                          *  If Master record was inadvertantly deleted, recall *
                          *  it back to a current status.                      *

                          IF DELETED()
                             RECALL RECORD REC_NUM
                          ENDIF
                          DO RCIS_HDR

                          *  If the Pay file is not empty, invoke the proce-  *
                          *  dures which will give the user the opportunity   *
                          *  to view any Pay records associated with the se-  *
                          *  lected Master record.                            *

                          IF (.NOT. EMPTY_P)
                             DO VIEW_PAY
                             IF (VP_CHOICE)
                                IF (M_CHOICE)
                                   LOOP
                                ELSE
                                   EXIT
                                ENDIF
                             ENDIF
                    ENDIF

                *  If the user has selected to process a Pay record,  *
                *  invoke the VIEW_PAY procedure and process its      *
                *  return response.                                   *

                CASE  R_SELECT = 'I'
                    DO VIEW_PAY
                    IF (M_CHOICE)
                       LOOP
                    ELSE
                       EXIT
                    ENDIF
             ENDCASE

          *  If no matching Master record is found, give the user the option *
          *  to try again or to terminate this function.                     *

          CASE  EOF()
             @ 22, 0
             @ 23, 4 SAY 'MASTER '
             DO ERR_NF
             IF (M_CHOICE)
                LOOP
             ELSE
                EXIT
             ENDIF
       ENDCASE

       *  Give the user the opportunity to execute this function again.  *

       DO M_PROMPT
    ENDDO

    *  Close the database files used in this function.  *

    SELECT 3
    USE
    SELECT 2
    USE
    SELECT 1
    USE
    CLOSE FORMAT
   *
    F_PARA = STUFF(F_PARA,1,1,'C')
    @ 21, 0
    ON ERROR
   *
   RETURN
```

```
*-----------------------------------------------------------------------------*
*                               TRANS_REC                                     *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       The TRANS_REC procedure is used to transfer system records between*
*       the active and the inactive relation files.  The system checks the*
*       destination file to ensure that the input primary key doesn't     *
*       already exist before the transfer is allowed to proceed.  Master  *
*       records and all associated subordinate Pay records will be trans- *
*       fered at the same time.  The Master record is automatically dis-  *
*       played to the user and the user is given the option of viewing the*
*       associated Pay records.  Transfer confirmation is required before *
*       the record is copied.  The system also checks to prevent inadver- *
*       tant deletion of a record.                                        *
*                                                                             *
* CALLED PROCEDURES:                                                          *
*                               Procedure Name          Location              *
*                               --------------          --------------        *
*                               DB3_ERR                 RCIS_P2.PRG           *
*                               SET_UP                  RCIS_P2.PRG           *
*                               TRANS_CHK               RCIS_P2.PRG           *
*                               INIT_DB                 RCIS_P2.PRG           *
*                               RCIS_HDR                RCIS_P2.PRG           *
*                               VIEW_PAY                RCIS_P2.PRG           *
*                               TQ_PROMPT               RCIS_P2.PRG           *
*                               BLD_NDX                 RCIS_P2.PRG           *
*                               ERR_NF                  RCIS_P2.PRG           *
*                               M_PROMPT                RCIS_P2.PRG           *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE TRANS_REC
*
 ON ERROR DO DB3_ERR WITH ERROR(), MESSAGE()
 M_CHOICE = .T.
 FIRST_TIME = .T.

 *  vvvvvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvv vvvv  *
 *  Loop until user chooses to terminate this transfer function mode.  *

 DO WHILE (M_CHOICE)
    DO SET_UP

    *  If the user has pressed the <Esc> key, exit this function and  *
    *  return to the select function menu.                            *

    IF (QUIT_KEY)
       EXIT
    ENDIF
    @ 22, 0
    @ 23, 0
    @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
    DO TRANS_CHK
DO CASE

   *  If the input search key already exists on the target file and  *
   *  the user wants to try again, loop back to the beginning of the *
   *  "Do While (M_Choice)" statement.                                *

   CASE T_PATH = 2
        LOOP

   *  If the input search key already exists on the target file and  *
   *  the user doesn't want to try again, exit from the transfer     *
   *  function mode.                                                  *

   CASE T_PATH = 3
        EXIT
ENDCASE
DO INIT_DB

*  If the Master file is empty, automatically exit this function and  *
*  return to the select function menu.                                 *

IF (EMPTY_M)
   @ 22, 0
   ? CHR(7)
   @ 23, 4 SAY 'MASTER FILE IS EMPTY.  PRESS ANY KEY TO CONTINUE.'
   WAIT ''
   EXIT
ENDIF
SELECT 1
SET FILTER TO &FILT_STR

*  Issue dBASE III PLUS command to go to the record which matches  *
*  the primary key value.                                            *

SEEK IN_SSAN
DO CASE

   *  If a matching Master record is found, set up the screen format *
   *  and prepare all files required to process the record display.  *

   CASE  .NOT. EOF()
         REC_NUM = RECNO()
         IN_FNAM = F_NAME
         IN_MNAM = M_NAME
         IN_LNAM = L_NAME
         @ 22, 0
         @ 23, 0
         ? CHR(7)
         @ 23, 4 SAY 'MASTER RECORD FOUND.  PRESS ANY KEY TO VIEW RECORD.'
         CLEAR TYPEAHEAD
         WAIT ''
         SAV_CLAS = AS_CLASS

         SELECT 3
         SEEK SAV_CLAS
```

```
            IF (.NOT. EOF())
               CT_REC_NUM = RECNO()
               CLAS_NUM = STR(AS_CL_TOT,3)
            ELSE
               CLAS_NUM = ' ? '
            ENDIF
*
            SELECT 1
            GOTO REC_NUM
            SET FORMAT TO &M_FORM_STR
            SET SCOREBOARD ON
            SET ESCAPE ON
            CLEAR TYPEAHEAD
            SET CONFIRM OFF

            *  Issue 'CHANGE' command to display the record data. *

            CHANGE
            SET CONFIRM ON
            DO RCIS_HDR
            GOTO REC_NUM
            DELETE

            *  If the Pay file is not empty, invoke the procedures     *
            *  which will give the user the opportunity to view any    *
            *  Pay records associated with the selected Master record. *

            IF (.NOT. EMPTY_P)
               R_SELECT = ' '
               DO VIEW_PAY
            ENDIF
            DO TQ_PRMPT

            *  If user reconfirms transfer request, then prepare all  *
            *  target files for the transfer process.                 *

            IF (TQ_CHOICE)
               @ 23, 0
               @ 23, 4 SAY 'TRANSFERING MASTER RECORD AND ALL ASSOCIATED';
                         + ' PAY RECORDS TO ' + DEST_FILE + ' FILE'

               *  Close all source files while transfer is being processed.*

               SELECT 3
               USE
               SELECT 2
               USE
               SELECT 1
               USE
*
               SELECT 1
               USE &T_M_FILE

               *  Prepare main index file and build index list for target *
               *  files.                                                  *
```

```
IF (.NOT. FILE(T_M_NDX_F))
   INDEX ON &M_NDX_STR TO &T_M_NDX
ENDIF
DO BLD_NDX WITH T_M_NDX
SET INDEX TO &NDX_LIST
SET FILTER TO &FILT_STR

*  Transfer Master record from source file to target file. *

APPEND FROM &M_FILE FOR SSAN = IN_SSAN

*  Update target file support files (tables).  *

IF (CLAS_NUM <> ' ? ')
   CLAS_VAL = AS_CLASS
   SET FILTER TO
   COUNT FOR AS_CLASS = CLAS_VAL TO CLAS_TOT
*
   SELECT 3
   USE &T_CT_FILE
   IF (.NOT. FILE(T_CT_NDX_F))
      INDEX ON AS_CLASS TO &T_CT_NDX
   ENDIF
   SET INDEX TO &T_CT_NDX
   SEEK CLAS_VAL
   IF (.NOT. EOF())
      REPLACE AS_CL_TOT WITH CLAS_TOT
   ENDIF
ENDIF
*
SELECT 2
USE &T_P_FILE
IF (RECNO() = 1)  .AND.  EOF()  .AND.  FILE(T_P_NDX_F)
   ERASE &T_P_NDX_F
ENDIF
IF (.NOT. FILE(T_P_NDX_F))
   INDEX ON &P_NDX_STR TO &T_P_NDX
ENDIF
SET INDEX TO &T_P_NDX
SET FILTER TO &FILT_STR

*  Transfer all associated Pay records from the source  *
*  file to the target file.                             *

APPEND FROM &P_FILE FOR SSAN = IN_SSAN

*  Transfer complete.  Close all target files.  *

SELECT 3
USE
SELECT 2
USE
SELECT 1
USE
```

```
                    ENDIF
        *
                    SELECT 1
                    USE &M_FILE
                    DO BLD_NDX WITH M_NDX
                    SET INDEX TO &NDX_LIST

                    *  If transfer was reconfirmed, remove marked Master record  *
                    *  from the source file.                                      *

                    IF (TQ_CHOICE)
                       PACK
                       IF (CLAS_NUM <> ' ? ')
                          SET FILTER TO
                          COUNT FOR AS_CLASS = SAV_CLAS TO CLAS_TOT
        *
                          SELECT 3
                          USE &CT_FILE
                          IF (.NOT. FILE(CT_NDX_F))
                             INDEX ON AS_CLASS TO &CT_NDX
                          ENDIF
                          SET INDEX TO &CT_NDX
                          GOTO CT_REC_NUM
                          REPLACE AS_CL_TOT WITH CLAS_TOT
                       ENDIF
                    ELSE
                       GOTO REC_NUM

                       *  If transfer request was not confirmed, recall the  *
                       *  Master record back to current status.              *

                       IF DELETED()
                          RECALL RECORD REC_NUM
                       ENDIF
                    ENDIF
                    IF (.NOT. EMPTY_P)
                       SELECT 2
                       USE &P_FILE
                       SET INDEX TO &P_NDX

                       *  If the Pay file is not empty and the transfer request  *
                       *  was confirmed, remove all associated Pay records from  *
                       *  the source file.  If the request wasn't confirmed,     *
                       *  recall all marked Pay records back to current status.  *

                       IF (TQ_CHOICE)
                          PACK
                       ELSE
                          RECALL ALL
                       ENDIF
                    ENDIF

                    *  Close all source files in preparation for next process.  *

                    SELECT 3
```

```
                  USE
                  SELECT 2
                  USE
                  SELECT 1
                  USE

            *  If no matching Master record is found, give the user th… option *
            *  to try again or to terminate this function.                      *

            CASE  EOF()
                  @ 22, 0
                  @ 23, 4 SAY 'MASTER '
                  DO ERR_NF
                  IF (M_CHOICE)
                     LOOP
                  ELSE
                     EXIT
                  ENDIF
         ENDCASE

         *  Give the user the opportunity to execute this function again.  *

         DO M_PROMPT
      ENDDO

      *  Close the database files used in this function.  *

      SELECT 3
      USE
      SELECT 2
      USE
      SELECT 1
      USE
      CLOSE FORMAT
     *
      F_PARA = STUFF(F_PARA,1,1,'C')
      @ 21, 0
      ON ERROR
     *
     RETURN
```

```
*------------------------------------------------------------------------------*
*                                 TRANS_CHK                                    *
*------------------------------------------------------------------------------*
*                                                                              *
* SUMMARY:                                                                     *
*         The TRANS_CHK is controlled by the TRANS_REC procedure. This pro-*
*         cedure is used to access the target file and check for any exist-*
*         ing primary keys which match the one input by the user.  If an   *
*         existing key is found, the user is advised to check their input  *
*         and try again.                                                   *
*                                                                              *
*------------------------------------------------------------------------------*


PROCEDURE TRANS_CHK
*
 T_PATH = 1
 SELECT 1
 USE &T_M_FILE

 *  If the target Master file is empty and the index file exists, erase  *
 *  the index file.                                                        *

 IF (RECNO() = 1)  .AND.  EOF()  .AND.  FILE(T_M_NDX_F)
    ERASE &T_M_NDX_F
 ELSE
    IF (.NOT. FILE(T_M_NDX_F))
       INDEX ON &M_NDX_STR TO &T_M_NDX
    ENDIF
    SET INDEX TO &T_M_NDX
    SET FILTER TO &FILT_STR
    SEEK IN_SSAN

    *  If the input key value already exists on the target file, prompt  *
    *  the user to try again.                                             *

    IF (.NOT. EOF())
       T_PATH = 2
       @ 22, 0
       @ 23, 0
       ? CHR(7)
       M_CHOICE = .T.
       @ 23,10 SAY 'RECORD ALREADY EXISTS IN THE TARGET FILE.'
       @ 23,53 SAY 'DO YOU WANT TO TRY AGAIN [Y/N]? ' GET M_CHOICE PICTURE 'Y'
       CLEAR TYPEAHEAD
       READ
       @ 23,0
       IF .NOT. M_CHOICE
          T_PATH = 3
          @ 21, 0
          @ 21,33 SAY 'CLOSING FILES'
       ENDIF
    ENDIF
 ENDIF
 *  Close the target Master file.  *

 SELECT 1
 USE
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                 HGHT_CHK                                   *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*        The HGHT_CHK procedure is used to ensure that the HEIGHT field     *
*        data stored in the Master record matches the primary key field in*
*        the height table relation. This procedure rounds the user's input*
*        height to the nearest quarter of an inch because the height table*
*        relation only recognizes quarter inch increments.                  *
*                                                                            *
* INVOKING PROCEDURES:                                                       *
*                               Procedure Name           Location           *
*                               --------------           --------------     *
*                               ADD_REC                  RCIS_P2.PRG        *
*                               EDIT_REC                 RCIS_P2.PRG        *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*    Variable Name     Status                      Purpose                  *
*    -------------     ------     ------------------------------------------*
*     HT_NUM           LOCAL      Used to store the integer portion of the *
*                                 HEIGHT variable.                          *
*                                                                            *
*     HT_FRAC          LOCAL      Used to store the fraction portion of the*
*                                 HEIGHT variable.                          *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE HGHT_CHK
*
 HT_NUM  =  VAL(LEFT(STR((HEIGHT*100),4),2))
 HT_FRAC = VAL(RIGHT(STR((HEIGHT*100),4),2))/100.00
 IF (HT_FRAC <> 0.00) .AND. (HT_FRAC <> 0.25) .AND. ;
    (HT_FRAC <> 0.50) .AND. (HT_FRAC <> 0.75)
*
    IF (HT_FRAC > 0.00)  .AND.  (HT_FRAC < 0.13)
       HT_FRAC = 0.00
    ELSE
       IF (HT_FRAC >= 0.13)  .AND.  (HT_FRAC < 0.38)
          HT_FRAC = 0.25
       ELSE
          IF (HT_FRAC >= 0.38)  .AND.  (HT_FRAC < 0.63)
             HT_FRAC = 0.50
          ELSE
             IF (HT_FRAC >= 0.63)  .AND.  (HT_FRAC < 0.88)
                HT_FRAC = 0.75
             ELSE
                HT_FRAC = 0.00
                HT_NUM  = HT_NUM + 1.00
             ENDIF
          ENDIF
       ENDIF
    ENDIF
    *  If the input value for the cadet's height is outside the  *
    *  allowable range, replace the height value with zeroes     *
    *  (this will cause the cadet's record to be flagged on the  *
    *  weight standards report and will prompt the user to enter *
    *  the correct value).                                       *

    IF (HT_NUM < 58.00) .OR. (HT_NUM > 83.00)
       HT_NUM = 0.00
       HT_FRAC = 0.00
    ENDIF
    REPLACE HEIGHT WITH (HT_NUM + HT_FRAC)
 ENDIF
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                              VIEW_PAY                                       *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*        The VIEW_PAY procedure allows the user to view Pay records already*
*        on file.  This procedure is controlled by the VIEW_REC and the    *
*        TRANS_REC procedures.  When the user is processing a Master record*
*        and associated Pay records exist, the user is given the option to *
*        view the Pay records.  If the user asks to see the Pay records    *
*        then this procedure is envoked.                                    *
*                                                                             *
* INVOKING PROCEDURES:                                                        *
*                              Procedure Name          Location              *
*                              --------------          --------------        *
*                              VIEW_REC                RCIS_P2.PRG           *
*                              TRANS_REC               RCIS_P2.PRG           *
*                                                                             *
* CALLED PROCEDURES:                                                          *
*                              Procedure Name          Location              *
*                              --------------          --------------        *
*                              ERR_NF                  RCIS_P2.PRG           *
*                              VP_PROMPT               RCIS_P2.PRG           *
*                              RCIS_HDR                RCIS_P2.PRG           *
*                              M_PROMPT                RCIS_P2.PRG           *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE VIEW_PAY
*
 SELECT 2
 SET FILTER TO &FILT_STR

 *  Issue dBASE III PLUS command to go to the record which matches  *
 *  the primary key value.                                           *

 SEEK IN_SSAN
 DO CASE

    *  If no matching Pay records are found, give the user the option *
    *  to try again or to terminate this function.                    *

    CASE  EOF()
          IF (R_SELECT = 'I')
             @ 22, 0
             @ 23, 7 SAY 'PAY '
             DO ERR_NF
          ENDIF

    *  If matcning Pay records are found, build Edit Pay records screen  *
    *  and display all the current associated Pay records.              *

    CASE .NOT. EOF()
         VP_CHOICE = .F.
```

```
IF ((R_SELECT = 'H')  .OR.  (F_SELECT = 'L'))
   DO VP_PRMPT
ENDIF

*  Enter this section if the user selected a Pay record for  *
*  processing or if their initial selection was a Master     *
*  record and they chose to view any associated Pay records. *

IF (VP_CHOICE)  .OR.  (R_SELECT = 'I')
   SET SCOREBOARD ON
   SET ESCAPE ON
   CLEAR TYPEAHEAD
   @  1, 0 TO  3,79 DOUBLE
   @  2,25 SAY 'INDIVIDUAL CADET DATA - PAY INFORMATION'
   INITIALS = LEFT(IN_FNAM,1)+' '+LEFT(IN_MNAM,1)
   @  2, 2 SAY TRIM(LEFT(IN_LNAM,10))+', '+INITIALS
   @  4, 0 SAY '    REC   BEGINNING   ENDING               RESID    ';
            + 'BOOK      FT    ATP    FSP '
   @  5, 0 SAY '     #     PAY DATE    PAY DATE   TUITION  (I OR O)  ';
            + 'FEES     DAYS   DAYS   DAYS'
   DISP_LINE = 1
   LINE_NUM  = 6

   *  Continue loop until all associated Pay records have been  *
   *  displayed.                                                *

   DO WHILE ((.NOT. EOF()) .AND. (LINE_NUM <= 22))
      REC_NUM = RECNO()
      @ LINE_NUM, 5 SAY LTRIM(STR(DISP_LINE))
      @ LINE_NUM,10 SAY PAY_DATE1
      @ LINE_NUM,22 SAY PAY_DATE2
      @ LINE_NUM,33 SAY TUITION
      @ LINE_NUM,45 SAY RES_STATUS
      @ LINE_NUM,52 SAY BOOK_FEES
      @ LINE_NUM,62 SAY FT_DAYS
      @ LINE_NUM,69 SAY ATP_DAYS
      @ LINE_NUM,76 SAY FSP_DAYS
      DISP_LINE = DISP_LINE + 1
      LINE_NUM  = LINE_NUM  + 1

      *  If the transfer function was selected, delete all  *
      *  associated Pay records after their contents has    *
      *  been displayed.                                    *

      IF (F_SELECT = 'L')
         GOTO REC_NUM
         DELETE
      ENDIF

      *  Issue dBASE III PLUS command to go to the next Pay  *
      *  record which matches the input key value.           *

      SKIP
   ENDDO
   @ 23, 0 SAY 'PRESS ANY KEY TO RETURN TO MAIN SELECTION SCREEN'
```

```
                  WAIT ''
                  DO RCIS_HDR
                  IF (F_SELECT = 'J')

                     *  Give the user the opportunity to execute this function *
                     *  again.                                                 *

                     DO M_PROMPT
                  ENDIF
               ELSE

                  *  If the transfer function was selected, delete all  *
                  *  associated Pay records without displaying their    *
                  *  contents.                                          *

                  IF (F_SELECT = 'L')
                     DO WHILE (.NOT. EOF())
                        DELETE
                        SKIP
                     ENDDO
                  ENDIF
               ENDIF
       ENDCASE
      *
      RETURN
```

```
*---------------------------------------------------------------------------*
*                                  SET_UP                                   *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*         The SET_UP procedure is used to set up the string variables used *
*         to identify the different source and destination database files  *
*         (both data and index files).  All procedures in this file use    *
*         these strings (GLOBAL) as opposed to building their own.         *
*                                                                           *
* INVOKING PROCEDURES:                                                      *
*                             Procedure Name             Location           *
*                             --------------             --------------     *
*                             ADD_REC                    RCIS_P2.PRG        *
*                             EDIT_REC                   RCIS_P2.PRG        *
*                             VIEW_REC                   RCIS_P2.PRG        *
*                             DEL_REC                    RCIS_P2.PRG        *
*                             TRANS_REC                  RCIS_P2.PRG        *
*                                                                           *
* CALLED PROCEDURES:                                                        *
*                             Procedure Name             Location           *
*                             --------------             --------------     *
*                             INPUT_KEY                  RCIS_P2.PRG        *
*                                                                           *
* VARIABLE DECLARATIONS:                                                    *
*                                                                           *
*     Variable Name      Status                   Purpose                   *
*     -------------      ------   ------------------------------------------*
*       S_PREFIX         LOCAL    Used to store a one letter identifier for*
*                                 the source files.                         *
*                                                                           *
*       T_PREFIX         LOCAL    Used to store a one letter identifier for*
*                                 the target files.                         *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE SET_UP
*
 PRIVATE S_PREFIX
 PRIVATE T_PREFIX
*

 *  Initialize global boolean variables used in other procedures.  *

 QUIT_KEY = .F.
 EMPTY_M  = .F.
 EMPTY_P  = .F.
 DEL_FLAG = .F.

 *  All these database file string variables only need to be built once  *
 *  for each mode.                                                        *

 IF  (FIRST_TIME)
     M_FILE  = 'X_CDT_MS'
```

```
       P_FILE  = 'X_CDT_PY'
       CT_FILE = 'X_CDT_CT'

       *  Initialize source and target file designaters.  *

       IF (G_SELECT = 'H')
          S_PREFIX = 'A'
          T_PREFIX = 'I'
          DEST_FILE = 'INACTIVE'
       ELSE
          S_PREFIX = 'I'
          T_PREFIX = 'A'
          DEST_FILE = 'ACTIVE'
       ENDIF
       M_FILE  = STUFF(M_FILE,1,1,LTRIM(S_PREFIX))
       P_FILE  = STUFF(P_FILE,1,1,LTRIM(S_PREFIX))
       CT_FILE = STUFF(CT_FILE,1,1,LTRIM(S_PREFIX))
       M_NDX      = 'X_SSAN'
       P_NDX      = 'X_PAYD'
       CT_NDX     = 'X_ASCL'
       M_NDX_STR = 'SSAN'
       P_NDX_STR = 'SSAN+STR(YEAR(PAY_DATE1),4)+STR(MONTH(PAY_DATE1),2)';
                 + '+STR(DAY(PAY_DATE1),2)'
       FILT_STR  = 'SSAN = IN_SSAN'
       IF (F_SELECT >= 'J')
          M_FORM_STR = 'CDT_M_VU'
       ELSE
          M_FORM_STR = 'CDT_M'
       ENDIF
       IF (F_SELECT = 'L')
          T_M_FILE    = STUFF(M_FILE,1,1,LTRIM(T_PREFIX))
          T_P_FILE    = STUFF(P_FILE,1,1,LTRIM(T_PREFIX))
          T_CT_FILE   = STUFF(CT_FILE,1,1,LTRIM(T_PREFIX))
          T_M_NDX     = STUFF(M_NDX,1,1,LTRIM(T_PREFIX))
          T_P_NDX     = STUFF(P_NDX,1,1,LTRIM(T_PREFIX))
          T_CT_NDX    = STUFF(CT_NDX,1,1,LTRIM(T_PREFIX))
          T_M_NDX_F   = T_M_NDX + '.NDX'
          T_P_NDX_F   = T_P_NDX + '.NDX'
          T_CT_NDX_F = T_CT_NDX + '.NDX'
       ENDIF
       M_NDX     = STUFF(M_NDX,1,1,LTRIM(S_PREFIX))
       P_NDX     = STUFF(P_NDX,1,1,LTRIM(S_PREFIX))
       CT_NDX    = STUFF(CT_NDX,1,1,LTRIM(S_PREFIX))
       M_NDX_F   = M_NDX + '.NDX'
       P_NDX_F   = P_NDX + '.NDX'
       CT_NDX_F = CT_NDX + '.NDX'
   ENDIF
   DO INPUT_KEY
  *
  RETURN
```

```
*------------------------------------------------------------------------------*
*                                   INPUT_KEY                                  *
*------------------------------------------------------------------------------*
*                                                                              *
* SUMMARY:                                                                     *
*           The INPUT_KEY procedure displays the prompts required for access   *
*           keys and accepts the user's input.  If a null value is returned,   *
*           either by pressing the <Enter> key without previously entering    *
*           data or by pressing the <Esc> key, the QUIT_KEY flag is set to    *
*           TRUE. This serves as an escape mechanism if the user had inadver-*
*           tantly selected an incorrect mode.                                 *
*                                                                              *
* CALLED PROCEDURES:                                                           *
*                               Procedure Name            Location             *
*                               --------------            --------------       *
*                               SSAN_CHK                  RCIS_P2.PRG          *
*                                                                              *
*------------------------------------------------------------------------------*


PROCEDURE INPUT_KEY
*
 DONE = .F.
 IN_FNAM = '               '
 IN_MNAM = '               '
 IN_LNAM = '               '
 IN_SSAN = '         '
 @ 18, 0 CLEAR TO 24,79
 @ 18,11 SAY 'SSAN'

 *  If the selected function is not Add or Transfer, display the  *
 *  secondary key value.                                          *

 IF (F_SELECT <> 'H')  .AND.  (F_SELECT <> 'L')
    @ 19, 5 SAY 'First Name'
    @ 20, 4 SAY 'Middle Name'
    @ 21, 6 SAY 'Last Name'
    @ 22,36 SAY '  OR  Name.'
 ENDIF
 @ 22, 4 SAY "Enter Cadet's Social Security #"

 *  Continue loop until the user enters a valid response or until they  *
 *  enter an exit sequence.                                              *

 DO WHILE (.NOT. DONE)
    @ 18,16 GET IN_SSAN  PICTURE '@R 999-99-9999'

    *  If the selected function is not Add or Transfer, allow the    *
    *  user to specify a secondary key value for the search.         *

    IF (F_SELECT <> 'H')  .AND.  (F_SELECT <> 'L')
       @ 19,16 GET IN_FNAM PICTURE '!!!!!!!!!!!!!!!'
       @ 20,16 GET IN_MNAM PICTURE '!!!!!!!!!!!!!!!'
       @ 21,16 GET IN_LNAM PICTURE '!!!!!!!!!!!!!!!'
    ENDIF
```

```
      *  Accept user's input key values.  *

      READ
      CLEAR TYPEAHEAD
*
      DONE = .T.

      *  If the user doesn't enter a value for the primary key, build the *
      *  filter string variable from the secondary key value inputs.      *

      IF (LEN(LTRIM(IN_SSAN)) = 0)
         IF (F_SELECT <> 'H')  .AND.  (F_SELECT <> 'L')
            T_FOR_STR = ''
            IF (LEN(LTRIM(IN_FNAM)) > 0)
               T_FOR_STR = 'F_NAME =' + "'" + IN_FNAM + "'"
            ENDIF
            IF (LEN(LTRIM(IN_MNAM)) > 0)
               IF (LEN(T_FOR_STR) > 0)
                  T_FOR_STR = T_FOR_STR + '.AND.M_NAME =' + "'" + IN_MNAM + "'"
               ELSE
                  T_FOR_STR = 'M_NAME =' + "'" + IN_MNAM + "'"
               ENDIF
            ENDIF
            IF (LEN(LTRIM(IN_LNAM)) > 0)
               IF (LEN(T_FOR_STR) > 0)
                  T_FOR_STR = T_FOR_STR + '.AND.L_NAME =' + "'" + IN_LNAM + "'"
               ELSE
                  T_FOR_STR = 'L_NAME =' + "'" + IN_LNAM + "'"
               ENDIF
            ENDIF

            *  If the secondary key value is being used, check the file for *
            *  duplicate records associated with that input value.          *

            IF (LEN(T_FOR_STR) > 0)
               SELECT 1
               USE &M_FILE
               COUNT FOR &T_FOR_STR TO REC_CNT
               IF (REC_CNT > 1)
                  @ 22, 0
                  @ 23, 0
                  ? CHR(7)
                  @ 23, 0 SAY 'NAME ASSIGNED TO MORE THAN ONE RECORD (ENTER';
                          + ' SSAN).  PRESS ANY KEY & TRY AGAIN.'
                  WAIT ''
                  DONE = .F.
                  LOOP
               ENDIF
            ELSE
               QUIT_KEY = .T.
            ENDIF
         ELSE
            QUIT_KEY = .T.
         ENDIF
      ELSE
         DO SSAN_CHK WITH IN_SSAN

         *  If the primary key value is not syntactically correct, prompt  *
         *  the user to try again.                                         *

         IF (BAD_SSAN)
            @ 23, 0
            ? CHR(7)
            @ 23, 0 SAY 'SSAN FIELD MUST HAVE NINE (9) DIGITS.  PRESS ANY KEY' ;
                      + ' AND TRY AGAIN.'
            WAIT ''
            @ 23, 0
            DONE = .F.
            LOOP
         ENDIF
      ENDIF
   ENDDO
   IF (QUIT_KEY)
      @ 18, 0 CLEAR TO 24,79
      @ 21,33 SAY 'CLOSING FILES'
      @ 24, 0
   ENDIF
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                  SSAN_CHK                                  *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*         The SSAN_CHK procedure checks each character of the primary key    *
*         input for spaces.  If a space is found, a flag is set and the      *
*         controlling procedure (INPUT_KEY) reads the flag and tells the     *
*         user to try again.                                                 *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*     Variable Name     Status                      Purpose                  *
*     -------------     ------     ------------------------------------------*
*      CHK_POS          LOCAL      Used as an incremental counter to test    *
*                                  each character of the primary key (SSAN).*
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE SSAN_CHK
*
 PARAMETERS SSAN_STR
*
 CHK_POS = 1
 BAD_SSAN = .F.
 DO WHILE (CHK_POS <= 9)
    POS_NUM = SUBSTR(SSAN_STR,CHK_POS,1)
    IF (POS_NUM = ' ')
       BAD_SSAN = .T.
    ENDIF
    CHK_POS = CHK_POS + 1
 ENDDO
*
RETURN
```

```
*---------------------------------------------------------------------*
*                              INIT_DB                                *
*---------------------------------------------------------------------*
*                                                                     *
* SUMMARY:                                                            *
*         The INIT_DB procedure sets up the dBASE III PLUS work area  *
*         environments for all the required relations, i.e. specifies work *
*         area IDs, opens data files, specifies index files and erases &  *
*         rebuilds indexes as required.                               *
*                                                                     *
* INVOKING PROCEDURES:                                                *
*                           Procedure Name          Location          *
*                           --------------          -------------     *
*                           ADD_REC                 RCIS_P2.PRG       *
*                           EDIT_REC                RCIS_P2.PRG       *
*                           VIEW_REC                RCIS_P2.PRG       *
*                           DEL_REC                 RCIS_P2.PRG       *
*                           TRANS_REC               RCIS_P2.PRG       *
*                                                                     *
* VARIABLE DECLARATIONS:                                              *
*                                                                     *
*     Variable Name     Status                  Purpose               *
*     -------------     ------    ------------------------------------*
*      CHK_POS         PARAMETER  Used as an incremental counter to test  *
*                                 each character of the primary key (SSAN).*
*                                                                     *
*---------------------------------------------------------------------*


PROCEDURE INIT_DB

 *  Initailize the Master file and all its associated index files.  *

 SELECT 1
 USE &M_FILE
 IF (RECNO() = 1  .AND.  EOF())
    EMPTY_M = .T.
    IF FILE(M_NDX_F)
       ERASE &M_NDX_F
    ENDIF
 ELSE
    IF .NOT. FILE(M_NDX_F)
       INDEX ON &M_NDX_STR TO &M_NDX
    ENDIF
    IF (FIRST_TIME)
       DO BLD_NDX WITH M_NDX
       FIRST_TIME = .F.
    ENDIF
    SET INDEX TO &NDX_LIST
 ENDIF

 *  Initailize the Pay file and its associated index file.  *

 SELECT 2
 USE &P_FILE
 IF (RECNO() = 1  .AND.  EOF())
    EMPTY_P = .T.
    IF FILE(P_NDX_F)
       ERASE &P_NDX_F
    ENDIF
 ELSE
    IF .NOT. FILE(P_NDX_F)
       INDEX ON &P_NDX_STR TO &P_NDX
    ENDIF
    SET INDEX TO &P_NDX
 ENDIF

 *  Initailize the Enrollment totals support file and its associated  *
 *  index files.                                                      *

 SELECT 3
 USE &CT_FILE
 IF .NOT. FILE(CT_NDX_F)
    INDEX ON AS_CLASS TO &CT_NDX
 ENDIF
 SET INDEX TO &CT_NDX
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                BLD_NDX                                      *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*         The BLD_NDX procedure checks for the existence of all the index     *
*         files used to process the queries.  It builds a string of the       *
*         existing file names to be used whenever the files are updated.      *
*         These index files must be updated whenever the database files are*
*         changed.  If not, the queries will not be able to locate the        *
*         current information stored on the database files.                   *
*                                                                             *
* INVOKING PROCEDURES:                                                        *
*                              Procedure Name            Location             *
*                              --------------            --------------       *
*                              ADD_REC                   RCIS_P2.PRG          *
*                              TRANS_REC                 RCIS_P2.PRG          *
*                              INIT_DB                   RCIS_P2.PRG          *
*                                                                             *
* VARIABLE DECLARATIONS:                                                      *
*                                                                             *
*    Variable Name      Status                    Purpose                     *
*    -------------      ------     -----------------------------------------*
*     MAS_NDX          PARAMETER   String variable which contains the current*
*                                  primary key index for the Master file.     *
*                                                                             *
*     CGDT_NDX          LOCAL      String variables for index file names.     *
*     CGDT_NDX_F          "                         "                         *
*     CLAS_NDX            "                         "                         *
*     CLAS_NDX_F          "                         "                         *
*     DCFY_NDX            "                         "                         *
*     DCFY_NDX_F          "                         "                         *
*     SCHA_NDX            "                         "                         *
*     SCHA_NDX_F          "                         "                         *
*     SEDT_NDX            "                         "                         *
*     SEDT_NDX_F          "                         "                         *
*     WPSS_NDX            "                         "                         *
*     WPSS_NDX_F          "                         "                         *
*                                                                             *
*     PREFIX            LOCAL      Used to store a one letter identifier for *
*                                  the source files.                          *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE BLD_NDX
*
 PARAMETER MAS_NDX
*
 PRIVATE WPSS_NDX
 PRIVATE SCHA_NDX
 PRIVATE CLAS_NDX
 PRIVATE DCFY_NDX
 PRIVATE CGDT_NDX
 PRIVATE SEDT_NDX
 PRIVATE WPSS_NDX_F
 PRIVATE SCHA_NDX_F
 PRIVATE CLAS_NDX_F
 PRIVATE DCFY_NDX_F
 PRIVATE CGDT_NDX_F
 PRIVATE SEDT_NDX_F
 PRIVATE PREFIX
*
 WPSS_NDX = 'X_WPSS'
 SCHA_NDX = 'X_SCHA'
 CLAS_NDX = 'X_CLAS'
 DCFY_NDX = 'X_DCFY'
 CGDT_NDX = 'X_CGDT'
 SEDT_NDX = 'X_SEDT'
*
 PREFIX     = SUBSTR(MAS_NDX,1,1)
 WPSS_NDX   = STUFF(WPSS_NDX,1,1,LTRIM(PREFIX))
 SCHA_NDX   = STUFF(SCHA_NDX,1,1,LTRIM(PREFIX))
 CLAS_NDX   = STUFF(CLAS_NDX,1,1,LTRIM(PREFIX))
 DCFY_NDX   = STUFF(DCFY_NDX,1,1,LTRIM(PREFIX))
 CGDT_NDX   = STUFF(CGDT_NDX,1,1,LTRIM(PREFIX))
 SEDT_NDX   = STUFF(SEDT_NDX,1,1,LTRIM(PREFIX))
 WPSS_NDX_F = WPSS_NDX + '.NDX'
 SCHA_NDX_F = SCHA_NDX + '.NDX'
 CLAS_NDX_F = CLAS_NDX + '.NDX'
 DCFY_NDX_F = DCFY_NDX + '.NDX'
 CGDT_NDX_F = CGDT_NDX + '.NDX'
 SEDT_NDX_F = SEDT_NDX + '.NDX'
*
 NDX_LIST = MAS_NDX
 IF FILE(WPSS_NDX_F)
    NDX_LIST = NDX_LIST + ',' + WPSS_NDX
 ENDIF
 IF FILE(SCHA_NDX_F)
    NDX_LIST = NDX_LIST + ',' + SCHA_NDX
 ENDIF
 IF FILE(CLAS_NDX_F)
    NDX_LIST = NDX_LIST + ',' + CLAS_NDX
 ENDIF
 IF FILE(DCFY_NDX_F)
    NDX_LIST = NDX_LIST + ',' + DCFY_NDX
 ENDIF
 IF FILE(CGDT_NDX_F)
    NDX_LIST = NDX_LIST + ',' + CGDT_NDX
 ENDIF
 IF FILE(SEDT_NDX_F)
    NDX_LIST = NDX_LIST + ',' + SEDT_NDX
 ENDIF
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                   INIT_SAV                                  *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*         The INIT_SAV procedure simply initializes the SAV_REC variables    *
*         which are used in the updating and deleting processes for PAY      *
*         records.                                                            *
*                                                                             *
* INVOKING PROCEDURES:                                                        *
*                               Procedure Name              Location          *
*                               --------------              --------------    *
*                               EDIT_PAY                    RCIS_P2.PRG       *
*                               DEL_PAY                     RCIS_P2.PRG       *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE INIT_SAV
*
 SAV_REC1  = 0
 SAV_REC2  = 0
 SAV_REC3  = 0
 SAV_REC4  = 0
 SAV_REC5  = 0
 SAV_REC6  = 0
 SAV_REC7  = 0
 SAV_REC8  = 0
 SAV_REC9  = 0
 SAV_REC10 = 0
 SAV_REC11 = 0
 SAV_REC12 = 0
 SAV_REC13 = 0
 SAV_REC14 = 0
 SAV_REC15 = 0
 SAV_REC16 = 0
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                  INIT_FLG                                   *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*          The INIT_FLG procedure simply initializes the FLAG_REC variables   *
*          which are used in the deleting processes for PAY records.          *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE INIT_FLG
*
 FLAG_REC1  = .F.
 FLAG_REC2  = .F.
 FLAG_REC3  = .F.
 FLAG_REC4  = .F.
 FLAG_REC5  = .F.
 FLAG_REC6  = .F.
 FLAG_REC7  = .F.
 FLAG_REC8  = .F.
 FLAG_REC9  = .F.
 FLAG_REC10 = .F.
 FLAG_REC11 = .F.
 FLAG_REC12 = .F.
 FLAG_REC13 = .F.
 FLAG_REC14 = .F.
 FLAG_REC15 = .F.
 FLAG_REC16 = .F.
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                  SAV_RECS                                  *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*        The SAV_RECS procedure is used in coordination with the procedures*
*        dures that process all Pay records on the same screen(16 maximum).*
*        It saves the database record numbers which correspond to the line *
*        they are displayed on so that the system knows which screen line  *
*        to use in displaying the appropriate records.                      *
*                                                                            *
* INVOKING PROCEDURES:                                                       *
*                                Procedure Name           Location          *
*                                --------------           --------------    *
*                                EDIT_PAY                 RCIS_P2.PRG       *
*                                DEL_PAY                  RCIS_P2.PRG       *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE SAV_RECS
*
 DO CASE
    CASE  DISP_LINE = 1
          SAV_REC1 = RECNO()
    CASE  DISP_LINE = 2
          SAV_REC2 = RECNO()
    CASE  DISP_LINE = 3
          SAV_REC3 = RECNO()
    CASE  DISP_LINE = 4
          SAV_REC4 = RECNO()
    CASE  DISP_LINE = 5
          SAV_REC5 = RECNO()
    CASE  DISP_LINE = 6
          SAV_REC6 = RECNO()
    CASE  DISP_LINE = 7
          SAV_REC7 = RECNO()
    CASE  DISP_LINE = 8
          SAV_REC8 = RECNO()
    CASE  DISP_LINE = 9
          SAV_REC9 = RECNO()
    CASE  DISP_LINE = 10
          SAV_REC10 = RECNO()
    CASE  DISP_LINE = 11
          SAV_REC11 = RECNO()
    CASE  DISP_LINE = 12
          SAV_REC12 = RECNO()
    CASE  DISP_LINE = 13
          SAV_REC13 = RECNO()
    CASE  DISP_LINE = 14
          SAV_REC14 = RECNO()
    CASE  DISP_LINE = 15
          SAV_REC15 = RECNO()
    CASE  DISP_LINE = 16
          SAV_REC16 = RECNO()
 ENDCASE
*
RETURN
```

```
*-----------------------------------------------------------------------*
*                              RCIS_HDR                                 *
*-----------------------------------------------------------------------*
*                                                                       *
* SUMMARY:                                                              *
*         The RCIS_HDR procedure redisplays the selected mode by repainting*
*         the pop-up menus.                                             *
*                                                                       *
* INVOKING PROCEDURES:                                                  *
*                              Procedure Name            Location       *
*                              --------------            -------------- *
*                              ADD_REC                   RCIS_P2.PRG    *
*                              ADD_PAY                   RCIS_P2.PRG    *
*                              EDIT_REC                  RCIS_P2.PRG    *
*                              EDIT_PAY                  RCIS_P2.PRG    *
*                              DEL_REC                   RCIS_P2.PRG    *
*                              DEL_PAY                   RCIS_P2.PRG    *
*                              VIEW_REC                  RCIS_P2.PRG    *
*                              VIEW_PAY                  RCIS_P2.PRG    *
*                              TRANS_REC                 RCIS_P2.PRG    *
*                                                                       *
*-----------------------------------------------------------------------*


PROCEDURE RCIS_HDR
*
 SET ESCAPE OFF
 SET SCOREBOARD OFF
 SET FILTER TO
 SET FORMAT TO
 CLEAR GETS
 @ 1, 0 TO 3,79
 @ 2,22 SAY 'ROTC CADET INFORMATION SYSTEM (RCIS)'
 CALL MENU WITH F_PARA
 CALL MENU WITH G_PARA
 IF (F_SELECT = 'M')
    CALL MENU WITH QS_PARA
    CALL MENU WITH QO_PARA
 ELSE
    IF (F_SELECT <> 'L')
       CALL MENU WITH R_PARA
    ENDIF
 ENDIF
 @ 24, 0
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                  ERR_RE                                    *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*         The ERR_RE procedure displays an error message informing the user*
*         that a record with the requested key value already exists and     *
*         then accepts a continuation option.                               *
*                                                                            *
* INVOKING PROCEDURES:                                                       *
*                              Procedure Name             Location          *
*                              --------------             --------------    *
*                              ADD_REC                    RCIS_P2.PRG       *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE ERR_RE
*
 ? CHR(7)
 M_CHOICE = .T.
 @ 18, 0 CLEAR TO 24,79
 @ 18,11 SAY 'SSAN'
 @ 18,16 SAY IN_SSAN  PICTURE '@R 999-99-9999'

 *  If the selected function is not Add or Transfer, display the  *
 *  secondary key values for the selected record.                  *

 IF (F_SELECT <> 'H')  .AND.  (F_SELECT <> 'L')
    @ 19, 5 SAY 'First Name'
    @ 20, 4 SAY 'Middle Name'
    @ 21, 6 SAY 'Last Name'
    @ 19,16 SAY IN_FNAM PICTURE '!!!!!!!!!!!!!!!'
    @ 20,16 SAY IN_MNAM PICTURE '!!!!!!!!!!!!!!!'
    @ 21,16 SAY IN_LNAM PICTURE '!!!!!!!!!!!!!!!'
 ENDIF
 @ 23,10 SAY 'RECORD ALREADY EXISTS.  DO YOU WANT TO TRY AGAIN [Y/N]? ';
         GET M_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
 @ 18, 0 CLEAR TO 24,79
 IF .NOT. M_CHOICE
    @ 21,33 SAY 'CLOSING FILES'
 ENDIF
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                                  ERR_NF                                   *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*         The ERR_NF procedure displays an error message informing the user*
*         that a record with the requested key value doesn't exist and then*
*         accepts a continuation option.                                    *
*                                                                           *
* INVOKING PROCEDURES:                                                      *
*                             Procedure Name            Location            *
*                             --------------            --------------      *
*                             ADD_REC                   RCIS_P2.PRG         *
*                             EDIT_REC                  RCIS_P2.PRG         *
*                             EDIT_PAY                  RCIS_P2.PRG         *
*                             DEL_REC                   RCIS_P2.PRG         *
*                             DEL_PAY                   RCIS_P2.PRG         *
*                             VIEW_REC                  RCIS_P2.PRG         *
*                             VIEW_PAY                  RCIS_P2.PRG         *
*                             TRANS_REC                 RCIS_P2.PRG         *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE ERR_NF
*
 ? CHR(7)
 M_CHOICE = .T.
 @ 18, 0 CLEAR TO 22,79
 @ 18,11 SAY 'SSAN'
 @ 18,16 SAY IN_SSAN  PICTURE '@R 999-99-9999'

 *  If the selected function is not Add or Transfer, display the  *
 *  secondary key values for the selected record.                 *

 IF (F_SELECT <> 'H')  .AND.  (F_SELECT <> 'L')
    @ 19, 5 SAY 'First Name'
    @ 20, 4 SAY 'Middle Name'
    @ 21, 6 SAY 'Last Name'
    @ 19,16 SAY IN_FNAM PICTURE '!!!!!!!!!!!!!!!'
    @ 20,16 SAY IN_MNAM PICTURE '!!!!!!!!!!!!!!!'
    @ 21,16 SAY IN_LNAM PICTURE '!!!!!!!!!!!!!!!'
 ENDIF
 @ 23,11 CLEAR TO 23,79
 @ 23,11 SAY 'RECORD NOT FOUND.  DO YOU WANT TO TRY AGAIN [Y/N]? ';
         GET M_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
 @ 18, 0 CLEAR TO 24,79
 IF .NOT. M_CHOICE
    @ 21,33 SAY 'CLOSING FILES'
 ENDIF
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                               P_PROMPT                                     *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*         The P_PROMPT procedure displays a message asking the user if they*
*         would like to add additional Pay records associated with the      *
*         current Master record.                                             *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE P_PROMPT
*

 *  Display the primary and secondary key values for the selected record.  *

 @ 18, 0 CLEAR TO 24,79
 @ 18,11 SAY 'SSAN'
 @ 18,16 SAY IN_SSAN  PICTURE '@R 999-99-9999'
 @ 19, 5 SAY 'First Name'
 @ 19,16 SAY IN_FNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 20, 4 SAY 'Middle Name'
 @ 20,16 SAY IN_MNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 21, 6 SAY 'Last Name'
 @ 21,16 SAY IN_LNAM PICTURE '!!!!!!!!!!!!!!!'
 P_CHOICE = .T.
 @ 23, 4 SAY 'WOULD YOU LIKE TO ADD AN ADDITIONAL PAY RECORD'
 @ 23,51 SAY 'FOR THIS CADET [Y/N]? ' GET P_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
 IF .NOT. P_CHOICE
    @ 18, 0 CLEAR TO 24,79
    @ 21,33 SAY 'CLOSING FILES'
 ENDIF
*
RETURN
```

```
*------------------------------------------------------------------------------*
*                                M_PROMPT                                      *
*------------------------------------------------------------------------------*
*                                                                              *
* SUMMARY:                                                                     *
*         The M_PROMPT procedure displays a continuation message and           *
*         accepts the user option.                                             *
*                                                                              *
* INVOKING PROCEDURES:                                                         *
*                               Procedure Name              Location           *
*                               --------------              --------------     *
*                               ADD_REC                     RCIS_P2.PRG        *
*                               EDIT_REC                    RCIS_P2.PRG        *
*                               EDIT_PAY                    RCIS_P2.PRG        *
*                               DEL_REC                     RCIS_P2.PRG        *
*                               DEL_PAY                     RCIS_P2.PRG        *
*                               VIEW_REC                    RCIS_P2.PRG        *
*                               TRANS_REC                   RCIS_P2.PRG        *
*                                                                              *
*------------------------------------------------------------------------------*


PROCEDURE M_PROMPT
*
 @ 18, 0 CLEAR TO 24,79
 M_CHOICE = .T.
 @ 23,16 SAY 'DO YOU WANT TO CONTINUE WITH THIS MODE [Y/N]? ';
         GET M_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
 IF .NOT. M_CHOICE
    @ 18, 0 CLEAR TO 24,79
    @ 21,33 SAY 'CLOSING FILES'
 ENDIF
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                 D_PROMPT                                    *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*         The D_PROMPT procedure displays a message requesting confirmation*
*         for record deletion.  The user response is accepted.                *
*                                                                             *
* INVOKING PROCEDURES:                                                        *
*                                Procedure Name            Location           *
*                                --------------            --------------     *
*                                ADD_REC                   RCIS_P2.PRG        *
*                                DEL_REC                   RCIS_P2.PRG        *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE D_PROMPT
*

 *  Display the primary and secondary key values for the selected record.  *

 @ 18, 0 CLEAR TO 24,79
 @ 18,11 SAY 'SSAN'
 @ 18,16 SAY IN_SSAN  PICTURE '@R 999-99-9999'
 @ 19, 5 SAY 'First Name'
 @ 19,16 SAY IN_FNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 20, 4 SAY 'Middle Name'
 @ 20,16 SAY IN_MNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 21, 6 SAY 'Last Name'
 @ 21,16 SAY IN_LNAM PICTURE '!!!!!!!!!!!!!!!'
 P_CHOICE = .F.
 @ 23,20 SAY 'DO YOU WANT TO DELETE THIS RECORD [Y/N]? ';
         GET P_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                                  TQ_PRMPT                                 *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*         The TQ_PRMPT procedure displays a message requesting confirmation*
*         for record transfer.  The user response is accepted.              *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE TQ_PRMPT
*

 *  Display the primary and secondary key values for the selected record.  *

 @ 18, 0 CLEAR TO 24,79
 @ 18,11 SAY 'SSAN'
 @ 18,16 SAY IN_SSAN  PICTURE '@R 999-99-9999'
 @ 19, 5 SAY 'First Name'
 @ 19,16 SAY IN_FNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 20, 4 SAY 'Middle Name'
 @ 20,16 SAY IN_MNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 21, 6 SAY 'Last Name'
 @ 21,16 SAY IN_LNAM PICTURE '!!!!!!!!!!!!!!!'
 TQ_CHOICE = .F.
 @ 23,20 SAY 'DO YOU WANT TO TRANSFER THIS RECORD [Y/N]? ';
         GET TQ_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                              VP_PRMPT                                     *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*          The VP_PRMPT procedure displays a message asking the user if     *
*          they would like to view all the Pay records associated with the  *
*          current Master record.                                           *
*                                                                           *
* INVOKING PROCEDURES:                                                      *
*                              Procedure Name            Location           *
*                              --------------            --------------     *
*                              EDIT_PAY                  RCIS_P2.PRG        *
*                              VIEW_PAY                  RCIS_P2.PRG        *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE VP_PRMPT
*

 *  Display the primary and secondary key values for the selected record.  *

 @ 18, 0 CLEAR TO 24,79
 @ 18,11 SAY 'SSAN'
 @ 18,16 SAY IN_SSAN  PICTURE '@R 999-99-9999'
 @ 19, 5 SAY 'First Name'
 @ 19,16 SAY IN_FNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 20, 4 SAY 'Middle Name'
 @ 20,16 SAY IN_MNAM PICTURE '!!!!!!!!!!!!!!!'
 @ 21, 6 SAY 'Last Name'
 @ 21,16 SAY IN_LNAM PICTURE '!!!!!!!!!!!!!!!'
 VP_CHOICE = .F.
 @ 23, 4 SAY "DO YOU WANT TO VIEW THIS CADET'S PAY RECORD(S) [Y/N]? " ;
         GET VP_CHOICE PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
*
RETURN
```

```
*---------------------------- -----------------------------------------*
*                               DB3_ERR                                *
*----------------------------------------------------------------------*
*                                                                      *
* SUMMARY:                                                             *
*        The DB3_ERR procedure displays system error messages and provides *
*        limited corrective action capabilities. If a corrupted index con- *
*        dition is detected, the system attempts to repair it by creating a*
*        replacement. For other errors, the system will display an advisory*
*        message and the error number detected.  This error number can be  *
*        used to locate the problem area.  An exact decoding of error num- *
*        bers can be found in the dBASE III PLUS User's Manual Appendices. *
*                                                                      *
* INVOKING PROCEDURES:                                                 *
*                               Procedure Name          Location       *
*                               --------------          --------------  *
*                               ADD_REC                 RCIS_P2.PRG    *
*                               EDIT_REC                RCIS_P2.PRG    *
*                               DEL_REC                 RCIS_P2.PRG    *
*                               VIEW_REC                RCIS_P2.PRG    *
*                               TRANS_REC               RCIS_P2.PRG    *
*                                                                      *
* VARIABLE DECLARATIONS:                                               *
*                                                                      *
*    Variable Name     Status                  Purpose                 *
*    -------------     ------    -------------------------------------- *
*     ERR_NUM        PARAMETER  Used to hold the system error number   *
*                               returned by the built-in function ERROR().*
*                                                                      *
*     ERR_MSG        PARAMETER  Used to hold the system error number re- *
*                               turned by the built-in function MESSAGE().*
*                                                                      *
*     PRFX_SAV         LOCAL    Used to store a one letter identifier for *
*                               the source files.                      *
*                                                                      *
*----------------------------------------------------------------------*


PROCEDURE DB3_ERR
*
 PARAMETERS ERR_NUM, ERR_MSG
*
 PRIVATE PRFX_SAV
*
 @ 21, 0
 ? CHR(7)
 @ 21, 0
 ? CHR(7)
 @ 21, 0
 ? CHR(7)

 *  If an index error has occured, try to correct the error by reindexing *
 *  all query index files using appropriate index string variables.      *

 IF (ERR_NUM = 68) .OR. (ERR_NUM = 114)
```

```
@ 21, 0
@ 21,15 SAY 'INDEX ERROR DETECTED.  ATTEMPTING TO REBUILD INDICES.'
@ 24,0
PRFX_SAV = LEFT(NDX_LIST,1)
STR_LEN  = LEN(NDX_LIST)
STRT_POS = 1
DO WHILE (STRT_POS < STR_LEN)
   NDX_NAM   = SUBSTR(NDX_LIST,STRT_POS,6)
   NDX_NAM_F = NDX_NAM + '.NDX'
   NDX_ID    = RIGHT(NDX_NAM,4)
   DO CASE
      CASE  NDX_ID  = 'SSAN'
            NDX_STR = 'SSAN'
      CASE  NDX_ID  = 'WPSS'
            NDX_STR = 'AS_CLASS+(WPSS/1000.0)'
      CASE  NDX_ID  = 'SCHA'
            NDX_STR = 'AS_CLASS+(CUM_GPA/10.0)'
      CASE  NDX_ID  = 'CLAS'
            NDX_STR = 'STR(AS_CLASS,1)+CAT_TYPE+L_NAME+F_NAME'
      CASE  NDX_ID  = 'DCFY'
            NDX_STR = 'YEAR(COM_DATE+92)+(FY_RTNG/100.00)';
                    + '+(DC_RTNG/1000.000)'
      CASE  NDX_ID  = 'CGDT'
            NDX_STR = 'STR(AS_CLASS,1)+STR(YEAR(COM_DATE),4)';
                    + '+STR(MONTH(COM_DATE),2)+STR(DAY(COM_DATE),2)'
      CASE  NDX_ID  = 'SEDT'
            NDX_STR = 'STR(AS_CLASS,1)+STR(YEAR(SCHLR_DATE),4)';
                    + '+STR(MONTH(SCHLR_DATE),2)+STR(DAY(SCHLR_DATE),2)';
                    + '+STR(SCHLR_TYPE,3,1)'
   ENDCASE
   IF FILE(NDX_NAM_F)
      REINDEX ON &NDX_STR TO &NDX_NAM
   ENDIF
   STRT_POS = STRT_POS + 7
ENDDO
IF (PRFX_SAV = 'A')  .OR.  (PRFX_SAV = 'I')
   CL_NDX   = STUFF(CT_NDX,1,1,LTRIM(PRFX_SAV))
   PY_NDX   = STUFF(P_NDX,1,1,LTRIM(PRFX_SAV))
   CL_NDX_F = CL_NDX + '.NDX'
   PY_NDX_F = PY_NDX + '.NDX'
   CL_STR   = 'AS_CLASS'
   PY_STR   = 'SSAN+STR(YEAR(PAY_DATE1),4)+STR(MONTH(PAY_DATE1),2)';
          + '+STR(DAY(PAY_DATE1),2)'
   IF FILE(CL_NDX_F)
      REINDEX ON &CL_STR TO &CL_NDX
   ENDIF
   IF FILE(PY_NDX_F)
      REINDEX ON &PY_STR TO &PY_NDX
   ENDIF
ENDIF
@ 21, 0
? CHR(7)
@ 21,15 SAY 'INDICES REBUILT.  ATTEMPTING TO CONTINUE PROCESSING.'
@ 21, 0
RETRY
```

```
 ELSE
    IF (ERR_NUM = 126)
       @ 23, 0
       @ 23,10 SAY 'PRINTER ERROR. CHECK PRINTER AND PRESS ANY KEY TO' ;
                 + ' CONTINUE.'
       CLEAR TYPEAHEAD
       WAIT ' '
       @ 23, 0
    ELSE
       @ 22, 0
       @ 23, 0
       @ 22, 0 SAY ERR_MSG
       @ 23, 0 SAY 'REPORT ERROR CODE ['
       @ 23,19 SAY ERR_NUM PICTURE '@B ###'
       @ 23,22 SAY '].  PRESS ANY KEY TO CONTINUE.'
       CLEAR TYPEAHEAD
       WAIT ' '
       @ 22, 0
       @ 23, 0
    ENDIF
 ENDIF
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                        BEGINNING OF RCIS_P3.PRG                            *
*----------------------------------------------------------------------------*
*----------------------------------------------------------------------------*
*                                 QUERIES                                    *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*       QUERIES is the main driver for the system Query functions.  It      *
*       prepares the required database files for processing and invokes     *
*       the specific query procedure that the user has requested.           *
*                                                                            *
* CALLED PROCEDURES:                                                         *
*                               Procedure Name            Location           *
*                               --------------            --------------     *
*                               SET_DBQ                   RCIS_P3.PRG        *
*                               DB3_Q_ERR                 RCIS_P3.PRG        *
*                               WPSS_QRY                  RCIS_P3.PRG        *
*                               SCHA_QRY                  RCIS_P3.PRG        *
*                               DCFY_QRY                  RCIS_P3.PRG        *
*                               CLAS_QRY                  RCIS_P3.PRG        *
*                               HRAX_QRY                  RCIS_P3.PRG        *
*                               CGDT_QRY                  RCIS_P3.PRG        *
*                               SEDT_QRY                  RCIS_P3.PRG        *
*                               WTAR_QRY                  RCIS_P3.PRG        *
*                               INDV_QRY                  RCIS_P3.PRG        *
*                               PAYI_QRY                  RCIS_P3.PRG        *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*     Variable Name     Status                   Purpose                     *
*     -------------     ------    ---------------------------------------*
*       QRY_NDX         LOCAL     String variable containing the list of    *
*                                 database index file names used by the     *
*                                 queries.                                   *
*                                                                            *
*       QRY_NDX_F       LOCAL     String variable containing a single data-*
*                                 base index file name.                      *
*                                                                            *
*       PRFX_SAV        LOCAL     Used to save a one letter identifier      *
*                                 from the front-end of the index file name*
*                                                                            *
*       STRT_POS        LOCAL     Used as a pointer to locate the beginning*
*                                 of each file name in the index string.    *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE QUERIES
*
 DO SET_DBQ
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
*
 SELECT 1
 USE &M_FILE
```

```
IF QS_SELECT = 'Q'
   SELECT 2
   USE &P_FILE
ENDIF
SELECT 1

*  If the Master file is empty, erase all existing index files.  *

IF (RECNO() = 1  .AND.  EOF())
   @ 23, 0 SAY 'REQUIRED DATABASE FILE IS EMPTY.  PRESS ANY KEY AND MAKE' ;
             + ' ANOTHER SELECTION.'
   WAIT ''
   PRFX_SAV = LEFT(M_NDX_F,1)
   QRY_NDX  = 'X_SSAN.NDX,X_WPSS.NDX,X_SCHA.NDX,X_DCFY.NDX,X_CLAS.NDX' ;
           + ',X_CGDT.NDX,X_SEDT.NDX'
   STRT_POS = 1
   DO WHILE (STRT_POS < 77)
      QRY_NDX_F = SUBSTR(QRY_NDX,STRT_POS,10)
      QRY_NDX_F = STUFF(QRY_NDX_F,1,1,LTRIM(PRFX_SAV))
      IF FILE(QRY_NDX_F)
         ERASE &QRY_NDX_F
      ENDIF
      STRT_POS = STRT_POS + 11
   ENDDO
ELSE
   EMPTY_P = .F.
   SELECT 2

   *  If the Pay file is empty, erase its index file.  *

   IF (RECNO() = 1  .AND.  EOF())
      EMPTY_P = .T.
      IF FILE(P_NDX_F)
         ERASE &P_NDX_F
      ENDIF
   ENDIF
   IF (QS_SELECT = 'Q')  .AND.  (EMPTY_P)
      @ 23, 0 SAY 'REQUIRED DATABASE FILE IS EMPTY.  PRESS ANY KEY AND MAKE' ;
                + ' ANOTHER SELECTION.'
      WAIT ''
   ELSE

      *  Initialize spacing variables used in output formatting.  *

      S2  = SPACE(2)
      S3  = SPACE(3)
      S4  = SPACE(4)
      S5  = SPACE(5)
      S6  = SPACE(6)
      S7  = SPACE(7)
      S17 = SPACE(17)
      S26 = SPACE(26)
      S31 = SPACE(31)

      *  If the WPSS, SCHA, DCFY, or INDV query has been selected,  *
   *  set up the class enrollment totals relation file.          *

   IF (QS_SELECT = 'H' .OR. QS_SELECT = 'I' .OR. QS_SELECT = 'J' .OR. ;
       QS_SELECT = 'P')
*
      SELECT 2
      USE &CT_FILE
      IF (.NOT. FILE(CT_NDX_F))
         INDEX ON AS_CLASS TO &CT_NDX
      ENDIF
      SET INDEX TO &CT_NDX
   ENDIF

   *  If the WTAR query has been selected, set up the height        *
   *  standards and the aerobics run time standards relation files. *

   IF (QS_SELECT = 'O')
      SELECT 2
      USE T_CDT_HW
      IF (.NOT. FILE('T_HGHT.NDX'))
         INDEX ON HEIGHT TO T_HGHT
      ENDIF
      SET INDEX TO T_HGHT
      SELECT 3
      USE T_CDT_RT
      IF (.NOT. FILE('T_AGEC.NDX'))
         INDEX ON AGE_CAT TO T_AGEC
      ENDIF
      SET INDEX TO T_AGEC
   ENDIF

   *  Direct the process flow to the query procedure which  *
   *  corresponds to the user's menu selection.             *

   DO CASE
      CASE QS_SELECT = 'H'
           DO WPSS_QRY
      CASE QS_SELECT = 'I'
           DO SCHA_QRY
      CASE QS_SELECT = 'J'
           DO DCFY_QRY
      CASE QS_SELECT = 'K'
           DO CLAS_QRY
      CASE QS_SELECT = 'L'
           DO HRAX_QRY
      CASE QS_SELECT = 'M'
           DO CGDT_QRY
      CASE QS_SELECT = 'N'
           DO SEDT_QRY
      CASE QS_SELECT = 'O'
           DO WTAR_QRY
      CASE QS_SELECT = 'P'
           DO INDV_QRY
      CASE QS_SELECT = 'Q'
           DO PAYI_QRY
         ENDCASE
      ENDIF
   ENDIF
*
 SELECT 3
 USE
 SELECT 2
 USE
 SELECT 1
 USE
*
 F_PARA = STUFF(F_PARA,1,1,'A')
 F_PARA = STUFF(F_PARA,6,1,'H')
 CLEAR
 @  1, 0 TO  3,79
 @  2,22 SAY 'ROTC CADET INFORMATION SYSTEM (RCIS)'
 ON ERROR
*
RETURN
```

```
*-----------------------------------------------------------------------*
*                                WPSS_QRY                               *
*-----------------------------------------------------------------------*
*                                                                       *
* SUMMARY:                                                              *
*       The WPSS_QRY procedure provides the interface for the user to per- *
*       form ad hoc queries on cadet data which is related to or used in  *
*       the computation of the Weighted POC Selection System (WPSS) score. *
*                                                                       *
*>>>>>>>>>>>>>ALL THAT FOLLOWS APPLIES FOR ALL QUERY PROCEDURES<<<<<<<<<<<<<*
*       Procedures build the query interface screen, prompt the user to   *
*       enter the desired constraint operators and values, error check the *
*       inputs, build the query output formats and invoke the dBASE III   *
*       PLUS system to locate the records which meet all the input con-   *
*       straints.  If any records are located they will be printed via the *
*       output media the user has previously selected.                    *
*       This particular query procedure will contain extensive comments for*
*       each significant code structure.  The comments for each structure *
*       will apply for every query procedure since all queries have the   *
*       same major code structures.  The structure's comments will be     *
*       numbered and in all subsequent query procedures will be labeled   *
*       with those same corresponding numbers.                            *
*                                                                       *
* CALLED PROCEDURES:                                                    *
*                             Procedure Name          Location          *
*                             --------------          --------------    *
*                             DB3_Q_ERR               RCIS_P3.PRG       *
*                             RO_CHK                  RCIS_P3.PRG       *
*                             ERR_NF                  RCIS_P3.PRG       *
*                             RCIS_HDR                RCIS_P3.PRG       *
*                             M_PROMPT                RCIS_P3.PRG       *
*                                                                       *
* VARIABLE DECLARATIONS:                                                *
*                                                                       *
*     Variable Name    Status                    Purpose                *
*     -------------    ------    ---------------------------------------*
*       DONE           LOCAL     Boolean flag used to terminate the INTER-*
*                                MEDIATE loops in the query procedures.  *
*                                                                       *
*       STOP_LOOP      LOCAL     Boolean flag used to signal an exit from *
*                                the MAIN loop in the query procedures.  *
*                                                                       *
*       TEMP_LOOP      LOCAL     Boolean flag used to terminate the loop *
*                                which checks for invalid relational oper-*
*                                ators.                                 *
*                                                                       *
*       GOOD_RO        LOCAL     Boolean flag used to indicate whether all*
*                                input relational operators are valid.  *
*                                                                       *
*       FIRST_TIME     LOCAL     Boolean flag used to signal the beginning*
*                                of a query print so that the report head-*
*                                er will only print once at the beginning.*
*                                                                       *
*       HDRXX          LOCAL     String variable containing the one line *
*                                of the report header. 'X's will have num-*
*                                               bers and letters indicating the position *
*                                               of the header.                           *
*                                                                                        *
*       DATAX_X         LOCAL                   String variable containing the formatted *
*                                               data names and spacers for the printouts.*
*                                               First 'X' will have a number indicating  *
*                                               the Xth line per cadet.  Second 'X' will *
*                                               have 'S' (10 pitch) or 'L' (17 pitch)    *
*                                               indicating short or long print format.   *
*                                                                                        *
*       FXX             LOCAL                   Used to store the data field inputs from *
*                                               the query input screens.  'X's will have *
*                                               numbers and letters indicating the posi- *
*                                               tion of the data input field.            *
*                                                                                        *
*       OXX             LOCAL                   Used to store the operator field inputs  *
*                                               from the query input screens.  'X's will *
*                                               have numbers and letters indicating the  *
*                                               position of the operator input field.    *
*                                                                                        *
*       FILT_STR        LOCAL                   String variable containing the list of   *
*                                               dBASE III PLUS filter conditions built   *
*                                               from the fields indicated on the query   *
*                                               input screen.                            *
*                                                                                        *
*       MAX_LINES       LOCAL                   Used to specify the maximum number of    *
*                                               print lines per page for the selected    *
*                                               output media.                            *
*                                                                                        *
*       DISP_LINE       LOCAL                   Used to indicate the current print line  *
*                                               for the printed output.                  *
*                                                                                        *
*  NOTE :  Most of the PRIVATE variables used in the query procedures are               *
*          used for the purpose of printing out the state of logical                    *
*          variables.  Logical variables cannot be converted to a string so             *
*          if they are TRUE, a 'Y' is stored in their corresponding string              *
*          variable, if they are FALSE, a 'N' is stored in their correspond-            *
*          ing string variable.                                                          *
*                                                                                        *
*>>>>>>>>>>>>>ALL THAT PRECEDES APPLIES FOR ALL QUERY PROCEDURES<<<<<<<<<<<<*
*------------------------------------------------------------------------------*


PROCEDURE WPSS_QRY
*
 PRIVATE FYC
 PRIVATE PRS
 PRIVATE WRQ
 PRIVATE PLS
 PRIVATE PRINT_OPT
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.
```

```
* vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *
* Loop until user chooses to terminate this query function mode.  *

DO WHILE (M_CHOICE)

   *  Initialize operator and constraint fields.  *

   DONE = .F.
   O1A = '  '
   F1A = ' '
   O1B = '  '
   F1B = ' '
   O2A = '  '
   F2A = '   '
   O2B = '  '
   F2B = '   '
   O3A = '  '
   F3A = '             '
   O3B = '  '
   F3B = '             '
   F4  = '          '
   PRINT_OPT = 1

   *  vvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *
   *  Loop until user enters data in query fields or chooses to terminate *
   *  this query function mode.                                           *

   DO WHILE (.NOT. DONE)
      CLEAR
      DO HELP_SCRN
      @  1, 0 TO 16,79
      @  1,20 SAY ' WEIGHTED POC SELECTION SYSTEM (WPSS) QUERY '
      @  3,28 SAY 'AS Class'
      @  6,26 SAY 'WPSS Score'
      @  9,27 SAY 'Last Name'
      @ 12,32 SAY 'SSAN'
      @ 14,14 SAY 'Print Options'
      @ 15,14 SAY ' Brief - 1 , Detailed - 2'

      *  vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *
      *  Loop until user is finised making changes to the input, or until  *
      *  all operator inputs are valid, or until user chooses to terminate *
      *  this query function mode.                                         *

      DO WHILE (.NOT. DONE)
         @  3,37 GET O1A PICTURE '!!'
         @  3,40 GET F1A PICTURE '9'
         @  4,37 GET O1B PICTURE '!!'
         @  4,40 GET F1B PICTURE '9'
         @  6,37 GET O2A PICTURE '!!'
         @  6,40 GET F2A PICTURE '999'
         @  7,37 GET O2B PICTURE '!!'
         @  7,40 GET F2B PICTURE '999'
         @  9,37 GET O3A PICTURE '!!'
@  9,40 GET F3A PICTURE '!!!!!!!!!!!!!!!'
@ 10,37 GET O3B PICTURE '!!'
@ 10,40 GET F3B PICTURE '!!!!!!!!!!!!!!!'
@ 12,40 GET  F4 PICTURE '@R 999-99-9999'
@ 15,40 GET PRINT_OPT PICTURE '9' RANGE 1,2
CLEAR TYPEAHEAD

*  Read query screen inputs and prepare to process them.  *

READ
@ 23, 0
@ 23,19 SAY ;
      "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
CLEAR TYPEAHEAD
READ

*  If the user chooses to cancel the query, set the required  *
*  flags to terminate all procedure loops.                    *

IF (DONE)
   STOP_LOOP = .T.
   M_CHOICE  = .F.
   EXIT
ELSE
   STOP_LOOP = .F.
ENDIF
*
@ 23, 0
@ 23,19 SAY ;
       "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
CLEAR TYPEAHEAD
READ

*  If the user wants to change their inputs, set DONE flag to  *
*  flase and repeat the current loop.                          *

IF (DONE)
   @ 23, 0
   DONE = .F.
   LOOP
ELSE
   DONE = .T.
ENDIF

*  vvvvvvvvvvvv  #4.  RELATIONAL OPERATOR CHECK  vvvvvvvvvvvv  *
*  Check all relational operators for valid entries and exit  *
*  the loop when the first invalid entry is detected.          *

GOOD_RO   = .T.
TEMP_LOOP = .T.
DO WHILE (TEMP_LOOP)
   IF (O1A <> '  ')
      DO RO_CHK WITH O1A
      IF (.NOT. GOOD_RO)
         EXIT
```

```
               ENDIF
            ENDIF
            IF (O1B <> '  ')
               DO RO_CHK WITH O1B
               IF (.NOT. GOOD_RO)
                  EXIT
               ENDIF
            ENDIF
            IF (O2A <> '  ')
               DO RO_CHK WITH O2A
               IF (.NOT. GOOD_RO)
                  EXIT
               ENDIF
            ENDIF
            IF (O2B <> '  ')
               DO RO_CHK WITH O2B
               IF (.NOT. GOOD_RO)
                  EXIT
               ENDIF
            ENDIF
            IF (O3A <> '  ')
               DO RO_CHK WITH O3A
               IF (.NOT. GOOD_RO)
                  EXIT
               ENDIF
            ENDIF
            IF (O3B <> '  ')
               DO RO_CHK WITH O3B
               IF (.NOT. GOOD_RO)
                  EXIT
               ENDIF
            ENDIF
            TEMP_LOOP = .F.
         ENDDO
         IF (.NOT. GOOD_RO)
            @ 23, 0
            ? CHR(7)
            M_CHOICE = .F.
            @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO' ;
                      + ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
            CLEAR TYPEAHEAD
            READ

            *  Give the user the option of either returning to the     *
            *  query input screen or terminating the query function.   *

            IF (M_CHOICE)
               @ 23, 0
               DONE = .F.
            ELSE
               STOP_LOOP = .T.
               EXIT
            ENDIF
         ENDIF
      ENDDO
```

```
*  Check to see if query termination condition has been previously *
*  set to 'true'.                                                   *

IF (STOP_LOOP)
   EXIT

*  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *
*  Initialize and build string variables used to define the    *
*  format for the query output.  String variables are used in  *
*  conjunction with the dBASE III PLUS  "SAY" command.         *

ELSE
   HDR1A = ''
   HDR1B = ''
   HDR2A = ''
   HDR2B = ''
   HDR3A = ''
   HDR3B = ''
   DATA1_S = ''
   DATA1_L = ''
   DATA2_S = ''
   DATA2_L = ''
   DATA3_S = ''
   DATA3_L = ''
   SEP_LINE = ''
   BLK_LINE = ''
   HDR1A = 'First           Last              WPSS     DC    GPA ';
         + '  SAT   AFOQT  AFOQT  AFOQT'
   HDR1B = 'Name            Name              Score   Rating  Cum ';
         + '  Cum   AcAp   Quan   Verb '
   DATA1_S = "LEFT(F_NAME,14)+S2+L_NAME+S2+STR(WPSS,6,2)+S4";
       + "+STR(DC_RTNG,1)+S5+STR(CUM_GPA,4,2)+S2+STR(SAT_CUM,4)+S2";
       + "+STR(AFOQT_AA,2)+S5+STR(AFOQT_QUAN,2)+S5+STR(AFOQT_VERB,2)+S3"
*
   IF (PRINT_OPT = 2)
      HDR2A = '                               AS      AS Class   GPA ';
            + '  SAT    SAT    Schlr  Pilot'
      HDR2B = '                              Class      Rank     Sem ';
            + '  Math  Verb   Type   Licns'
      DATA2_S = "S31+STR(AS_CLASS,1)+S7+STR(AS_RNK_POS,3)+'/'+CLAS_NUM";
         + "+S3+STR(SEM_GPA,4,2)+S2+STR(SAT_MATH,3)+S3+STR(SAT_VERB,3)";
         + "+S4+TRANSFORM(SCHLR_TYPE,'@R 9.9')+S4+PLS+S4"
      HDR3A = '                                                  Phys';
            + '      Grad        Comm        '
      HDR3B = '                              DOB         Age     Date';
            + '      Date        Date        '
      DATA3_S = "S31+DTOC(BIRTHDATE)+S3+AGE+S5+DTOC(PHY_DATE)+S2";
            + "+DTOC(GRAD_DATE)+S2+DTOC(COM_DATE)+S3"
   ENDIF
   SEP_LINE = REPLICATE('_',80)
   BLK_LINE = REPLICATE(' ',80)
   SQG_LINE = REPLICATE('~',80)
*
   IF (QO_SELECT = 'J')
```

```
    HDR1A = HDR1A + '  AFOQT  AFOQT  Cat     FY            FSP'
    HDR1B = HDR1B + '  Pilot  Nav    Type  Rating  Major  Date'
    DATA1_L = "S2+STR(AFOQT_PLT,2)+S5+STR(AFOQT_NAV,2)+S5";
          + "+CAT_TYPE+S5+STR(FY_RTNG,2)+S6+MAJOR+S3+DTOC(FSP_DATE)"
    HDR2A = HDR2A + '  4-Yr   Prior  Waiv'
    HDR2B = HDR2B + '  Cadet  Serv   Req    Race'
    DATA2_L =  "S2+FYC+S6+PRS+S6+WRQ+S6+RACE"
    HDR3A = HDR3A + '  Form      Corps'
    HDR3B = HDR3B + '   48       Auxiliaries'
    DATA3_L = "S2+DTOC(FORM_48)+S2" ;
          + "+TRANSFORM(CORPS_AUX,'@R !!!!!!!!!!!!!!!!!!!!!!!!')"
    SEP_LINE = SEP_LINE + REPLICATE('_',52)
    BLK_LINE = BLK_LINE + REPLICATE(' ',52)
    SQG_LINE = SQG_LINE + REPLICATE('~',52)
ENDIF

*  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *
*  Initialize and build string varaible used to set the filter *
*  condition for this query.  The string variable is used in   *
*  conjunction with the dBASE III PLUS command "SET FILTER TO".*
*  The filter masks all records which do not meet all the con- *
*  ditions specified in the string varaible.                   *

FILT_STR = ''
IF (LEN(LTRIM(F1A)) > 0)
   FILT_STR = 'AS_CLASS' + O1A + F1A
ENDIF
IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.AS_CLASS' + O1B + F1B
   ELSE
      FILT_STR = 'AS_CLASS' + O1B + F1B
   ENDIF
ENDIF
IF (LEN(LTRIM(F2A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.WPSS' + O2A +  F2A
   ELSE
      FILT_STR = 'WPSS' + O2A + F2A
   ENDIF
ENDIF
IF (LEN(LTRIM(F2B)) > 0  .AND.  (O2A <> O2B)  .AND.  (F2A <> F2B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.WPSS' + O2B + F2B
   ELSE
      FILT_STR = 'WPSS' + O2B + F2B
   ENDIF
ENDIF
IF (LEN(LTRIM(F3A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O3A + "'" + F3A + "'"
   ELSE
      FILT_STR = 'L_NAME' + O3A + "'" + F3A + "'"
   ENDIF
ENDIF
```

```
IF (LEN(LTRIM(F3B)) > 0  .AND.  (O3A <> O3B)  .AND.  (F3A <> F3B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O3B + "'" + F3B + "'"
   ELSE
      FILT_STR = 'L_NAME' + O3B + "'" + F3B + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F4)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F4 + "'"
   ELSE
      FILT_STR = 'SSAN =' + "'" + F4 + "'"
   ENDIF
ENDIF
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *
*  If user has entered data in the query fields, then proceed to *
*  process their inputs.  Open the required database files, set  *
*  the filter condition, set the print constraints and direct the*
*  print to the selected output media.                            *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If none of the database records meet all the input  *
      *  constraints, give the user the option to try again  *
      *  or to terminate the query.                          *

      CASE (EOF())
           DO ERR_NF
           IF (M_CHOICE)
              DONE = .F.
              LOOP
           ELSE
              EXIT
           ENDIF

      *  If some database records meet the constraints, ini-  *
      *  tialize the print environment and perform print loop *
      *  until all records are printed.                       *

      CASE (.NOT. EOF())
           IF QO_SELECT <> 'H'
              SET PRINT ON
              SET DEVICE TO PRINT
      IF QO_SELECT = 'J'
         @  0, 1 SAY CHR(27) + CHR(15)
      ELSE
         @  0, 1 SAY CHR(27) + CHR(77)
      ENDIF
      MAX_LINES = 66
   ELSE
      MAX_LINES = 23
   ENDIF
   IF (QO_SELECT <> 'J')
      SPACER = SPACE(18)
   ELSE
      SPACER = SPACE(49)
   ENDIF
   CLEAR
   @  0, 0 SAY SPACER + 'WEIGHTED POC SELECTION SYSTEM';
             + '(WPSS) REPORT'
   @  1, 0
   FIRST_TIME = .T.
   DISP_LINE = 2

   *  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *
   *  Loop until all database records (which meet input  *
   *  constraints) have been printed.                     *

   DO WHILE (.NOT. EOF())
      IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
         IF (.NOT. FIRST_TIME)
            EJECT
         ENDIF
      ENDIF
      IF (FIRST_TIME)
         FIRST_TIME = .F.
      ELSE
         DISP_LINE = 0
         CLEAR
      ENDIF

      *  vvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvv  *
      *  Loop until the display line exceeds the maximum *
      *  number of lines for the selected output media.  *

      DO WHILE ((DISP_LINE < MAX_LINES) .AND. (.NOT. EOF()))
         REC_NUM = RECNO()

         *  If the number of print lines per cadet will  *
         *  not fit on one page, exit the loop and go to *
         *  the next page.                               *

         IF ((MAX_LINES-DISP_LINE) < 11).AND.(PRINT_OPT = 2)
            EXIT
         ELSE
            IF ((DISP_LINE <= 3)  .OR.  (PRINT_OPT = 2))
               @ DISP_LINE, 0 SAY HDR1A
               @ DISP_LINE + 1, 0 SAY HDR1B
   IF (QO_SELECT <> 'H')
      @ DISP_LINE + 1, 0 SAY SEP_LINE
   ENDIF
   DISP_LINE = DISP_LINE + 2
ENDIF
@ DISP_LINE, 0 SAY &DATA1_S
IF (QO_SELECT = 'J')
   @ DISP_LINE, 80 SAY &DATA1_L
ENDIF
DISP_LINE = DISP_LINE + 2
IF (PRINT_OPT = 2)
   @ DISP_LINE, 0     SAY HDR2A
   @ DISP_LINE + 1, 0 SAY HDR2B
   IF (QO_SELECT <> 'H')
      SEP_LINE = STUFF(SEP_LINE,1,31,S31)
      @ DISP_LINE + 1, 0 SAY SEP_LINE
   ENDIF
   PLS = 'N'
   IF PLT_LICENS
      PLS = 'Y'
   ENDIF
   CLAS_VAL = AS_CLASS
   SELECT 2
   SEEK CLAS_VAL
   IF (.NOT. EOF())
      CLAS_NUM = STR(AS_CL_TOT,3)
   ELSE
      CLAS_NUM = ' ? '
   ENDIF
   SELECT 1
   GOTO REC_NUM
   @ DISP_LINE + 2, 0 SAY &DATA2_S
   IF (QO_SELECT = 'J')
      FYC = 'N'
      PRS = 'N'
      WRQ = 'N'
      IF FOUR_YR
         FYC = 'Y'
      ENDIF
      IF PRIOR_SVC
         PRS = 'Y'
      ENDIF
      IF WAIVER_REQ
         WRQ = 'Y'
      ENDIF
      @ DISP_LINE + 2, 80 SAY &DATA2_L
   ENDIF
   @ DISP_LINE + 4, 0 SAY HDR3A
   @ DISP_LINE + 5, 0 SAY HDR3B
   IF (QO_SELECT <> 'H')
      @ DISP_LINE + 5, 0 SAY SEP_LINE
SEP_LINE = STUFF(SEP_LINE,1,31,REPLICATE('_',31))
   ENDIF
   @ DISP_LINE + 6, 0 SAY &DATA3_S
   IF (QO_SELECT = 'J')
```

```
                                @ DISP_LINE + 6, 80 SAY &DATA3_L
                             ENDIF
                             @ DISP_LINE + 7, 0 SAY SQG_LINE
                             DISP_LINE = DISP_LINE + 8
                          ENDIF
                       ENDIF

                       *  Issue dBASE III PLUS command to go to the     *
                       *  next record which meets the input constraints.*

                       SKIP
                    ENDDO

                    *  If the output media is the screen, issue the user*
                    *  paging prompt.                                   *

                    IF (QO_SELECT = 'H')
                       @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
                       CLEAR TYPEAHEAD
                       WAIT ''
                    ENDIF
                 ENDDO
                 IF (QO_SELECT <> 'H')
                    @ DISP_LINE + 1, 0 SAY CHR(10)
                    EJECT
                    IF (QO_SELECT = 'J')
                       @ 0, 1 SAY CHR(18)
                    ELSE
                       @  0, 1 SAY CHR(27) + CHR(80)
                    ENDIF
                    SET PRINT OFF
                 ENDIF
                 SET DEVICE TO SCREEN
                 SET FILTER TO
         ENDCASE

      *  If the user fails to enter any data in the input fields,   *
      *  issue a prompt for them to please enter data (if they had  *
      *  intended to cancel the query, they should not have gotten  *
      *  this far in the procedure).                                *

      ELSE
         @ 23, 0
         ? CHR(7)
         @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
         CLEAR TYPEAHEAD
         WAIT ''
         @ 23, 0
         DONE = .F.
      ENDIF
   ENDIF
ENDDO
CLEAR

*  If the user has not previously entered a response to terminate the *
```

```
    *  query (M_CHOICE would be "false"), then give them the opportunity  *
    *  to do another query or terminate the function.                     *

    IF (M_CHOICE)
       DO RCIS_HDR
       DO M_PROMPT
    ENDIF
 ENDDO

 *  Close the database files used in this query.  *

 SELECT 2
 USE
 SELECT 1
 USE
 F_PARA = STUFF(F_PARA,1,1,'C')
 ON ERROR
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                 SCHA_QRY                                    *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       The SCHA_QRY procedure provides the interface for the user to per-   *
*       form ad hoc queries on cadet data which is related to cadet schol-   *
*       arship requirements and/or cadet academic performance.                *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE SCHA_QRY
*
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    O1A = '  '
    F1A = ' '
    O1B = '  '
    F1B = ' '
    F2  = ' '
    O3A = '  '
    F3A = '               '
    O3B = '  '
    F3B = '               '
    O4  = '>='
    F4  = '    '
    O5  = '>='
    F5  = '10'
    O6  = '>='
    F6  = '15'
    O7  = '>='
    F7  = '50'
    O8  = '>='
    F8  = '30'
    O9  = '  '
    F9  = '    '

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       DO HELP_SCRN
       @  1, 0 TO 15,79
@  1,16 SAY ' SCHOLARSHIP CANDIDATES/ACADEMIC PERFORMANCE QUERY '
@  3,12 SAY 'AS Class'
@  6, 2 SAY 'Scholarship'
@  7, 2 SAY 'Category (T, N, P)'
@ 10,11 SAY 'Last Name'
@  3,49 SAY 'Cumulative GPA'
@  5,53 SAY 'AFOQT Quan'
@  7,53 SAY 'AFOQT Verb'
@  9,52 SAY 'AFOQT Pilot'
@ 11,54 SAY 'AFOQT Nav'
@ 13,49 SAY 'Cumulative SAT'

*  vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *

DO WHILE (.NOT. DONE)
   @  3,21 GET O1A PICTURE '!!'
   @  3,24 GET F1A PICTURE '9'
   @  4,21 GET O1B PICTURE '!!'
   @  4,24 GET F1B PICTURE '9'
   @  7,24 GET F2  PICTURE '!'
   @ 10,21 GET O3A PICTURE '!!'
   @ 10,24 GET F3A PICTURE '!!!!!!!!!!!!!!!'
   @ 11,21 GET O3B PICTURE '!!'
   @ 11,24 GET F3B PICTURE '!!!!!!!!!!!!!!!'
   @  3,64 GET O4  PICTURE '!!'
   @  3,67 GET F4  PICTURE '9.99'
   @  5,64 GET O5  PICTURE '!!'
   @  5,67 GET F5  PICTURE '99'
   @  7,64 GET O6  PICTURE '!!'
   @  7,67 GET F6  PICTURE '99'
   @  9,64 GET O7  PICTURE '!!'
   @  9,67 GET F7  PICTURE '99'
   @ 11,64 GET O8  PICTURE '!!'
   @ 11,67 GET F8  PICTURE '99'
   @ 13,64 GET O9  PICTURE '!!'
   @ 13,67 GET F9  PICTURE '9999'
   READ

   *  Read query screen inputs and prepare to process them.  *

   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user chooses to cancel the query, set the required  *
   *  flags to terminate all procedure loops.                    *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
```

```
          ENDIF
*
          @ 23, 0
          @ 23,19 SAY ;
               "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
          CLEAR TYPEAHEAD
          READ

          *  If the user wants to change their inputs, set DONE flag to  *
          *  flase and repeat the current loop.                          *

          IF (DONE)
             @ 23, 0
             DONE = .F.
             LOOP
          ELSE
             DONE = .T.
          ENDIF

          *  vvvvvvvvvvvv  #4.  RELATIONAL OPERATOR CHECK  vvvvvvvvvvvv  *

          GOOD_RO   = .T.
          TEMP_LOOP = .T.
          DO WHILE (TEMP_LOOP)
             IF (01A <> '  ')
                DO RO_CHK WITH 01A
                IF (.NOT. GOOD_RO)
                   EXIT
                ENDIF
             ENDIF
             IF (01B <> '  ')
                DO RO_CHK WITH 01B
                IF (.NOT. GOOD_RO)
                   EXIT
                ENDIF
             ENDIF
             IF (03A <> '  ')
                DO RO_CHK WITH 03A
                IF (.NOT. GOOD_RO)
                   EXIT
                ENDIF
             ENDIF
             IF (03B <> '  ')
                DO RO_CHK WITH 03B
                IF (.NOT. GOOD_RO)
                   EXIT
                ENDIF
             ENDIF
             IF (04 <> '  ')
                DO RO_CHK WITH 04
                IF (.NOT. GOOD_RO)
                   EXIT
                ENDIF
             ENDIF
             IF (05 <> '  ')
```

```
        DO RO_CHK WITH 05
        IF (.NOT. GOOD_RO)
           EXIT
        ENDIF
     ENDIF
     IF (06 <> '  ')
        DO RO_CHK WITH 06
        IF (.NOT. GOOD_RO)
           EXIT
        ENDIF
     ENDIF
     IF (07 <> '  ')
        DO RO_CHK WITH 07
        IF (.NOT. GOOD_RO)
           EXIT
        ENDIF
     ENDIF
     IF (08 <> '  ')
        DO RO_CHK WITH 08
        IF (.NOT. GOOD_RO)
           EXIT
        ENDIF
     ENDIF
     IF (09 <> '  ')
        DO RO_CHK WITH 09
        IF (.NOT. GOOD_RO)
           EXIT
        ENDIF
     ENDIF
     TEMP_LOOP = .F.
  ENDDO
  IF (.NOT. GOOD_RO)
     @ 23, 0
     ? CHR(7)
     M_CHOICE = .F.
     @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO' ;
                + ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
     CLEAR TYPEAHEAD
     READ

     *  Give the user the option of either returning to the     *
     *  query input screen or terminating the query function.   *

     IF (M_CHOICE)
        @ 23, 0
        DONE = .F.
     ELSE
        STOP_LOOP = .T.
        EXIT
     ENDIF
  ENDIF
  IF ((F2 <> 'T').AND.(F2 <> 'N').AND.(F2 <> 'P').AND.(F2 <> ' '))
     @ 23, 0
     ? CHR(7)
     M_CHOICE = .F.
```

```
         @ 23, 4 SAY 'INVALID SCHOLARSHIP CATEGORY.  WOULD YOU LIKE TO' ;
                + ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
         CLEAR TYPEAHEAD
         READ

         *  Give the user the option of returning to correct their   *
         *  invalid entry or to terminate the query function.        *

         IF (M_CHOICE)
            @ 23, 0
            DONE = .F.
         ELSE
            STOP_LOOP = .T.
            EXIT
         ENDIF
      ENDIF
   ENDDO

   *  Check to see if query termination condition has been previously *
   *  set to 'true'.                                                  *

   IF (STOP_LOOP)
      EXIT
   ELSE

   *  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

      HDR1A = ''
      HDR1B = ''
      DATA1_S = ''
      DATA1_L = ''
      HDR1A = 'First             Last                AS    Cat   GPA    SAT ';
            + '  AFOQT              '
      HDR1B = 'Name              Name               Class  Type  Cum    Cum ';
            + '  Quan   Verb  Pil  Nav'
      DATA1_S = "F_NAME+S2+L_NAME+S2+STR(AS_CLASS,1)+S6+CAT_TYPE+S5";
      + "+STR(CUM_GPA,4,2)+S2+STR(SAT_CUM,4)+S2+STR(AFOQT_QUAN,2)+S5";
      + "+STR(AFOQT_VERB,2)+S4+STR(AFOQT_PLT,2)+S3+STR(AFOQT_NAV,2)+' '"
      SEP_LINE = REPLICATE('_',80)
*
      IF (QO_SELECT = 'J')
         HDR1A = HDR1A + '        AFOQT     ACT   WPSS    AS Class     FY  ';
               + '  GPA'
         HDR1B = HDR1B + '  AcAp  Date      Cum   Score      Rank    Rating';
               + '  Sem'
         DATA1_L = "S2+STR(AFOQT_AA,2)+S4+DTOC(AFOQT_DATE)+S2";
             + "+STR(ACT_CUM,2)+S3+STR(WPSS,6,2)+S3+STR(AS_RNK_POS,3)+'/'";
             + "+CLAS_NUM+S4+STR(FY_RTNG,2)+S4+STR(SEM_GPA,4,2)"
         SEP_LINE = SEP_LINE + REPLICATE('_',52)
      ENDIF

      *  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *

     FILT_STR = ''
      IF (LEN(LTRIM(F1A)) > 0)
   FILT_STR = 'AS_CLASS' + O1A + F1A
ENDIF
IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.AS_CLASS' + O1B + F1B
   ELSE
      FILT_STR = 'AS_CLASS' + O1B + F1B
   ENDIF
ENDIF
IF (LEN(LTRIM(F2)) > 0)
   IF (LEN(FILT_STR) > 0)
      IF (LTRIM(F2) = 'T')
         FILT_STR = FILT_STR + ".AND.(CAT_TYPE='N'.OR.CAT_TYPE='M'";
                  + ".OR.CAT_TYPE='2')"
      ELSE
         IF (LTRIM(F2) = 'N')
            FILT_STR = FILT_STR + ".AND.CAT_TYPE='3'"
         ELSE
            FILT_STR = FILT_STR + ".AND.CAT_TYPE='P'"
         ENDIF
      ENDIF
   ELSE
      IF (LTRIM(F2) = 'T')
         FILT_STR = "(CAT_TYPE='N'.OR.CAT_TYPE='M'.OR.CAT_TYPE='2')"
      ELSE
         IF (LTRIM(F2) = 'N')
            FILT_STR = "CAT_TYPE='3'"
         ELSE
            FILT_STR = "CAT_TYPE='P'"
         ENDIF
      ENDIF
   ENDIF
ENDIF
IF (LEN(LTRIM(F3A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O3A + "'" + F3A + "'"
   ELSE
      FILT_STR = 'L_NAME' + O3A + "'" + F3A + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F3B)) > 0  .AND.  (O3A <> O3B)  .AND.  (F3A <> F3B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O3B + "'" + F3B + "'"
   ELSE
      FILT_STR = 'L_NAME' + O3B + "'" + F3B + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(TRIM(F4))) > 0)  .AND.  (LTRIM(TRIM(F4)) <> '.')
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.CUM_GPA' + O4 + F4
   ELSE
      FILT_STR = 'CUM_GPA' + O4 + F4
   ENDIF
ENDIF
IF (LEN(LTRIM(F5)) > 0)
```

```
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.AFOQT_QUAN' + O5 + F5
   ELSE
      FILT_STR = 'AFOQT_QUAN' + O5 + F5
   ENDIF
ENDIF
IF (LEN(LTRIM(F6)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.AFOQT_VERB' + O6 + F6
   ELSE
      FILT_STR = 'AFOQT_VERB' + O6 + F6
   ENDIF
ENDIF
IF (LEN(LTRIM(F7)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.AFOQT_PLT' + O7 + F7
   ELSE
      FILT_STR = 'AFOQT_PLT' + O7 + F7
   ENDIF
ENDIF
IF (LEN(LTRIM(F8)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.AFOQT_NAV' + O8 + F8
   ELSE
      FILT_STR = 'AFOQT_NAV' + O8 + F8
   ENDIF
ENDIF
IF (LEN(LTRIM(F9)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.SAT_CUM' + O9 + F9
   ELSE
      FILT_STR = 'SAT_CUM' + O9 + F9
   ENDIF
ENDIF
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If none of the database records meet all the input  *
      *  constraints, give the user the option to try again  *
      *  or to terminate the query.                          *

      CASE (EOF())
```

```
          DO ERR_NF
          IF (M_CHOICE)
             DONE = .F.
             LOOP
          ELSE
             EXIT
          ENDIF

     *  If some database records meet the constraints, ini-   *
     *  tialize the print environment and perform print loop *
     *  until all records are printed.                        *

     CASE (.NOT. EOF())
          IF QO_SELECT <> 'H'
             SET PRINT ON
             SET DEVICE TO PRINT
             IF QO_SELECT = 'J'
                @  0, 1 SAY CHR(27) + CHR(15)
             ELSE
                @  0, 1 SAY CHR(27) + CHR(77)
             ENDIF
             MAX_LINES = 66
          ELSE
             MAX_LINES = 23
          ENDIF
          IF (QO_SELECT <> 'J')
             SPACER = SPACE(15)
          ELSE
             SPACER = SPACE(46)
          ENDIF
          CLEAR
          @  0, 0 SAY SPACER + 'SCHOLARSHIP CANDIDATES/ACADEMIC';
                       + ' PERFORMANCE REPORT'
          @  1, 0
          FIRST_TIME = .T.
          DISP_LINE = 2

          *  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *

          DO WHILE (.NOT. EOF())
             IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
                IF (.NOT. FIRST_TIME)
                   EJECT
                ENDIF
             ENDIF
             IF (FIRST_TIME)
                FIRST_TIME = .F.
             ELSE
                DISP_LINE = 0
                CLEAR
             ENDIF

             *  vvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvv  *

             DO WHILE ((DISP_LINE < MAX_LINES) .AND. (.NOT. EOF()))
```

```
                 REC_NUM = RECNO()
                 IF (DISP_LINE <= 3)
                    @ DISP_LINE, 0 SAY HDR1A
                    @ DISP_LINE + 1, 0 SAY HDR1B
                    IF (QO_SELECT <> 'H')
                       @ DISP_LINE + 1, 0 SAY SEP_LINE
                    ENDIF
                    DISP_LINE = DISP_LINE + 2
                 ENDIF
                 @ DISP_LINE, 0 SAY &DATA1_S
                 IF (QO_SELECT = 'J')
                    CLAS_VAL = AS_CLASS
                    SELECT 2
                    SEEK CLAS_VAL
                    IF (.NOT. EOF())
                       CLAS_NUM = STR(AS_CL_TOT,3)
                    ELSE
                       CLAS_NUM = ' ? '
                    ENDIF
                    SELECT 1
                    GOTO REC_NUM
                    @ DISP_LINE, 80 SAY &DATA1_L
                 ENDIF
                 DISP_LINE = DISP_LINE + 2

                 *  Issue dBASE III PLUS command to go to the     *
                 *  next record which meets the input constraints.*

                 SKIP
              ENDDO

              *  If the output media is the screen, issue the user*
              *  paging prompt.                                   *

              IF (QO_SELECT = 'H')
                 @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
                 CLEAR TYPEAHEAD
                 WAIT ''
              ENDIF
           ENDDO
           IF (QO_SELECT <> 'H')
              @ DISP_LINE + 1, 0 SAY CHR(10)
              EJECT
              IF (QO_SELECT = 'J')
                 @ 0, 1 SAY CHR(18)
              ELSE
                 @  0, 1 SAY CHR(27) + CHR(80)
              ENDIF
              SET PRINT OFF
           ENDIF
           SET DEVICE TO SCREEN
           SET FILTER TO
   ENDCASE

*  If the user fails to enter any data in the input fields,   *
```

```
         *  issue a prompt for them to please entor data (if they had  *
         *  intended to cancel the query, they should not have gotten  *
         *  this far in the procedure).                                *

         ELSE
            @ 23, 0
            ? CHR(7)
            @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
            CLEAR TYPEAHEAD
            WAIT ''
            @ 23, 0
            DONE = .F.
         ENDIF
      ENDIF
   ENDDO
   CLEAR

   *  If the user has not previously entered a response to terminate the *
   *  query (M_CHOICE would be "false"), then give them the opportunity  *
   *  to do another query or terminate the function.                     *

   IF (M_CHOICE)
      DO RCIS_HDR
      DO M_PROMPT
   ENDIF
ENDDO

*  Close the database files used in this query.  *

SELECT 2
USE
SELECT 1
USE
F_PARA = STUFF(F_PARA,1,1,'C')
ON ERROR
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                                  DCFY_QRY                                  *
*---------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*       The DCFY_QRY procedure provides the interface for the user to per-  *
*       form ad hoc queries on cadet data which is related to specified     *
*       cadet ratings for all cadets being commissioned within a given      *
*       fiscal year or range of fiscal years.                                *
*                                                                            *
*---------------------------------------------------------------------------*


PROCEDURE DCFY_QRY
*
 PRIVATE SPACER
 PRIVATE FTC
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    O1A = '  '
    F1A = '  '
    O1B = '  '
    F1B = '  '
    O2A = '  '
    F2A = '               '
    O2B = '  '
    F2B = '               '
    F3  = '         '
    O4A = '  '
    F4A = '  '
    O4B = '  '
    F4B = '  '
    O5A = '  '
    F5A = ' '
    O5B = '  '
    F5B = ' '

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       DO HELP_SCRN
       @  5, 0 TO 15,79
       @  5,17 SAY ' DATE OF COMMISSIONING (DOC) FISCAL YEAR  QUERY '
       @  7,11 SAY 'DOC'
@  8,11 SAY 'Fiscal Year'
@ 10,13 SAY 'Last Name'
@ 13,18 SAY 'SSAN'
@  7,52 SAY 'Fiscal Year'
@  8,52 SAY 'Rating'
@ 10,50 SAY 'Det Commander'
@ 11,50 SAY 'Rating'

*  vvvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvvv  *

DO WHILE (.NOT. DONE)
   @  7,23 GET O1A PICTURE '!!'
   @  7,26 GET F1A PICTURE '99'
   @  8,23 GET O1B PICTURE '!!'
   @  8,26 GET F1B PICTURE '99'
   @ 10,23 GET O2A PICTURE '!!'
   @ 10,26 GET F2A PICTURE '!!!!!!!!!!!!!!!'
   @ 11,23 GET O2B PICTURE '!!'
   @ 11,26 GET F2B PICTURE '!!!!!!!!!!!!!!!'
   @ 13,26 GET F3  PICTURE '@R 999-99-9999'
   @  7,64 GET O4A PICTURE '!!'
   @  7,67 GET F4A PICTURE '99'
   @  8,64 GET O4B PICTURE '!!'
   @  8,67 GET F4B PICTURE '99'
   @ 10,64 GET O5A PICTURE '!!'
   @ 10,67 GET F5A PICTURE '9'
   @ 11,64 GET O5B PICTURE '!!'
   @ 11,67 GET F5B PICTURE '9'

   *  Read query screen inputs and prepare to process them.  *

   READ
   @ 23, 0
   @ 23,19 SAY ;
          "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user chooses to cancel the query, set the required  *
   *  flags to terminate all procedure loops.                    *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
   ENDIF
*
   @ 23, 0
   @ 23,19 SAY ;
          "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ
```

```
*  If the user wants to change their inputs, set DONE flag to  *
*  flase and repeat the current loop.                          *

IF (DONE)
   @ 23, 0
   DONE = .F.
   LOOP
ELSE
   DONE = .T.
ENDIF

*  vvvvvvvvvvvv  #4.  RELATIONAL OPERATOR CHECK  vvvvvvvvvvvv  *

GOOD_RO   = .T.
TEMP_LOOP = .T.
DO WHILE (TEMP_LOOP)
   IF (O1A <> '  ')
      DO RO_CHK WITH O1A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O1B <> '  ')
      DO RO_CHK WITH O1B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O2A <> '  ')
      DO RO_CHK WITH O2A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O2B <> '  ')
      DO RO_CHK WITH O2B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O4A <> '  ')
      DO RO_CHK WITH O4A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O4B <> '  ')
      DO RO_CHK WITH O4B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O5A <> '  ')
      DO RO_CHK WITH O5A
      IF (.NOT. GOOD_RO)
```

```
            EXIT
         ENDIF
      ENDIF
      IF (05B <> '  ')
         DO RO_CHK WITH 05B
         IF (.NOT. GOOD_RO)
            EXIT
         ENDIF
      ENDIF
      TEMP_LOOP = .F.
   ENDDO
   IF (.NOT. GOOD_RO)
      @ 23, 0
      ? CHR(7)
      M_CHOICE = .F.
      @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO' ;
                + ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
      CLEAR TYPEAHEAD
      READ

      *  Give the user the option of either returning to the     *
      *  query input screen or terminating the query function.   *

      IF (M_CHOICE)
         @ 23, 0
         DONE = .F.
      ELSE
         STOP_LOOP = .T.
         EXIT
      ENDIF
   ENDIF
ENDDO

*  Check to see if query termination condition has been previously *
*  set to 'true'.                                                   *

IF (STOP_LOOP)
   EXIT
ELSE

*  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

   HDR1A = ''
   HDR1B = ''
   DATA1_S = ''
   DATA1_L = ''
   HDR1A = 'First            Last                FY      DC     AS Class';
         + '  AS      Comm        '
   HDR1B = 'Name             Name              Rating  Rating    Rank  ';
         + ' Class   Date        '
   DATA1_S = "F_NAME+S2+L_NAME+S4+STR(FY_RTNG,2)+S6+STR(DC_RTNG,1)+S5";
           + "+STR(AS_RNK_POS,3)+'/'+CLAS_NUM+S5+STR(AS_CLASS,1)+S5";
           + "+DTOC(COM_DATE)+S3"
   SEP_LINE = REPLICATE('_',80)
*
```

```
 IF (QO_SELECT = 'J')
    HDR1A = HDR1A + 'Grad      Cat   WPSS     GPA     SAT     FT ';
         + '    FT'
    HDR1B = HDR1B + 'Date      Type  Score    Cum     Cum    Comp';
         + '  Rating'
    DATA1_L = "DTOC(GRAD_DATE)+S3+CAT_TYPE+S4+STR(WPSS,6,2)+S3";
            + "+STR(CUM_GPA,4,2)+S3+STR(SAT_CUM,4)+S4";
            + "+FTC+S3+STR(FT_RTNG,6,2)"
    SEP_LINE = SEP_LINE + REPLICATE('_',52)
 ENDIF

 *  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *

FILT_STR = ''
 IF (LEN(LTRIM(F1A)) > 0)
    FILT_STR = 'YEAR(COM_DATE+92)' + O1A + '19' + F1A
 ENDIF
 IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
    IF (LEN(FILT_STR) > 0)
     FILT_STR = FILT_STR + '.AND.YEAR(COM_DATE+92)' + O1B + '19' + F1B
    ELSE
       FILT_STR = 'YEAR(COM_DATE+92)' + O1B + '19' + F1B
    ENDIF
 ENDIF
 IF (LEN(LTRIM(F2A)) > 0)
    IF (LEN(FILT_STR) > 0)
       FILT_STR = FILT_STR + '.AND.L_NAME' + O2A + "'" + F2A + "'"
    ELSE
       FILT_STR = 'L_NAME' + O2A + "'" + F2A + "'"
    ENDIF
 ENDIF
 IF (LEN(LTRIM(F2B)) > 0  .AND.  (O2A <> O2B)  .AND.  (F2A <> F2B))
    IF (LEN(FILT_STR) > 0)
       FILT_STR = FILT_STR + '.AND.L_NAME' + O2B + "'" + F2B + "'"
    ELSE
       FILT_STR = 'L_NAME' + O2B + "'" + F2B + "'"
    ENDIF
 ENDIF
 IF (LEN(LTRIM(F3)) > 0)
    IF (LEN(FILT_STR) > 0)
       FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F3 + "'"
    ELSE
       FILT_STR = 'SSAN =' + "'" + F3 + "'"
    ENDIF
 ENDIF
 IF (LEN(LTRIM(F4A)) > 0)
    IF (LEN(FILT_STR) > 0)
       FILT_STR = FILT_STR + '.AND.FY_RTNG' + O4A +  F4A
    ELSE
       FILT_STR = 'FY_RTNG' + O4A + F4A
    ENDIF
 ENDIF
 IF (LEN(LTRIM(F4B)) > 0  .AND.  (O4A <> O4B)  .AND.  (F4A <> F4B))
    IF (LEN(FILT_STR) > 0)
       FILT_STR = FILT_STR + '.AND.FY_RTNG' + O4B + F4B
```

```
   ELSE
      FILT_STR = 'FY_RTNG' + O4B + F4B
   ENDIF
ENDIF
IF (LEN(LTRIM(F5A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.DC_RTNG' + O5A +  F5A
   ELSE
      FILT_STR = 'DC_RTNG' + O5A + F5A
   ENDIF
ENDIF
IF (LEN(LTRIM(F5B)) > 0  .AND.  (O5A <> O5B)  .AND.  (F5A <> F5B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.DC_RTNG' + O5B + F5B
   ELSE
      FILT_STR = 'DC_RTNG' + O5B + F5B
   ENDIF
ENDIF
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If none of the database records meet all the input  *
      *  constraints, give the user the option to try again  *
      *  or to terminate the query.                          *

      CASE (EOF())
           DO ERR_NF
           IF (M_CHOICE)
              DONE = .F.
              LOOP
           ELSE
              EXIT
           ENDIF

      *  If some database records meet the constraints, ini-  *
      *  tialize the print environment and perform print loop *
      *  until all records are printed.                       *

      CASE (.NOT. EOF())
           IF QO_SELECT <> 'H'
              SET PRINT ON
              SET DEVICE TO PRINT
      IF QO_SELECT = 'J'
         @  0, 1 SAY CHR(27) + CHR(15)
      ELSE
         @  0, 1 SAY CHR(27) + CHR(77)
      ENDIF
      MAX_LINES = 66
   ELSE
      MAX_LINES = 23
   ENDIF
   IF (QO_SELECT <> 'J')
      SPACER = SPACE(17)
   ELSE
      SPACER = SPACE(48)
   ENDIF
   CLEAR
   @  0, 0 SAY SPACER + 'DATE OF COMMISSIONING (DOC) FISCAL';
             + ' YEAR REPORT'
   @  1, 0
   FIRST_TIME = .T.
   DISP_LINE = 2

   *  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *

   DO WHILE (.NOT. EOF())
      IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
         IF (.NOT. FIRST_TIME)
            EJECT
         ENDIF
      ENDIF
      IF (FIRST_TIME)
         FIRST_TIME = .F.
      ELSE
         DISP_LINE = 0
         CLEAR
      ENDIF

      *  vvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvv  *

      DO WHILE ((DISP_LINE < MAX_LINES) .AND. (.NOT. EOF()))
         REC_NUM = RECNO()
         IF (DISP_LINE <= 3)
            @ DISP_LINE, 0 SAY HDR1A
            @ DISP_LINE + 1, 0 SAY HDR1B
            IF (QO_SELECT <> 'H')
               @ DISP_LINE + 1, 0 SAY SEP_LINE
            ENDIF
            DISP_LINE = DISP_LINE + 2
         ENDIF
         FTC = 'N'
         IF FT_COMP
            FTC = 'Y'
         ENDIF
         CLAS_VAL = AS_CLASS
         SELECT 2
         SEEK CLAS_VAL
```

```
                 IF (.NOT. EOF())
                    CLAS_NUM = STR(AS_CL_TOT,3)
                 ELSE
                    CLAS_NUM = ' ? '
                 ENDIF
                 SELECT 1
                 GOTO REC_NUM
                 @ DISP_LINE, 0 SAY &DATA1_S
                 IF (QO_SELECT = 'J')
                    @ DISP_LINE, 80 SAY &DATA1_L
                 ENDIF
                 DISP_LINE = DISP_LINE + 2

                 *  Issue dBASE III PLUS command to go to the     *
                 *  next record which meets the input constraints.*

                 SKIP
              ENDDO

              *  If the output media is the screen, issue the user*
              *  paging prompt.                                   *

              IF (QO_SELECT = 'H')
                 @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
                 CLEAR TYPEAHEAD
                 WAIT ''
              ENDIF
           ENDDO
           IF (QO_SELECT <> 'H')
              @ DISP_LINE + 1, 0 SAY CHR(10)
              EJECT
              IF (QO_SELECT = 'J')
                 @ 0, 1 SAY CHR(18)
              ELSE
                 @  0, 1 SAY CHR(27) + CHR(80)
              ENDIF
              SET PRINT OFF
           ENDIF
           SET DEVICE TO SCREEN
           SET FILTER TO
   ENDCASE

*  If the user fails to enter any data in the input fields,   *
*  issue a prompt for them to please enter data (if they had  *
*  intended to cancel the query, they should not have gotten  *
*  this far in the procedure).                                *

ELSE
   @ 23, 0
   ? CHR(7)
   @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
   CLEAR TYPEAHEAD
   WAIT ''
   @ 23, 0
   DONE = .F.
```

```
            ENDIF
         ENDIF
      ENDDO
      CLEAR

      *  If the user has not previously entered a response to terminate the *
      *  query (M_CHOICE would be "false"), then give them the opportunity  *
      *  to do another query or terminate the function.                     *

      IF (M_CHOICE)
         DO RCIS_HDR
         DO M_PROMPT
      ENDIF
   ENDDO

   *  Close the database files used in this query.  *

   SELECT 2
   USE
   SELECT 1
   USE
   F_PARA = STUFF(F_PARA,1,1,'C')
   ON ERROR
  *
  RETURN
```

```
*---------------------------------------------------------------------------*
*                                CLAS_QRY                                   *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*       The CLAS_QRY procedure provides the interface for the user to per- *
*       form ad hoc queries on general cadet data which can be grouped by   *
*       AS_CLASS, CAT_TYPE and PC_STATUS.                                   *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE CLAS_QRY
*
 PRIVATE SPACER
 PRIVATE MRM
 PRIVATE MRE
 PRIVATE MRF
 PRIVATE WRK
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    O1A = '  '
    F1A = ' '
    O1B = '  '
    F1B = ' '
    F2  = ' '
    F3  = ' '
    O4A = '  '
    F4A = '               '
    O4B = '  '
    F4B = '               '
    F5  = '         '

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       DO HELP_SCRN
       @  1, 0 TO 15,79
       @  1,17 SAY   AIR SCIENCE CLASS GENERAL INFORMATION QUERY '
       @  3,28 SAY 'AS Class'
       @  6,23 SAY 'Category Type'
       @  8,16 SAY 'Pursuing/Conditional'
       @ 10,27 SAY 'Last Name'
       @ 13,32 SAY 'SSAN'
```

```
*  vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *

DO WHILE (.NOT. DONE)
   @  3,37 GET O1A PICTURE '!!'
   @  3,40 GET F1A PICTURE '9'
   @  4,37 GET O1B PICTURE '!!'
   @  4,40 GET F1B PICTURE '9'
   @  6,40 GET F2  PICTURE '!'
   @  8,40 GET F3  PICTURE '!'
   @ 10,37 GET O4A PICTURE '!!'
   @ 10,40 GET F4A PICTURE '!!!!!!!!!!!!!!!!'
   @ 11,37 GET O4B PICTURE '!!'
   @ 11,40 GET F4B PICTURE '!!!!!!!!!!!!!!!!'
   @ 13,40 GET F5  PICTURE '@R 999-99-9999'

   *  Read query screen inputs and prepare to process them.  *

   READ
   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user chooses to cancel the query, set the required  *
   *  flags to terminate all procedure loops.                    *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
   ENDIF
   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user wants to change their inputs, set DONE flag to  *
   *  flase and repeat the current loop.                          *

   IF (DONE)
      @ 23, 0
      DONE = .F.
      LOOP
   ELSE
      DONE = .T.
   ENDIF

   *  vvvvvvvvvvvv  #4.  RELATIONAL OPERATOR CHECK  vvvvvvvvvvvv  *

   GOOD_RO   = .T.
```

```
      TEMP_LOOP = .T.
      DO WHILE (TEMP_LOOP)
         IF (O1A <> '  ')
            DO RO_CHK WITH O1A
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         IF (O1B <> '  ')
            DO RO_CHK WITH O1B
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         IF (O4A <> '  ')
            DO RO_CHK WITH O4A
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         IF (O4B <> '  ')
            DO RO_CHK WITH O4B
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         TEMP_LOOP = .F.
      ENDDO
      IF (.NOT. GOOD_RO)
         @ 23, 0
         ? CHR(7)
         M_CHOICE = .F.
         @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO' ;
                     ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
         CLEAR TYPEAHEAD
         READ

         *  Give the user the option of either returning to the     *
         *  query input screen or terminating the query function.   *

         IF (M_CHOICE)
            @ 23, 0
            DONE = .F.
         ELSE
            STOP_LOOP = .T.
            EXIT
         ENDIF
      ENDIF
   ENDDO

   *  Check to see if query termination condition has been previously *
   *  set to 'true'.                                                  *

   IF (STOP_LOOP)
      EXIT
```

```
       ELSE

       *  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

          HDR1A = ''
          HDR1B = ''
          DATA1_S = ''
          DATA1_L = ''
          HDR1A = 'First            Last             AS    Cat          Purs';
                + '  Schl  Min   Min  Min'
          HDR1B = 'Name             Name            Class  Type  Major  Cond';
                + '  Type  Math  Eng  Frl'
          DATA1_S = "F_NAME+S2+L_NAME+S4+STR(AS_CLASS,1)+S5+CAT_TYPE+S4+MAJOR";
              + "+S4+PC_STATUS+S4+STR(SCHLR_TYPE,3,1)+S4+MRM+S5+MRE+S4+MRF+' '"
          SEP_LINE = REPLICATE('_',80)
*
          IF (QO_SELECT = 'J')
             HDR1B = HDR1B + '  SSAN           Matric  Work  Corps Auxiliaries'
             DATA1_L = "S2+TRANSFORM(SSAN,'@R 999-99-9999')+S3+MATRIC+S3+WRK";
                + "+S4+TRANSFORM(CORPS_AUX,'@R !!¦!!¦!!¦!!¦!!¦!!¦!!')"
             SEP_LINE = SEP_LINE + REPLICATE('_',57)
          ENDIF

          *  vvvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvvv    *

          FILT_STR = ''
          IF (LEN(LTRIM(F1A)) > 0)
             FILT_STR = 'AS_CLASS' + O1A + F1A
          ENDIF
          IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
             IF (LEN(FILT_STR) > 0)
                FILT_STR = FILT_STR + '.AND.AS_CLASS' + O1B + F1B
             ELSE
                FILT_STR = 'AS_CLASS' + O1B + F1B
             ENDIF
          ENDIF
          IF (LEN(LTRIM(F2)) > 0)
             IF (LEN(FILT_STR) > 0)
                FILT_STR = FILT_STR + '.AND.CAT_TYPE =' + "'" + F2 + "'"
             ELSE
                FILT_STR = 'CAT_TYPE =' + "'" + F2 + "'"
             ENDIF
          ENDIF
          IF (LEN(LTRIM(F3)) > 0)
             IF (LEN(FILT_STR) > 0)
                FILT_STR = FILT_STR + '.AND.PC_STATUS =' + "'" + F3 + "'"
             ELSE
                FILT_STR = 'PC_STATUS =' + "'" + F3 + "'"
             ENDIF
          ENDIF
          IF (LEN(LTRIM(F4A)) > 0)
             IF (LEN(FILT_STR) > 0)
                FILT_STR = FILT_STR + '.AND.L_NAME' + O4A + "'" + F4A + "'"
             ELSE
                FILT_STR = 'L_NAME' + O4A + "'" + F4A + "'"
```

```
   ENDIF
ENDIF
IF (LEN(LTRIM(F4B)) > 0  .AND.  (O4A <> O4B)  .AND.  (F4A <> F4B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O4B + "'" + F4B + "'"
   ELSE
      FILT_STR = 'L_NAME' + O4B + "'" + F4B + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F5)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F5 + "'"
   ELSE
      FILT_STR = 'SSAN =' + "'" + F5 + "'"
   ENDIF
ENDIF
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If none of the database records meet all the input  *
      *  constraints, give the user the option to try again  *
      *  or to terminate the query.                           *

      CASE (EOF())
           DO ERR_NF
           IF (M_CHOICE)
              DONE = .F.
              LOOP
           ELSE
              EXIT
           ENDIF

      *  If some database records meet the constraints, ini-  *
      *  tialize the print environment and perform print loop *
      *  until all records are printed.                       *

      CASE (.NOT. EOF())
           IF QO_SELECT <> 'H'
              SET PRINT ON
              SET DEVICE TO PRINT
              IF QO_SELECT = 'J'
                 @  0, 1 SAY CHR(27) + CHR(15)
   ELSE
      @  0, 1 SAY CHR(27) + CHR(77)
   ENDIF
   MAX_LINES = 66
ELSE
   MAX_LINES = 23
ENDIF
IF (QO_SELECT <> 'J')
   SPACER = SPACE(18)
ELSE
   SPACER = SPACE(49)
ENDIF
CLEAR
@  0, 0 SAY SPACER + 'AIR SCIENCE CLASS GENERAL';
          + ' INFORMATION REPORT'
@  1, 0
FIRST_TIME = .T.
DISP_LINE = 2

*  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *

DO WHILE (.NOT. EOF())
   IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
      IF (.NOT. FIRST_TIME)
         EJECT
      ENDIF
   ENDIF
   IF (FIRST_TIME)
      FIRST_TIME = .F.
   ELSE
      DISP_LINE = 0
      CLEAR
   ENDIF

   *  vvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvv  *

   DO WHILE ((DISP_LINE < MAX_LINES) .AND. (.NOT. EOF()))
      IF (DISP_LINE <= 3)
         @ DISP_LINE, 0 SAY HDR1A
         @ DISP_LINE + 1, 0 SAY HDR1B
         IF (QO_SELECT <> 'H')
            @ DISP_LINE + 1, 0 SAY SEP_LINE
         ENDIF
         DISP_LINE = DISP_LINE + 2
      ENDIF
      MRM = 'N'
      MRE = 'N'
      MRF = 'N'
      IF M_R_MATH
         MRM = 'Y'
      ENDIF
      IF M_R_ENGL
         MRE = 'Y'
      ENDIF
      IF M_R_FLAN
```

```
                 MRF = 'Y'
              ENDIF
              @ DISP_LINE, 0 SAY &DATA1_S
              IF (QO_SELECT = 'J')
                 WRK = 'N'
                 IF WORK
                    WRK = 'Y'
                 ENDIF
                 @ DISP_LINE, 80 SAY &DATA1_L
              ENDIF
              DISP_LINE = DISP_LINE + 2

              *  Issue dBASE III PLUS command to go to the      *
              *  next record which meets the input constraints.*

              SKIP
           ENDDO

           *  If the output media is the screen, issue the user*
           *  paging prompt.                                   *

           IF (QO_SELECT = 'H')
              @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
              CLEAR TYPEAHEAD
              WAIT ''
           ENDIF
        ENDDO
        IF (QO_SELECT <> 'H')
           @ DISP_LINE + 1, 0 SAY CHR(10)
           EJECT
           IF (QO_SELECT = 'J')
              @ 0, 1 SAY CHR(18)
           ELSE
              @  0, 1 SAY CHR(27) + CHR(80)
           ENDIF
           SET PRINT OFF
        ENDIF
        SET DEVICE TO SCREEN
        SET FILTER TO
   ENDCASE

*  If the user fails to enter any data in the input fields,   *
*  issue a prompt for them to please enter data (if they had  *
*  intended to cancel the query, they should not have gotten  *
*  this far in the procedure).                                *

ELSE
   @ 23, 0
   ? CHR(7)
   @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
   CLEAR TYPEAHEAD
   WAIT ''
   @ 23, 0
   DONE = .F.
ENDIF
```

```
            ENDIF
         ENDDO
         CLEAR

         *  If the user has not previously entered a response to terminate the *
         *  query (M_CHOICE would be "false"), then give them the opportunity  *
         *  to do another query or terminate the function.                     *

         IF (M_CHOICE)
            DO RCIS_HDR
            DO M_PROMPT
         ENDIF
      ENDDO

      *  Close the database files used in this query.  *

      SELECT 1
      USE
      F_PARA = STUFF(F_PARA,1,1,'C')
      ON ERROR
     *
     RETURN
```

```
*----------------------------------------------------------------------------*
*                                   HRAX_QRY                                 *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*        The HRAX_QRY procedure provides the interface for the user to per-  *
*        form ad hoc queries on required cadet data for two-year program     *
*        candidates and additional data related to the horizontal axis.      *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE HRAX_QRY
*
 PRIVATE ALT
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    O1A = '  '
    F1A = ' '
    O1B = '  '
    F1B = ' '
    F2  = ' '
    O3A = '  '
    F3A = '             '
    O3B = '  '
    F3B = '             '
    F4  = '       '

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       DO HELP_SCRN
       @  3, 0 TO 15,79
       @  3,14 SAY ' TWO-YEAR PROGRAM CANDIDATE (HORIZONTAL AXIS) QUERY '
       @  5,28 SAY 'AS Class'
       @  8,23 SAY 'Category Type'
       @ 10,27 SAY 'Last Name'
       @ 13,32 SAY 'SSAN'

       *  vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *

       DO WHILE (.NOT. DONE)
          @  5,37 GET O1A PICTURE '!!'
@  5,40 GET F1A PICTURE '9'
@  6,37 GET O1B PICTURE '!!'
@  6,40 GET F1B PICTURE '9'
@  8,40 GET F2  PICTURE '!'
@ 10,37 GET O3A PICTURE '!!'
@ 10,40 GET F3A PICTURE '!!!!!!!!!!!!!!!'
@ 11,37 GET O3B PICTURE '!!'
@ 11,40 GET F3B PICTURE '!!!!!!!!!!!!!!!'
@ 13,40 GET F4  PICTURE '@R 999-99-9999'

*  Read query screen inputs and prepare to process them.   *

READ
@ 23, 0
@ 23,19 SAY ;
      "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
CLEAR TYPEAHEAD
READ

*  If the user chooses to cancel the query, set the required  *
*  flags to terminate all procedure loops.                    *

IF (DONE)
   STOP_LOOP = .T.
   M_CHOICE  = .F.
   EXIT
ELSE
   STOP_LOOP = .F.
ENDIF
@ 23, 0
@ 23,19 SAY ;
       "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
CLEAR TYPEAHEAD
READ

*  If the user wants to change their inputs, set DONE flag to  *
*  flase and repeat the current loop.                          *

IF (DONE)
   @ 23, 0
   DONE = .F.
   LOOP
ELSE
   DONE = .T.
ENDIF

*  vvvvvvvvvvvv  #4.  RELATIONAL OPERATOR CHECK  vvvvvvvvvvvv  *

GOOD_RO   = .T.
TEMP_LOOP = .T.
DO WHILE (TEMP_LOOP)
   IF (O1A <> '  ')
      DO RO_CHK WITH O1A
      IF (.NOT. GOOD_RO)
         EXIT
```

```
            ENDIF
         ENDIF
         IF (O1B <> '  ')
            DO RO_CHK WITH O1B
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         IF (O3A <> '  ')
            DO RO_CHK WITH O3A
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         IF (O3B <> '  ')
            DO RO_CHK WITH O3B
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         TEMP_LOOP = .F.
      ENDDO
      IF (.NOT. GOOD_RO)
         @ 23, 0
         ? CHR(7)
         M_CHOICE = .F.
         @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO' ;
                  + ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
         CLEAR TYPEAHEAD
         READ

         *  Give the user the option of either returning to the     *
         *  query input screen or terminating the query function.   *

         IF (M_CHOICE)
            @ 23, 0
            DONE = .F.
         ELSE
            STOP_LOOP = .T.
            EXIT
         ENDIF
      ENDIF
   ENDDO

   *  Check to see if query termination condition has been previously *
   *  set to 'true'.                                                   *

   IF (STOP_LOOP)
      EXIT
   ELSE

   *  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv   *

      HDR1A = ''
      HDR1B = ''
```

```
HDR2A = ''
HDR2B = ''
DATA1_S = ''
DATA1_L = ''
DATA2_S = ''
DATA2_L = ''
SEP_LINE = ''
BLK_LINE = ''
HDR1A = 'First          Last          AS    Cat   Phys  ';
      + 'Physical          '
HDR1B = 'Name           Name         Class  Type  Cat   ';
      + 'Date     ALTU  Race       '
DATA1_S = "F_NAME+S2+L_NAME+S4+STR(AS_CLASS,1)+S5+CAT_TYPE+S5";
        + "+PHY_CAT+S4+DTOC(PHY_DATE)+S3+ALT+S5+RACE+S7+' '"
HDR2A = '              AFOQT                         SAT       ';
      + '        GPA         DC '
HDR2B = '              Quan   Verb  Pil  Nav  AcAp  Cum   Math';
      + '  Verb  Cum    Sem   Rtng'
*
DATA2A = "S17+' '+STR(AFOQT_QUAN,2)+S5+STR(AFOQT_VERB,2)+S3";
  + "+STR(AFOQT_PLT,2)+S3+STR(AFOQT_NAV,2)+S4+STR(AFOQT_AA,2)";
  + "+S3+STR(SAT_CUM,4)+S3+STR(SAT_MATH,3)+S3+STR(SAT_VERB,3)"
DATA2B = "+S2+STR(CUM_GPA,4,2)+S2+STR(SEM_GPA,4,2)+S3";
       + "+STR(DC_RTNG,1)+S2"
DATA2_S = DATA2A + DATA2B
*
SEP_LINE = REPLICATE('_',80)
BLK_LINE = REPLICATE(' ',80)
SQG_LINE = REPLICATE('~',80)
*
IF (QO_SELECT = 'J')
   HDR1A = HDR1A + '  LOCAL'
   HDR1B = HDR1B + '  Street              City              Zip   ';
         + '  Phone'
   DATA1_L = "S2+LOCAL_STRT+S2+LEFT(LOCAL_CITY,15)+S2";
        + "+LEFT(LOCAL_ZIP,5)+S2+TRANSFORM(LOCAL_PHON,'@R 999-9999')"
   HDR2A = HDR2A + '  ACT                            Form 48'
   HDR2B = HDR2B + '  Cum  Math  Engl  NSci  SSci   Date'
   DATA2_L = "S3+STR(ACT_CUM,2)+S3+STR(ACT_MATH,2)+S4";
           + "+STR(ACT_ENGL,2)+S4+STR(ACT_NSCI,2)+S4";
           + "+STR(ACT_SSCI,2)+S4+DTOC(FORM_48)"
   SEP_LINE = SEP_LINE + REPLICATE('_',57)
   BLK_LINE = BLK_LINE + REPLICATE(' ',57)
   SQG_LINE = SQG_LINE + REPLICATE('~',57)
ENDIF

*  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *

FILT_STR = ''
IF (LEN(LTRIM(F1A)) > 0)
   FILT_STR = 'AS_CLASS' + O1A + F1A
ENDIF
IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.AS_CLASS' + O1B + F1B
      ELSE
         FILT_STR = 'AS_CLASS' + O1B + F1B
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F2)) > 0)
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.CAT_TYPE =' + "'" + F2 + "'"
      ELSE
         FILT_STR = 'CAT_TYPE =' + "'" + F2 + "'"
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F3A)) > 0)
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.L_NAME' + O3A + "'" + F3A + "'"
      ELSE
         FILT_STR = 'L_NAME' + O3A + "'" + F3A + "'"
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F3B)) > 0  .AND.  (O3A <> O3B)  .AND.  (F3A <> F3B))
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.L_NAME' + O3B + "'" + F3B + "'"
      ELSE
         FILT_STR = 'L_NAME' + O3B + "'" + F3B + "'"
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F4)) > 0)
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F4 + "'"
      ELSE
         FILT_STR = 'SSAN =' + "'" + F4 + "'"
      ENDIF
   ENDIF
   DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT   vvvvvvvv  *

   IF (LEN(FILT_STR) > 0)
      @ 23, 0
      @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
      SELECT 1
      IF (.NOT. FILE(M_NDX_F))
         INDEX ON &M_NDX_STR TO &M_NDX
      ENDIF
      SET INDEX TO &M_NDX
      SET FILTER TO &FILT_STR
      GOTO TOP
      DO CASE

         *  If none of the database records meet all the input  *
         *  constraints, give the user the option to try again  *
         *  or to terminate the query.                          *

         CASE (EOF())
              DO ERR_NF
              IF (M_CHOICE)
```

```
            DONE = .F.
            LOOP
         ELSE
            EXIT
         ENDIF

*  If some database records meet the constraints, ini-  *
*  tialize the print environment and perform print loop *
*  until all records are printed.                       *

CASE (.NOT. EOF())
     IF QO_SELECT <> 'H'
        SET PRINT ON
        SET DEVICE TO PRINT
        IF QO_SELECT = 'J'
           @  0, 1 SAY CHR(27) + CHR(15)
        ELSE
           @  0, 1 SAY CHR(27) + CHR(77)
        ENDIF
        MAX_LINES = 66
     ELSE
        MAX_LINES = 23
     ENDIF
     IF (QO_SELECT <> 'J')
        SPACER = SPACE(15)
     ELSE
        SPACER = SPACE(46)
     ENDIF
     CLEAR
     @  0, 0 SAY SPACER + 'TWO-YEAR PROGRAM CANDIDATE';
               + ' (HORIZONTAL AXIS) REPORT'
     @  1, 0
     FIRST_TIME = .T.
     DISP_LINE = 2

     *  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *

     DO WHILE (.NOT. EOF())
        IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
           IF (.NOT. FIRST_TIME)
              EJECT
           ENDIF
        ENDIF
        IF (FIRST_TIME)
           FIRST_TIME = .F.
        ELSE
           DISP_LINE = 0
           CLEAR
        ENDIF

        *  vvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvv  *

        DO WHILE ((DISP_LINE < MAX_LINES) .AND. (.NOT. EOF()))

           *  If the number of print lines per cadet will  *
```

```
                                *  not fit on one page, exit the loop and go to *
                                *  the next page.                               *

                                IF ((MAX_LINES - DISP_LINE) < 7)
                                   EXIT
                                ELSE
                                   @ DISP_LINE, 0 SAY HDR1A
                                   @ DISP_LINE + 1, 0 SAY HDR1B
                                   IF (QO_SELECT <> 'H')
                                      @ DISP_LINE + 1, 0 SAY SEP_LINE
                                   ENDIF
                                   ALT = 'N'
                                   IF ALTU
                                      ALT = 'Y'
                                   ENDIF
                                   @ DISP_LINE + 2, 0 SAY &DATA1_S
                                   IF (QO_SELECT = 'J')
                                      @ DISP_LINE + 2, 80 SAY &DATA1_L
                                   ENDIF
                                   @ DISP_LINE + 4, 0 SAY HDR2A
                                   @ DISP_LINE + 5, 0 SAY HDR2B
                                   IF (QO_SELECT <> 'H')
                                      SEP_LINE = STUFF(SEP_LINE,1,17,S17)
                                      @ DISP_LINE + 5, 0 SAY SEP_LINE
                                   SEP_LINE = STUFF(SEP_LINE,1,17,REPLICATE('_',17))
                                   ENDIF
                                   DL = DISP_LINE + 6

*  The position of the following line is critical for it to print properly. *
*  The string varaible is so long that DOS will not accept it unless it is   *
*  <= 256 characters when combined with the other commands on the same line.*

******************************
 @ DL, 0 SAY &DATA2_S
******************************
                                   IF (QO_SELECT = 'J')
                                      @ DISP_LINE + 6, 80 SAY &DATA2_L
                                   ENDIF
                                   @ DISP_LINE + 7, 0 SAY SQG_LINE
                                   DISP_LINE = DISP_LINE + 8
                                ENDIF

                                *  Issue dBASE III PLUS command to go to the     *
                                *  next record which meets the input constraints.*

                                SKIP
                             ENDDO

                             *  If the output media is the screen, issue the user*
                             *  paging prompt.                                   *

                             IF (QO_SELECT = 'H')
                                @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
                                CLEAR TYPEAHEAD
                                WAIT ''
```

```
                              ENDIF
                           ENDDO
                           IF (QO_SELECT <> 'H')
                              @ DISP_LINE + 1, 0 SAY CHR(10)
                              EJECT
                              IF (QO_SELECT = 'J')
                                 @ 0, 1 SAY CHR(18)
                              ELSE
                                 @  0, 1 SAY CHR(27) + CHR(80)
                              ENDIF
                              SET PRINT OFF
                           ENDIF
                           SET DEVICE TO SCREEN
                           SET FILTER TO
                     ENDCASE

                  *  If the user fails to enter any data in the input fields,    *
                  *  issue a prompt for them to please enter data (if they had   *
                  *  intended to cancel the query, they should not have gotten   *
                  *  this far in the procedure).                                 *

                  ELSE
                     @ 23, 0
                     ? CHR(7)
                     @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
                     CLEAR TYPEAHEAD
                     WAIT ''
                     @ 23, 0
                     DONE = .F.
                  ENDIF
               ENDIF
            ENDDO
            CLEAR

            *  If the user has not previously entered a response to terminate the *
            *  query (M_CHOICE would be "false"), then give them the opportunity  *
            *  to do another query or terminate the function.                     *

            IF (M_CHOICE)
               DO RCIS_HDR
               DO M_PROMPT
            ENDIF
         ENDDO

         *  Close the database files used in this query.  *

         SELECT 1
         USE
         F_PARA = STUFF(F_PARA,1,1,'C')
         ON ERROR
        *
        RETURN
```

```
*----------------------------------------------------------------------------*
*                                CGDT_QRY                                     *
*----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*        The CGDT_QRY procedure provides the interface for the user to per-  *
*        form ad hoc queries on cadet data which is related to suspense      *
*        dates pertaining to their graduation and their commissioning.       *
*                                                                             *
*----------------------------------------------------------------------------*


PROCEDURE CGDT_QRY
*
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    O1A = '  '
    F1A = ' '
    O1B = '  '
    F1B = ' '
    O2A = '  '
    F2A = '               '
    O2B = '  '
    F2B = '               '
    F3  = '         '
    O4A = '  '
    F4A = '   '
    O4B = '  '
    F4B = '   '
    O5A = '  '
    F5A = '   '
    O5B = '  '
    F5B = '   '

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       DO HELP_SCRN
       @  5, 0 TO 15,79
       @  5,17 SAY ' GRADUATION/COMMISSIONING SUSPENSE DATES  QUERY '
       @  7, 9 SAY 'AS Class'
       @ 10,11 SAY 'Last Name'
       @ 13,16 SAY 'SSAN'
@  7,47 SAY '# Days Until'
@  8,47 SAY 'Commissioning Date'
@ 10,50 SAY '# Days Until'
@ 11,50 SAY 'Graduation Date'

*  vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *

DO WHILE (.NOT. DONE)
   @  7,21 GET O1A PICTURE '!!'
   @  7,24 GET F1A PICTURE '9'
   @  8,21 GET O1B PICTURE '!!'
   @  8,24 GET F1B PICTURE '9'
   @ 10,21 GET O2A PICTURE '!!'
   @ 10,24 GET F2A PICTURE '!!!!!!!!!!!!!!!'
   @ 11,21 GET O2B PICTURE '!!'
   @ 11,24 GET F2B PICTURE '!!!!!!!!!!!!!!!'
   @ 13,24 GET F3  PICTURE '@R 999-99-9999'
   @  7,66 GET O4A PICTURE '!!'
   @  7,69 GET F4A PICTURE '999'
   @  8,66 GET O4B PICTURE '!!'
   @  8,69 GET F4B PICTURE '999'
   @ 10,66 GET O5A PICTURE '!!'
   @ 10,69 GET F5A PICTURE '999'
   @ 11,66 GET O5B PICTURE '!!'
   @ 11,69 GET F5B PICTURE '999'

   *  Read query screen inputs and prepare to process them.  *

   READ
   @ 23, 0
   @ 23,19 SAY ;
        "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user chooses to cancel the query, set the required  *
   *  flags to terminate all procedure loops.                    *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
   ENDIF
   @ 23, 0
   @ 23,19 SAY ;
        "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user wants to change their inputs, set DONE flag to  *
   *  flase and repeat the current loop.                          *

   IF (DONE)
   @ 23, 0
   DONE = .F.
   LOOP
ELSE
   DONE = .T.
ENDIF

*  vvvvvvvvvvvv  #4.  RELATIONAL OPERATOR CHECK  vvvvvvvvvvvv  *

GOOD_RO   = .T.
TEMP_LOOP = .T.
DO WHILE (TEMP_LOOP)
   IF (O1A <> '  ')
      DO RO_CHK WITH O1A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O1B <> '  ')
      DO RO_CHK WITH O1B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O2A <> '  ')
      DO RO_CHK WITH O2A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O2B <> '  ')
      DO RO_CHK WITH O2B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O4A <> '  ')
      DO RO_CHK WITH O4A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O4B <> '  ')
      DO RO_CHK WITH O4B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O5A <> '  ')
      DO RO_CHK WITH O5A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O5B <> '  ')
```

```
            DO RO_CHK WITH O5B
            IF (.NOT. GOOD_RO)
               EXIT
            ENDIF
         ENDIF
         TEMP_LOOP = .F.
      ENDDO
      IF (.NOT. GOOD_RO)
         @ 23, 0
         ? CHR(7)
         M_CHOICE = .F.
         @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO'
         @ 23,52 SAY ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
         CLEAR TYPEAHEAD
         READ

         *  Give the user the option of either returning to the     *
         *  query input screen or terminating the query function.   *

         IF (M_CHOICE)
            @ 23, 0
            DONE = .F.
         ELSE
            STOP_LOOP = .T.
            EXIT
         ENDIF
      ENDIF
   ENDDO

   *  Check to see if query termination condition has been previously *
   *  set to 'true'.                                                  *

   IF (STOP_LOOP)
      EXIT
   ELSE

   *  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

      HDR1A = ''
      HDR1B = ''
      DATA1_S = ''
      DATA1_L = ''
      HDR1A = 'First              Last                Comm       Grad        ';
           + ' AS                      '
      HDR1B = 'Name               Name                Date       Date        ';
           + 'Class   SSAN             '
      DATA1_S = "F_NAME+S2+L_NAME+S3+DTOC(COM_DATE)+S3+DTOC(GRAD_DATE)+S4";
             + "+STR(AS_CLASS,1)+S6+TRANSFORM(SSAN,'@R 999-99-9999')+S4"
      SEP_LINE = REPLICATE('_',80)

      IF (QO_SELECT = 'J')
         DATA1_L =  "S2"
         SEP_LINE = SEP_LINE + REPLICATE('_',52)
      ENDIF
```

```
*  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *

FILT_STR = ''
IF (LEN(LTRIM(F1A)) > 0)
   FILT_STR = 'AS_CLASS' + O1A + F1A
ENDIF
IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
   IF (LEN(FILT_STR) > 0)
    FILT_STR = FILT_STR + '.AND.AS_CLASS' + O1B + F1B
   ELSE
      FILT_STR = 'AS_CLASS' + O1B + F1B
   ENDIF
ENDIF
IF (LEN(LTRIM(F2A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O2A + "'" + F2A + "'"
   ELSE
      FILT_STR = 'L_NAME' + O2A + "'" + F2A + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F2B)) > 0  .AND.  (O2A <> O2B)  .AND.  (F2A <> F2B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O2B + "'" + F2B + "'"
   ELSE
      FILT_STR = 'L_NAME' + O2B + "'" + F2B + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F3)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F3 + "'"
   ELSE
      FILT_STR = 'SSAN =' + "'" + F3 + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F4A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.(COM_DATE-DATE())' + O4A +  F4A
   ELSE
      FILT_STR = '(COM_DATE-DATE())' + O4A + F4A
   ENDIF
ENDIF
IF (LEN(LTRIM(F4B)) > 0  .AND.  (O4A <> O4B)  .AND.  (F4A <> F4B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.(COM_DATE-DATE())' + O4B + F4B
   ELSE
      FILT_STR = '(COM_DATE-DATE())' + O4B + F4B
   ENDIF
ENDIF
IF (LEN(LTRIM(F5A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.(GRAD_DATE-DATE())' + O5A +  F5A
   ELSE
      FILT_STR = '(GRAD_DATE-DATE())' + O5A + F5A
   ENDIF
ENDIF
```

```
IF (LEN(LTRIM(F5B)) > 0  .AND.  (O5A <> O5B)  .AND.  (F5A <> F5B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.(GRAD_DATE-DATE())' + O5B + F5B
   ELSE
      FILT_STR = '(GRAD_DATE-DATE())' + O5B + F5B
   ENDIF
ENDIF
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If none of the database records meet all the input  *
      *  constraints, give the user the option to try again  *
      *  or to terminate the query.                          *

      CASE (EOF())
           DO ERR_NF
           IF (M_CHOICE)
              DONE = .F.
              LOOP
           ELSE
              EXIT
           ENDIF

      *  If some database records meet the constraints, ini-  *
      *  tialize the print environment and perform print loop *
      *  until all records are printed.                        *

      CASE (.NOT. EOF())
           IF QO_SELECT <> 'H'
              SET PRINT ON
              SET DEVICE TO PRINT
              IF QO_SELECT = 'J'
                 @  0, 1 SAY CHR(27) + CHR(15)
              ELSE
                 @  0, 1 SAY CHR(27) + CHR(77)
              ENDIF
              MAX_LINES = 66
           ELSE
              MAX_LINES = 23
           ENDIF
           IF (QO_SELECT <> 'J')
              SPACER = SPACE(17)
```

```
ELSE
   SPACER = SPACE(48)
ENDIF
CLEAR
@  0, 0 SAY SPACER + 'GRADUATION/COMMISSIONING SUSPENSE';
          + ' DATES REPORT'
@  1, 0
FIRST_TIME = .T.
DISP_LINE = 2

*  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *

DO WHILE (.NOT. EOF())
   IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
      IF (.NOT. FIRST_TIME)
         EJECT
      ENDIF
   ENDIF
   IF (FIRST_TIME)
      FIRST_TIME = .F.
   ELSE
      DISP_LINE = 0
      CLEAR
   ENDIF

   *  vvvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvvv  *

   DO WHILE ((DISP_LINE < MAX_LINES) .AND. (.NOT. EOF()))
      IF (DISP_LINE <= 3)
         @ DISP_LINE, 0 SAY HDR1A
         @ DISP_LINE + 1, 0 SAY HDR1B
         IF (QO_SELECT <> 'H')
            @ DISP_LINE + 1, 0 SAY SEP_LINE
         ENDIF
         DISP_LINE = DISP_LINE + 2
      ENDIF
      @ DISP_LINE, 0 SAY &DATA1_S
      IF (QO_SELECT = 'J')
         @ DISP_LINE, 80 SAY &DATA1_L
      ENDIF
      DISP_LINE = DISP_LINE + 2

      *  Issue dBASE III PLUS command to go to the     *
      *  next record which meets the input constraints.*

      SKIP
   ENDDO

   *  If the output media is the screen, issue the user*
   *  paging prompt.                                   *

   IF (QO_SELECT = 'H')
      @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
      CLEAR TYPEAHEAD
      WAIT ''
```

```
                  ENDIF
               ENDDO
               IF (QO_SELECT <> 'H')
                  @ DISP_LINE + 1, 0 SAY CHR(10)
                  EJECT
                  IF (QO_SELECT = 'J')
                     @ 0, 1 SAY CHR(18)
                  ELSE
                     @  0, 1 SAY CHR(27) + CHR(80)
                  ENDIF
                  SET PRINT OFF
               ENDIF
               SET DEVICE TO SCREEN
               SET FILTER TO
         ENDCASE

      *  If the user fails to enter any data in the input fields,    *
      *  issue a prompt for them to please enter data (if they had   *
      *  intended to cancel the query, they should not have gotten   *
      *  this far in the procedure).                                 *

      ELSE
         @ 23, 0
         ? CHR(7)
         @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
         CLEAR TYPEAHEAD
         WAIT ''
         @ 23, 0
         DONE = .F.
      ENDIF
   ENDIF
ENDDO
CLEAR

*  If the user has not previously entered a response to terminate the *
*  query (M_CHOICE would be "false"), then give them the opportunity  *
*  to do another query or terminate the function.                      *

IF (M_CHOICE)
   DO RCIS_HDR
   DO M_PROMPT
ENDIF
ENDDO

*  Close the database files used in this query.  *

SELECT 1
USE
F_PARA = STUFF(F_PARA,1,1,'C')
ON ERROR
*
RETURN
```

```
*--------------------------------------------------------------------------*
*                                 SEDT_QRY                                 *
*--------------------------------------------------------------------------*
*                                                                          *
* SUMMARY:                                                                 *
*       The SEDT_QRY procedure provides the interface for the user to per- *
*       form ad hoc queries on cadet data which is related to the cadet's  *
*       scholarship expiration date (if they have one), i.e. suspense dates*
*                                                                          *
*--------------------------------------------------------------------------*


PROCEDURE SEDT_QRY
*
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    O1A = '  '
    F1A = ' '
    O1B = '  '
    F1B = ' '
    F2  = ' '
    O3A = '  '
    F3A = '   '
    O3B = '  '
    F3B = '   '
    O4A = '  '
    F4A = '               '
    O4B = '  '
    F4B = '               '
    F5  = '         '

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       DO HELP_SCRN
       @  1, 0 TO 15,79
       @  1,22 SAY ' SCHOLARSHIP EXPIRATION DATES QUERY '
       @  3,28 SAY 'AS Class'
       @  6,23 SAY 'Category Type'
       @  8,16 SAY 'Scholarship Type'
       @ 11,27 SAY 'Last Name'
       @ 14,32 SAY 'SSAN'
```

```
* vvvvvvvvvvvvvvvv #3. INTERMEDIATE INPUT LOOP vvvvvvvvvvvvvvvv *

DO WHILE (.NOT. DONE)
   @  3,37 GET O1A PICTURE '!!'
   @  3,40 GET F1A PICTURE '9'
   @  4,37 GET O1B PICTURE '!!'
   @  4,40 GET F1B PICTURE '9'
   @  6,40 GET F2  PICTURE '!'
   @  8,37 GET O3A PICTURE '!!'
   @  8,40 GET F3A PICTURE '9.9'
   @  9,37 GET O3B PICTURE '!!'
   @  9,40 GET F3B PICTURE '9.9'
   @ 11,37 GET O4A PICTURE '!!'
   @ 11,40 GET F4A PICTURE '!!!!!!!!!!!!!!!'
   @ 12,37 GET O4B PICTURE '!!'
   @ 12,40 GET F4B PICTURE '!!!!!!!!!!!!!!!'
   @ 14,40 GET F5  PICTURE '@R 999-99-9999'

   * Read query screen inputs and prepare to process them. *

   READ
   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   * If the user chooses to cancel the query, set the required  *
   * flags to terminate all procedure loops.                    *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
   ENDIF
   @ 23, 0
   @ 23,19 SAY ;
          "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   * If the user wants to change their inputs, set DONE flag to  *
   * flase and repeat the current loop.                           *

   IF (DONE)
      @ 23, 0
      DONE = .F.
      LOOP
   ELSE
      DONE = .T.
   ENDIF

   * vvvvvvvvvvvv #4. RELATIONAL OPERATOR CHECK vvvvvvvvvvvv *
```

```
GOOD_RO   = .T.
TEMP_LOOP = .T.
DO WHILE (TEMP_LOOP)
   IF (O1A <> '  ')
      DO RO_CHK WITH O1A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O1B <> '  ')
      DO RO_CHK WITH O1B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O3A <> '  ')
      DO RO_CHK WITH O3A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O3B <> '  ')
      DO RO_CHK WITH O3B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O4A <> '  ')
      DO RO_CHK WITH O4A
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   IF (O4B <> '  ')
      DO RO_CHK WITH O4B
      IF (.NOT. GOOD_RO)
         EXIT
      ENDIF
   ENDIF
   TEMP_LOOP = .F.
ENDDO
IF (.NOT. GOOD_RO)
   @ 23, 0
   ? CHR(7)
   M_CHOICE = .F.
   @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO' ;
            + ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  Give the user the option of either returning to the     *
   *  query input screen or terminating the query function.   *

   IF (M_CHOICE)
```

```
            @ 23, 0
            DONE = .F.
         ELSE
            STOP_LOOP = .T.
            EXIT
         ENDIF
      ENDIF
   ENDDO

   *  Check to see if query termination condition has been previously *
   *  set to 'true'.                                                   *

   IF (STOP_LOOP)
      EXIT
   ELSE

   *  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

      HDR1A = ''
      HDR1B = ''
      DATA1_S = ''
      DATA1_L = ''
      HDR1A = 'First           Last            Schl Exp  Sch  Corps       ';
          + '              Semester'
      HDR1B = 'Name            Name            Date      Typ  Position    ';
          + '              Intrview'
      DATA1_S = "LEFT(F_NAME,14)+S2+LEFT(L_NAME,14)+S2+DTOC(SCHLR_DATE)";
             + "+S2+STR(SCHLR_TYPE,3,1)+S2+LEFT(CORPS_POS,23)+S2";
             + "+DTOC(SEM_INTRVW)"
      SEP_LINE = REPLICATE('_',80)
*
      IF (QO_SELECT = 'J')
         HDR1A = HDR1A + '  Significant'
         HDR1B = HDR1B + '  Information'
         DATA1_L = "S2+OTHER_INFO"
         SEP_LINE = SEP_LINE + REPLICATE('_',52)
      ENDIF

      *  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *

      FILT_STR = ''
      IF (LEN(LTRIM(F1A)) > 0)
         FILT_STR = 'AS_CLASS' + O1A + F1A
      ENDIF
      IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
         IF (LEN(FILT_STR) > 0)
            FILT_STR = FILT_STR + '.AND.AS_CLASS' + O1B + F1B
         ELSE
            FILT_STR = 'AS_CLASS' + O1B + F1B
         ENDIF
      ENDIF
      IF (LEN(LTRIM(F2)) > 0)
         IF (LEN(FILT_STR) > 0)
            FILT_STR = FILT_STR + '.AND.CAT_TYPE =' + "'" + F2 + "'"
         ELSE
         FILT_STR = 'CAT_TYPE =' + "'" + F2 + "'"
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F3A)) > 0)
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.SCHLR_TYPE' + O3A + F3A
      ELSE
         FILT_STR = 'SCHLR_TYPE' + O3A + F3A
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F3B)) > 0  .AND.  (O3A <> O3B)  .AND.  (F3A <> F3B))
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.SCHLR_TYPE' + O3B + F3B
      ELSE
         FILT_STR = 'SCHLR_TYPE' + O3B + F3B
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F4A)) > 0)
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.L_NAME' + O4A + "'" + F4A + "'"
      ELSE
         FILT_STR = 'L_NAME' + O4A + "'" + F4A + "'"
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F4B)) > 0  .AND.  (O4A <> O4B)  .AND.  (F4A <> F4B))
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.L_NAME' + O4B + "'" + F4B + "'"
      ELSE
         FILT_STR = 'L_NAME' + O4B + "'" + F4B + "'"
      ENDIF
   ENDIF
   IF (LEN(LTRIM(F5)) > 0)
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F5 + "'"
      ELSE
         FILT_STR = 'SSAN =' + "'" + F5 + "'"
      ENDIF
   ENDIF
   DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If none of the database records meet all the input  *
*  constraints, give the user the option to try again   *
*  or to terminate the query.                            *

CASE (EOF())
     DO ERR_NF
     IF (M_CHOICE)
        DONE = .F.
        LOOP
     ELSE
        EXIT
     ENDIF

*  If some database records meet the constraints, ini-   *
*  tialize the print environment and perform print loop *
*  until all records are printed.                        *

CASE (.NOT. EOF())
     IF QO_SELECT <> 'H'
        SET PRINT ON
        SET DEVICE TO PRINT
        IF QO_SELECT = 'J'
           @  0, 1 SAY CHR(27) + CHR(15)
        ELSE
           @  0, 1 SAY CHR(27) + CHR(77)
        ENDIF
        MAX_LINES = 66
     ELSE
        MAX_LINES = 23
     ENDIF
     IF (QO_SELECT <> 'J')
        SPACER = SPACE(22)
     ELSE
        SPACER = SPACE(53)
     ENDIF
     CLEAR
     @  0, 0 SAY SPACER + 'SCHOLARSHIP EXPIRATION DATES REPORT'
     @  1, 0
     FIRST_TIME = .T.
     DISP_LINE = 2

     *  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *

     DO WHILE (.NOT. EOF())
        IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
           IF (.NOT. FIRST_TIME)
              EJECT
           ENDIF
        ENDIF
        IF (FIRST_TIME)
           FIRST_TIME = .F.
        ELSE
           DISP_LINE = 0
           CLEAR
        ENDIF
```

```
                    *  vvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvv  *

                    DO WHILE ((DISP_LINE < MAX_LINES) .AND. (.NOT. EOF()))
                       IF (DISP_LINE <= 3)
                          @ DISP_LINE, 0 SAY HDR1A
                          @ DISP_LINE + 1, 0 SAY HDR1B
                          IF (QO_SELECT <> 'H')
                             @ DISP_LINE + 1, 0 SAY SEP_LINE
                          ENDIF
                          DISP_LINE = DISP_LINE + 2
                       ENDIF
                       @ DISP_LINE, 0 SAY &DATA1_S
                       IF (QO_SELECT = 'J')
                          @ DISP_LINE, 80 SAY &DATA1_L
                       ENDIF
                       DISP_LINE = DISP_LINE + 2

                       *  Issue dBASE III PLUS command to go to the     *
                       *  next record which meets the input constraints.*

                       SKIP
                    ENDDO

                    *  If the output media is the screen, issue the user*
                    *  paging prompt.                                   *

                    IF (QO_SELECT = 'H')
                       @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
                       CLEAR TYPEAHEAD
                       WAIT ''
                    ENDIF
                 ENDDO
                 IF (QO_SELECT <> 'H')
                    @ DISP_LINE + 1, 0 SAY CHR(10)
                    EJECT
                    IF (QO_SELECT = 'J')
                       @ 0, 1 SAY CHR(18)
                    ELSE
                       @  0, 1 SAY CHR(27) + CHR(80)
                    ENDIF
                    SET PRINT OFF
                 ENDIF
                 SET DEVICE TO SCREEN
                 SET FILTER TO
      ENDCASE

   *  If the user fails to enter any data in the input fields,   *
   *  issue a prompt for them to please enter data (if they had  *
   *  intended to cancel the query, they should not have gotten  *
   *  this far in the procedure).                                *

   ELSE
      @ 23, 0
      ? CHR(7)
      @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
```

```
            CLEAR TYPEAHEAD
            WAIT ''
            @ 23, 0
            DONE = .F.
         ENDIF
      ENDIF
   ENDDO
   CLEAR

   *  If the user has not previously entered a response to terminate the *
   *  query (M_CHOICE would be "false"), then give them the opportunity  *
   *  to do another query or terminate the function.                     *

   IF (M_CHOICE)
      DO RCIS_HDR
      DO M_PROMPT
   ENDIF
ENDDO

*  Close the database files used in this query.  *

SELECT 1
USE
F_PARA = STUFF(F_PARA,1,1,'C')
ON ERROR
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                                   WTAR_QRY                                *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*        The WTAR_QRY procedure provides the interface for the user to per- *
*        form ad hoc queries on cadet data which is related to the cadet's  *
*        weight and aerobic run time standards.                             *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE WTAR_QRY
*
 PRIVATE PRINT_OPT
 PRIVATE PRNT_FLAG
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    O1A = '  '
    F1A = ' '
    O1B = '  '
    F1B = ' '
    O2A = '  '
    F2A = '             '
    O2B = '  '
    F2B = '             '
    F3  = '       '
    PRINT_OPT = 1

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       DO HELP_SCRN
       @  1, 0 TO 15,79
       @  1,19 SAY ' CADET WEIGHT AND AEROBIC STANDARDS QUERY '
       @  3,23 SAY 'AS Class'
       @  6,22 SAY 'Last Name'
       @  9,27 SAY 'SSAN'
       @ 11,18 SAY 'Print Options'
       @ 12,18 SAY ' *Subject to constraints above*'
       @ 13,18 SAY '   All Cadets - 1'
       @ 14,18 SAY '   Only Cadets in violation of standards - 2'
```

```
* vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *

DO WHILE (.NOT. DONE)
   @  3,32 GET O1A PICTURE '!!'
   @  3,35 GET F1A PICTURE '9'
   @  4,32 GET O1B PICTURE '!!'
   @  4,35 GET F1B PICTURE '9'
   @  6,32 GET O2A PICTURE '!!'
   @  6,35 GET F2A PICTURE '!!!!!!!!!!!!!!!!'
   @  7,32 GET O2B PICTURE '!!'
   @  7,35 GET F2B PICTURE '!!!!!!!!!!!!!!!!'
   @  9,35 GET F3  PICTURE '@R 999-99-9999'
   @ 14,63 GET PRINT_OPT PICTURE '9' RANGE 1,2

   *  Read query screen inputs and prepare to process them.  *

   READ
   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user chooses to cancel the query, set the required  *
   *  flags to terminate all procedure loops.                     *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
   ENDIF
   @ 23, 0
   @ 23,19 SAY ;
          "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user wants to change their inputs, set DONE flag to  *
   *  flase and repeat the current loop.                           *

   IF (DONE)
      @ 23, 0
      DONE = .F.
      LOOP
   ELSE
      DONE = .T.
   ENDIF

   *  vvvvvvvvvvvv  #4.  RELATIONAL OPERATOR CHECK  vvvvvvvvvvv  *

   GOOD_RO   = .T.
   TEMP_LOOP = .T.
   DO WHILE (TEMP_LOOP)
```

```
        IF (O1A <> '  ')
           DO RO_CHK WITH O1A
           IF (.NOT. GOOD_RO)
              EXIT
           ENDIF
        ENDIF
        IF (O1B <> '  ')
           DO RO_CHK WITH O1B
           IF (.NOT. GOOD_RO)
              EXIT
           ENDIF
        ENDIF
        IF (O2A <> '  ')
           DO RO_CHK WITH O2A
           IF (.NOT. GOOD_RO)
              EXIT
           ENDIF
        ENDIF
        IF (O2B <> '  ')
           DO RO_CHK WITH O2B
           IF (.NOT. GOOD_RO)
              EXIT
           ENDIF
        ENDIF
        TEMP_LOOP = .F.
     ENDDO
     IF (.NOT. GOOD_RO)
        @ 23, 0
        ? CHR(7)
        M_CHOICE = .F.
        @ 23, 4 SAY 'INVALID RELATIONAL OPERATOR.  WOULD YOU LIKE TO' ;
                  + ' TRY AGAIN [Y/N]? '  GET M_CHOICE PICTURE 'Y'
        CLEAR TYPEAHEAD
        READ

        *  Give the user the option of either returning to the     *
        *  query input screen or terminating the query function.   *

        IF (M_CHOICE)
           @ 23, 0
           DONE = .F.
        ELSE
           STOP_LOOP = .T.
           EXIT
        ENDIF
     ENDIF
  ENDDO

  *  Check to see if query termination condition has been previously *
  *  set to 'true'.                                                  *

  IF (STOP_LOOP)
     EXIT
  ELSE
```

```
*  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

   HDR1A = ''
   HDR1B = ''
   HDR2A = ''
   HDR2B = ''
   DATA1_S = ''
   DATA1_L = ''
   DATA2_S = ''
   DATA2_L = ''
   COL_HDRA = ' Max Min     Max '
   COL_HDRB = ' WT  WT  10%  RT '
   COL_LIN  = '|   |   |   |   |'
   BLK_LINE = REPLICATE(' ',80)
   SEP_LINE = REPLICATE('_',80)
   SQG_LINE = REPLICATE('~',80)
   HDR1A = 'First           Last                            Max   ';
         + '   Min                   '
   HDR1B = 'Name            Name            Heigh  Weight  Weight';
         + '  Weight                 '
   DATA1_S = "LEFT(F_NAME,14)+S2+LEFT(L_NAME,14)+S2+STR(HEIGHT,5,2)+S2";
         + "+STR(WEIGHT,6,2)+S2+STR(MAX_WGHT,6,2)+S2+STR(MIN_WGHT,6,2)";
         + "+S2+COL_LIN"
   HDR2A = '                          AS    Cat            Run    ';
         + '   Max    '+COL_LIN
   HDR2B = '                         Class  Type    Age    Time   ';
         + ' Run Time '+COL_LIN
   DATA2_S = "S26+STR(AS_CLASS,1)+S6+CAT_TYPE+S6+AGE+S5";
           + "+TRANSFORM(RUN_TIME,'@R 99:99')+S4";
           + "+TRANSFORM(STR(MAX_RT,4),'@R 99:99')+S2+COL_LIN"

   IF (QO_SELECT = 'J')
      HDR1A = HDR1A + '  LOCAL'
      HDR1B = HDR1B + '  Street                City                 Zip  ';
            + '  Phone'
      DATA1_L = "S2+LOCAL_STRT+S2+LEFT(LOCAL_CITY,15)+S2";
           + "+LEFT(LOCAL_ZIP,5)+S2+TRANSFORM(LOCAL_PHON,'@R 999-9999')"
      DATA2_L = "S2"
      SEP_LINE = SEP_LINE + REPLICATE('_',57)
      SQG_LINE = SQG_LINE + REPLICATE('~',57)
   ENDIF

   *  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv   *

   FILT_STR = ''
   IF (LEN(LTRIM(F1A)) > 0)
      FILT_STR = 'AS_CLASS' + O1A + F1A
   ENDIF
   IF (LEN(LTRIM(F1B)) > 0  .AND.  (O1A <> O1B)  .AND.  (F1A <> F1B))
      IF (LEN(FILT_STR) > 0)
         FILT_STR = FILT_STR + '.AND.AS_CLASS' + O1B + F1B
      ELSE
         FILT_STR = 'AS_CLASS' + O1B + F1B
      ENDIF
   ENDIF
```

```
IF (LEN(LTRIM(F2A)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O2A + "'" + F2A + "'"
   ELSE
      FILT_STR = 'L_NAME' + O2A + "'" + F2A + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F2B)) > 0  .AND.  (O2A <> O2B)  .AND.  (F2A <> F2B))
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.L_NAME' + O2B + "'" + F2B + "'"
   ELSE
      FILT_STR = 'L_NAME' + O2B + "'" + F2B + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F3)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F3 + "'"
   ELSE
      FILT_STR = 'SSAN =' + "'" + F3 + "'"
   ENDIF
ENDIF
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

@ 23, 0
@ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
SELECT 1
IF (.NOT. FILE(M_NDX_F))
   INDEX ON &M_NDX_STR TO &M_NDX
ENDIF
SET INDEX TO &M_NDX
IF (LEN(FILT_STR) > 0)
   SET FILTER TO &FILT_STR
ENDIF
GOTO TOP
DO CASE

      *  If none of the database records meet all the input  *
      *  constraints, give the user the option to try again  *
      *  or to terminate the query.                          *

   CASE (EOF())
        DO ERR_NF
        IF (M_CHOICE)
           DONE = .F.
           LOOP
        ELSE
           EXIT
        ENDIF

      *  If some database records meet the constraints, ini-  *
      *  tialize the print environment and perform print loop *
      *  until all records are printed.                       *
```

```
CASE (.NOT. EOF())
     IF QO_SELECT <> 'H'
        SET PRINT ON
        SET DEVICE TO PRINT
        IF QO_SELECT = 'J'
           @  0, 1 SAY CHR(27) + CHR(15)
        ELSE
           @  0, 1 SAY CHR(27) + CHR(77)
        ENDIF
        MAX_LINES = 66
     ELSE
        MAX_LINES = 23
     ENDIF
     IF (QO_SELECT <> 'J')
        SPACER = SPACE(19)
     ELSE
        SPACER = SPACE(50)
     ENDIF
     CLEAR
     @  0, 0 SAY SPACER + 'CADET WEIGHT AND AEROBIC STANDARDS';
               + ' REPORT'
     @  1, 0
     FIRST_TIME = .T.
     DISP_LINE = 2

        *  vvvvvvvvvv  #8.  DATABASE RECORD LOOP  vvvvvvvvvv  *

     DO WHILE (.NOT. EOF())
        IF ((DISP_LINE > 0)  .AND.  (QO_SELECT <> 'H'))
           IF (.NOT. FIRST_TIME)
              EJECT
           ENDIF
        ENDIF
        IF (FIRST_TIME)
           FIRST_TIME = .F.
        ELSE
           DISP_LINE = 0
           CLEAR
        ENDIF

           *  vvvvvvvvvvvvv  #9.  PAGING LOOP  vvvvvvvvvvvvv  *

        DO WHILE ((DISP_LINE < MAX_LINES)  .AND.  (.NOT. EOF()))
           REC_NUM = RECNO()
           PRNT_FLAG = .F.
           VIOL_BAR  = COL_LIN
           HGHT_SAV  = HEIGHT
           SEX_SAV   = SEX
           AGE_GROUP = '1'
           IF (INT(VAL(AGE)) >= 30)
              AGE_GROUP = '2'
           ENDIF
           SELECT 2
           SEEK HGHT_SAV
           MAX_WGHT = 0.00
```

```
MIN_WGHT = 0.00
IF (.NOT. EOF())
   IF (SEX_SAV = 'F')
      MAX_WGHT = MAX_WT_F
      MIN_WGHT = MIN_WT_F
   ELSE
      IF (SEX_SAV = 'M')
         MAX_WGHT = MAX_WT_M
         MIN_WGHT = MIN_WT_M
      ENDIF
   ENDIF
ENDIF
SELECT 3
SEEK AGE_GROUP
MAX_RT = 0000
IF (.NOT. EOF())
   IF (SEX_SAV = 'F')
      MAX_RT = MAX_RT_F
   ELSE
      IF (SEX_SAV = 'M')
         MAX_RT = MAX_RT_M
      ENDIF
   ENDIF
ENDIF
SELECT 1
GOTO REC_NUM
IF (WEIGHT > MAX_WGHT)
   PRNT_FLAG = .T.
   VIOL_BAR  = STUFF(VIOL_BAR,3,1,'*')
ENDIF
IF (WEIGHT < MIN_WGHT)
   PRNT_FLAG = .T.
   VIOL_BAR  = STUFF(VIOL_BAR,7,1,'*')
ENDIF
IF (WEIGHT > (MAX_WGHT*.90))
   PRNT_FLAG = .T.
   VIOL_BAR  = STUFF(VIOL_BAR,11,1,'*')
ENDIF
IF (VAL(RUN_TIME) > MAX_RT)
   PRNT_FLAG = .T.
   VIOL_BAR  = STUFF(VIOL_BAR,15,1,'*')
ENDIF
IF (PRINT_OPT = 1) .OR. (PRNT_FLAG)

   *  If the number of print lines per cadet will  *
   *  not fit on one page, exit the loop and go to *
   *  the next page.                               *

   IF ((MAX_LINES - DISP_LINE) < 7)
      EXIT
   ELSE
      IF (DISP_LINE <= 3)
         HDR1A = STUFF(HDR1A,64,17,COL_HDRA)
         HDR1B = STUFF(HDR1B,64,17,COL_HDRB)
     SEP_LINE = STUFF(SEP_LINE,64,17,REPLICATE('_',17))
```

```
                                ELSE
                                   HDR1A = STUFF(HDR1A,64,17,COL_LIN)
                                   HDR1B = STUFF(HDR1B,64,17,COL_LIN)
                                ENDIF
                                @ DISP_LINE, 0 SAY HDR1A
                                @ DISP_LINE + 1, 0 SAY HDR1B
*
                                IF (QO_SELECT <> 'H')
                                   @ DISP_LINE + 1, 0 SAY SEP_LINE
                                ENDIF
                                @ DISP_LINE + 2, 0 SAY &DATA1_S
*
                                IF (QO_SELECT = 'J')
                                   @ DISP_LINE + 2, 80 SAY &DATA1_L
                                ENDIF
                                BLK_LINE = STUFF(BLK_LINE,64,17,VIOL_BAR)
                                @ DISP_LINE + 3, 0 SAY BLK_LINE
                                @ DISP_LINE + 4, 0 SAY HDR2A
                                @ DISP_LINE + 5, 0 SAY HDR2B
*
                                IF (QO_SELECT <> 'H')
                                   SEP_LINE = STUFF(SEP_LINE,64,17,COL_LIN)
                                   SEP_LINE = STUFF(SEP_LINE,1,26,S26)
                                   @ DISP_LINE + 5, 0 SAY SEP_LINE
                                SEP_LINE = STUFF(SEP_LINE,1,26,REPLICATE('_',26))
                                ENDIF
                                @ DISP_LINE + 6, 0 SAY &DATA2_S
*
                                IF (QO_SELECT = 'J')
                                   @ DISP_LINE + 6, 80 SAY &DATA2_L
                                ENDIF
                                SQG_LINE = STUFF(SQG_LINE,64,17,COL_LIN)
                                @ DISP_LINE + 7, 0 SAY SQG_LINE
                                DISP_LINE = DISP_LINE + 8
                             ENDIF
                          ENDIF

                             *  Issue dBASE III PLUS command to go to the      *
                             *  next record which meets the input constraints.*

                          SKIP
                       ENDDO

                          *  If the output media is the screen, issue the user*
                          *  paging prompt.                                    *

                       IF (QO_SELECT = 'H')
                          @ 23, 0 SAY 'PRESS ANY KEY TO CONTINUE'
                          CLEAR TYPEAHEAD
                          WAIT ''
                       ENDIF
                    ENDDO
                    IF (QO_SELECT <> 'H')
                       @ DISP_LINE + 1, 0 SAY CHR(10)
                       EJECT
```

```
                     IF (QO_SELECT = 'J')
                        @  0, 1 SAY CHR(18)
                     ELSE
                        @  0, 1 SAY CHR(27) + CHR(80)
                     ENDIF
                     SET PRINT OFF
                  ENDIF
                  SET DEVICE TO SCREEN
                  SET FILTER TO
          ENDCASE
       ENDIF
    ENDDO
    CLEAR

    *  If the user has not previously entered a response to terminate the *
    *  query (M_CHOICE would be "false"), then give them the opportunity  *
    *  to do another query or terminate the function.                     *

    IF (M_CHOICE)
       DO RCIS_HDR
       DO M_PROMPT
    ENDIF
 ENDDO

 *  Close the database files used in this query.  *

 SELECT 3
 USE
 SELECT 2
 USE
 SELECT 1
 USE
 F_PARA = STUFF(F_PARA,1,1,'C')
 ON ERROR
*
RETURN
```

```
*---------------------------------------------------------------------------*
*                              INDV_QRY                                     *
*---------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*       The INDV_QRY procedure provides the interface for the user to per-  *
*       form queries on all the data contained in the Master record for     *
*       individual cadets.  All data is displayed on one screen.            *
*                                                                           *
*---------------------------------------------------------------------------*


PROCEDURE INDV_QRY
*
 PRIVATE FYC
 PRIVATE PRS
 PRIVATE WRQ
 PRIVATE PLS
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    F1A = '               '
    F1B = '               '
    F1C = '               '
    F2  = '           '

    *  vvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       @  5, 0 TO 15,79
       @  5,28 SAY ' INDIVIDUAL CADET QUERY '
       @  7,24 SAY 'Enter Name or Social Security #'
       @  9,27 SAY 'First Name'
       @ 10,26 SAY 'Middle Name'
       @ 11,28 SAY 'Last Name'
       @ 13,33 SAY 'SSAN'

       *  vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *

       DO WHILE (.NOT. DONE)
          @  9,38 GET F1A PICTURE '!!!!!!!!!!!!!!!'
          @ 10,38 GET F1B PICTURE '!!!!!!!!!!!!!!!'
          @ 11,38 GET F1C PICTURE '!!!!!!!!!!!!!!!'
          @ 13,38 GET F2  PICTURE '@R 999-99-9999'
```

```
   *  Read query screen inputs and prepare to process them.  *

   READ
   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user chooses to cancel the query, set the required  *
   *  flags to terminate all procedure loops.                    *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
   ENDIF
   @ 23, 0
   @ 23,19 SAY ;
          "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user wants to change their inputs, set DONE flag to  *
   *  flase and repeat the current loop.                          *

   IF (DONE)
      @ 23, 0
      DONE = .F.
      LOOP
   ELSE
      DONE = .T.
   ENDIF
ENDDO

*  Check to see if query termination condition has been previously *
*  set to 'true'.                                                    *

IF (STOP_LOOP)
   EXIT

*  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

ELSE
   HDR1A = ''
   HDR1B = ''
   HDR2A = ''
   HDR2B = ''
   HDR3A = ''
   HDR3B = ''
   HDR4A = ''
   HDR4B = ''
```

```
          HDR5A = ''
          HDR5B = ''
          HDR6A = ''
          HDR6B = ''
          DATA1_S = ''
          DATA1_L = ''
          DATA2_S = ''
          DATA2_L = ''
          DATA3_S = ''
          DATA4_S = ''
          DATA5_S = ''
          DATA5_L = ''
          DATA6_S = ''
          DATA6_L = ''
          HDR1A = 'First           Middle   Last                      ';
                + '         Birth             '
          HDR1B = 'Name            Name     Name            SSAN        ';
                + '  Matric  Date      Age  Sex'
          DATA1_S = "LEFT(F_NAME,14)+S2+LEFT(M_NAME,7)+S2+LEFT(L_NAME,14)+S2";
            + "+TRANSFORM(SSAN,'@R 999-99-9999')+S2+MATRIC+S2+DTOC(BIRTHDATE)";
            + "+S3+AGE+S3+SEX"
*
          HDR2A = 'AS  AS Class  DC    FY     FT    FT          Pil        ';
                + '  Corps                  '
          HDR2B = 'Yr    Rank   Rtng  Rtng  Rating  Cmp  ALTU  Lics  Work';
                + '  Auxiliaries            '
          DATA2A = "' '+STR(AS_CLASS,1)+S3+STR(AS_RNK_POS,3)+'/'+CLAS_NUM+S3";
                 + "+STR(DC_RTNG,1)+S5+STR(FY_RTNG,2)+S3+STR(FT_RTNG,6,2)+S3";
                 + "+FTC+S4+ALT+S5"
          DATA2B = "+PLS+S5+WRK+S4+TRANSFORM(CORPS_AUX,'@R !!¦!!¦!!¦!!¦!!¦!!')"
          DATA2_S = DATA2A + DATA2B
*
          HDR3A = 'Cat   Purs  4-Yı  Pri   Waiv  Form 48   Semester       ';
                + '  FSP      '
          HDR3B = 'Type  Cond  Cad.  Serv  Req   Date       Intrview  Race';
                + '  Date     '
          DATA3_S = "' '+CAT_TYPE+S5+PC_STATUS+S5+FYC+S5+PRS+S5+WRQ+S4";
               + "+DTOC(FORM_48)+S2+DTOC(SEM_INTRVW)+S3+RACE+S4+DTOC(FSP_DATE)"
*
          HDR4A = '                Weigh     Run     Run        Phys  Phys    ';
                + '  Grad      Comm       '
          HDR4B = 'Height  Weight  Date      Time    Date       Cat   Date    ';
                + '  Date      Date       '
        DATA4_S = "' '+STR(HEIGHT,5,2)+S2+STR(WEIGHT,6,2)+S2+DTOC(WEIGH_DATE)";
           + "+S2+TRANSFORM(RUN_TIME,'@R 99:99')+S2+DTOC(RUN_DATE)+S3+PHY_CAT";
           + "+S4+DTOC(PHY_DATE)+S2+DTOC(GRAD_DATE)+S2+DTOC(COM_DATE)+S3"
*
          HDR5A = '        Schl  Schl Exp  GPA         SAT               ';
                + '  ACT                        '
          HDR5B = 'Major  Type  Date      Cum   Sem   Cum   Math  Verb';
                + '  Cum  Math  Engl  NSci  SSci'
          DATA5A = "' '+MAJOR+S3+STR(SCHLR_TYPE,3,1)+S2+DTOC(SCHLR_DATE)+S2";
                + "+STR(CUM_GPA,4,2)+S2+STR(SEM_GPA,4,2)+S2+STR(SAT_CUM,4)+S3";
                + "+STR(SAT_MATH,3)+S3+STR(SAT_VERB,3)+S3+STR(ACT_CUM,2)+S3"
          DATA5B = "+STR(ACT_MATH,2)+S4+STR(ACT_ENGL,2)+S4+STR(ACT_NSCI,2)+S4";
```

```
            + "+STR(ACT_SSCI,2)"
         DATA5_S = DATA5A + DATA5B
*
         HDR6A = 'AFOQT                          AFOQT     Min Req        '
         HDR6B = 'Quan  Verb  Pil  Nav  AcAp  Date       Math  Engl  Frln'
         DATA6_S = "' '+STR(AFOQT_QUAN,2)+S4+STR(AFOQT_VERB,2)+S4";
                 + "+STR(AFOQT_PLT,2)+S3+STR(AFOQT_NAV,2)+S3+STR(AFOQT_AA,2)";
                 + "+S3+DTOC(AFOQT_DATE)+S3+MRM+S5+MRE+S5+MRF+S2"
*
         SEP_LINE = REPLICATE('_',80)
         SQG_LINE = REPLICATE('~',80)
*
         IF (QO_SELECT = 'J')
            HDR1A = HDR1A + '  LOCAL'
            HDR1B = HDR1B + '  Street                 City             Zip  ';
                  + '  Phone'
            DATA1_L = "S2+LOCAL_STRT+S2+LEFT(LOCAL_CITY,15)+S2";
                 + "+LEFT(LOCAL_ZIP,5)+S2+TRANSFORM(LOCAL_PHON,'@R 999-9999')"
*
            HDR2A = HDR2A + '  Corps'
            HDR2B = HDR2B + '  Position'
            DATA2_L = "S2+CORPS_POS"
*
            HDR3A = HDR3A + '  PERMANENT'
            HDR3B = HDR3B + '  Street                City                 ';
                  + '  ST  Zip          Phone'
            DATA3_L = "S2+LEFT(PERM_STRT,19)+S2+LEFT(PERM_CITY,19)+S2";
                    + "+PERM_STAT+S2+TRANSFORM(PERM_ZIP,'@R 99999-NNNN')+S2";
                    + "+TRANSFORM(PERM_PHON,'@R (999)999-9999')"
*
            HDR6A = HDR6A + '  Significant'
            HDR6B = HDR6B + '  Information'
            DATA6_L =  "S2+OTHER_INFO"
*
            SEP_LINE = SEP_LINE + REPLICATE('_',57)
            SQG_LINE = SQG_LINE + REPLICATE('~',57)
         ENDIF

         *  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *

         FILT_STR = ''
         IF (LEN(LTRIM(F1A)) > 0)
            FILT_STR = 'F_NAME =' + "'" + F1A + "'"
         ENDIF
         IF (LEN(LTRIM(F1B)) > 0)
            IF (LEN(FILT_STR) > 0)
               FILT_STR = FILT_STR + '.AND.M_NAME =' + "'" + F1B + "'"
            ELSE
               FILT_STR = 'M_NAME =' + "'" + F1B + "'"
            ENDIF
         ENDIF
         IF (LEN(LTRIM(F1C)) > 0)
            IF (LEN(FILT_STR) > 0)
               FILT_STR = FILT_STR + '.AND.L_NAME =' + "'" + F1C + "'"
            ELSE
```

```
      FILT_STR = 'L_NAME =' + "'" + F1C + "'"
   ENDIF
ENDIF
IF (LEN(LTRIM(F2)) > 0)
   IF (LEN(FILT_STR) > 0)
      FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F2 + "'"
   ELSE
      FILT_STR = 'SSAN =' + "'" + F2 + "'"
   ENDIF
ENDIF
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   IF (LEN(LTRIM(F2)) = 0)
      COUNT FOR &FILT_STR TO REC_CNT
      IF (REC_CNT > 1)
        @ 23, 0
        ? CHR(7)
        @ 23, 0 SAY 'NAME ASSIGNED TO MORE THAN ONE RECORD (ENTER';
                 + ' SSAN).  PRESS ANY KEY & TRY AGAIN.'
        WAIT ''
        DONE = .F.
        LOOP
      ENDIF
   ENDIF
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If none of the database records meet all the input  *
      *  constraints, give the user the option to try again  *
      *  or to terminate the query.                          *

      CASE (EOF())
           DO ERR_NF
           IF (M_CHOICE)
              DONE = .F.
              LOOP
           ELSE
              EXIT
           ENDIF

      *  If some database records meet the constraints, ini-  *
      *  tialize the print environment and perform print func-*
      *  tion until all data is printed.                      *
```

```
            CASE (.NOT. EOF())
                 REC_NUM = RECNO()
                 IF QO_SELECT <> 'H'
                    SET PRINT ON
                    SET DEVICE TO PRINT
                    IF QO_SELECT = 'J'
                       @  0, 1 SAY CHR(27) + CHR(15)
                    ELSE
                       @  0, 1 SAY CHR(27) + CHR(77)
                    ENDIF
                 ENDIF
                 IF (QO_SELECT <> 'J')
                    SPACER = SPACE(27)
                 ELSE
                    SPACER = SPACE(59)
                 ENDIF
                 CLEAR
                 DISP_LINE = 0
*
                 IF (QO_SELECT <> 'H')
                    DISP_LINE = 5
                 ENDIF
                 @ DISP_LINE, 0 SAY SPACER + 'INDIVIDUAL CADET REPORT'
*
                 IF (QO_SELECT <> 'H')
                    DISP_LINE = DISP_LINE + 1
                 ENDIF
                 @ DISP_LINE + 2, 0     SAY HDR1A
                 @ DISP_LINE + 3, 0 SAY HDR1B
*
                 IF (QO_SELECT <> 'H')
                    @ DISP_LINE + 3, 0 SAY SEP_LINE
                 ENDIF
                 @ DISP_LINE + 4, 0 SAY &DATA1_S
*
                 IF (QO_SELECT = 'J')
                    @ DISP_LINE + 4, 80 SAY &DATA1_L
                 ENDIF
*
                 IF (QO_SELECT <> 'H')
                    DISP_LINE = DISP_LINE + 1
                 ENDIF
                 @ DISP_LINE + 6, 0 SAY HDR2A
                 @ DISP_LINE + 7, 0 SAY HDR2B
*
                 IF (QO_SELECT <> 'H')
                    @ DISP_LINE + 7, 0 SAY SEP_LINE
                 ENDIF
                 FTC = 'N'
                 ALT = 'N'
                 PLS = 'N'
                 WRK = 'N'
                 IF FT_COMP
                    FTC = 'Y'
                 ENDIF
```

```
                IF ALTU
                   ALT = 'Y'
                ENDIF
                IF PLT_LICENS
                   PLS = 'Y'
                ENDIF
                IF WORK
                   WRK = 'Y'
                ENDIF
                CLAS_VAL = AS_CLASS
                SELECT 2
                SEEK CLAS_VAL
                IF (.NOT. EOF())
                   CLAS_NUM = STR(AS_CL_TOT,3)
                ELSE
                   CLAS_NUM = ' ? '
                ENDIF
                SELECT 1
                GOTO REC_NUM
                @ DISP_LINE + 8, 0 SAY &DATA2_S
*
                IF (QO_SELECT = 'J')
                   @ DISP_LINE + 8, 80 SAY &DATA2_L
                ENDIF
*
                IF (QO_SELECT <> 'H')
                   DISP_LINE = DISP_LINE + 1
                ENDIF
                @ DISP_LINE + 10, 0 SAY HDR3A
                @ DISP_LINE + 11, 0 SAY HDR3B
*
                IF (QO_SELECT <> 'H')
                   @ DISP_LINE + 11, 0 SAY SEP_LINE
                ENDIF
                FYC = 'N'
                PRS = 'N'
                WRQ = 'N'
                IF FOUR_YR
                   FYC = 'Y'
                ENDIF
                IF PRIOR_SVC
                   PRS = 'Y'
                ENDIF
                IF WAIVER_REQ
                   WRQ = 'Y'
                ENDIF
                @ DISP_LINE + 12, 0 SAY &DATA3_S
*
                IF (QO_SELECT = 'J')
                   @ DISP_LINE + 12, 64 SAY &DATA3_L
                ENDIF
*
                IF (QO_SELECT <> 'H')
                   DISP_LINE = DISP_LINE + 1
                ENDIF
```

```
                     @ DISP_LINE + 14, 0 SAY HDR4A
                     @ DISP_LINE + 15, 0 SAY HDR4B
*
                     IF (QO_SELECT <> 'H')
                        @ DISP_LINE + 15, 0 SAY SEP_LINE
                     ENDIF
                     @ DISP_LINE + 16, 0 SAY &DATA4_S
*
                     IF (QO_SELECT <> 'H')
                        DISP_LINE = DISP_LINE + 1
                     ENDIF
                     @ DISP_LINE + 18, 0 SAY HDR5A
                     @ DISP_LINE + 19, 0 SAY HDR5B
*
                     IF (QO_SELECT <> 'H')
                        @ DISP_LINE + 19, 0 SAY SEP_LINE
                     ENDIF
                     DL = DISP_LINE + 20

*  The position of the following line is critical for it to print properly. *
*  The string varaible is so long that DOS will not accept it unless it is  *
*  <= 256 characters when combined with the other commands on the same line.*

*********************
@ DL, 0 SAY &DATA5_S
*********************
                     IF (QO_SELECT <> 'H')
                        DISP_LINE = DISP_LINE + 1
                     ENDIF
                     @ DISP_LINE + 22, 0 SAY HDR6A
                     @ DISP_LINE + 23, 0 SAY HDR6B
*
                     IF (QO_SELECT <> 'H')
                        @ DISP_LINE + 23, 0 SAY SEP_LINE
                     ENDIF
                     MRM = 'N'
                     MRE = 'N'
                     MRF = 'N'
                     IF M_R_MATH
                        MRM = 'Y'
                     ENDIF
                     IF M_R_ENGL
                        MRE = 'Y'
                     ENDIF
                     IF M_R_FLAN
                        MRF = 'Y'
                     ENDIF
                     @ DISP_LINE + 24, 0 SAY &DATA6_S
*
                     IF (QO_SELECT = 'J')
                        @ DISP_LINE + 24, 54 SAY &DATA6_L
                     ENDIF
*
                     IF (QO_SELECT <> 'H')
                        @ DISP_LINE + 26, 0 SAY SQG_LINE
```

```
                    ENDIF

                    *  If the output media is the screen, issue the user*
                    *  paging prompt.                                   *

                    IF (QO_SELECT = 'H')
                       @  0,52 SAY '(Press any key to continue)'
                       CLEAR TYPEAHEAD
                       WAIT ''
                    ENDIF
*
                    IF (QO_SELECT <> 'H')
                       @ DISP_LINE + 27, 0 SAY CHR(10)
                       EJECT
                       IF (QO_SELECT = 'J')
                          @  0, 1 SAY CHR(18)
                       ELSE
                          @  0, 1 SAY CHR(27) + CHR(80)
                       ENDIF
                       SET PRINT OFF
                    ENDIF
                    SET DEVICE TO SCREEN
                    SET FILTER TO
              ENDCASE

           *  If the user fails to enter any data in the input fields,   *
           *  issue a prompt for them to please enter data (if they had  *
           *  intended to cancel the query, they should not have gotten  *
           *  this far in the procedure).                                *

           ELSE
              @ 23, 0
              ? CHR(7)
              @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
              CLEAR TYPEAHEAD
              WAIT ''
              @ 23, 0
              DONE = .F.
           ENDIF
        ENDIF
     ENDDO
     CLEAR

     *  If the user has not previously entered a response to terminate the *
     *  query (M_CHOICE would be "false"), then give them the opportunity  *
     *  to do another query or terminate the function.                     *

     IF (M_CHOICE)
        DO RCIS_HDR
        DO M_PROMPT
     ENDIF
  ENDDO

  *  Close the database files used in this query.  *
```

```
 SELECT 2
 USE
 SELECT 1
 USE
 F_PARA = STUFF(F_PARA,1,1,'C')
 ON ERROR
*
RETURN
```

```
*----------------------------------------------------------------------*
*                              PAYI_QRY                                *
*----------------------------------------------------------------------*
*                                                                      *
* SUMMARY:                                                             *
*        The PAYI_QRY procedure provides the interface for the user to per- *
*        form queries on all the data contained in the associated Pay re-   *
*        cords of an individual cadet.  All data is displayed on one screen.*
*                                                                      *
*----------------------------------------------------------------------*


PROCEDURE PAYI_QRY
*
 PRIVATE FYC
 PRIVATE PRS
 PRIVATE WRQ
 PRIVATE PLS
 PRIVATE SPACER
*
 ON ERROR DO DB3_Q_ERR WITH ERROR(), MESSAGE()
 CLEAR
 M_CHOICE = .T.

 *  vvvvvvvvvvvvvvvvvvvv  #1.  MAIN OUTER LOOP  vvvvvvvvvvvvvvvvvv  *

 DO WHILE (M_CHOICE)

    *  Initialize operator and constraint fields.  *

    DONE = .F.
    F1A = '               '
    F1B = '               '
    F1C = '               '
    F2  = '           '

    *  vvvvvvvvvvvvvvvvvv  #2.  INTERMEDIATE SCREEN LOOP  vvvvvvvvvvvvvvvvv  *

    DO WHILE (.NOT. DONE)
       CLEAR
       @  5, 0 TO 15,79
       @  5,26 SAY ' INDIVIDUAL CADET PAY QUERY '
       @  7,24 SAY 'Enter Name or Social Security #'
       @  9,27 SAY 'First Name'
       @ 10,26 SAY 'Middle Name'
       @ 11,28 SAY 'Last Name'
       @ 13,33 SAY 'SSAN'

       *  vvvvvvvvvvvvvvvv  #3.  INTERMEDIATE INPUT LOOP  vvvvvvvvvvvvvvvv  *

       DO WHILE (.NOT. DONE)
          @  9,38 GET F1A PICTURE '!!!!!!!!!!!!!!!'
          @ 10,38 GET F1B PICTURE '!!!!!!!!!!!!!!!'
          @ 11,38 GET F1C PICTURE '!!!!!!!!!!!!!!!'
          @ 13,38 GET F2  PICTURE '@R 999-99-9999'
```

```
   *  Read query screen inputs and prepare to process them.  *

   READ
   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO CANCEL THIS QUERY [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user chooses to cancel the query, set the required  *
   *  flags to terminate all procedure loops.                    *

   IF (DONE)
      STOP_LOOP = .T.
      M_CHOICE  = .F.
      EXIT
   ELSE
      STOP_LOOP = .F.
   ENDIF
   @ 23, 0
   @ 23,19 SAY ;
         "DO YOU WANT TO MAKE ANY CHANGES [Y/N]? " GET DONE PICTURE 'Y'
   CLEAR TYPEAHEAD
   READ

   *  If the user wants to change their inputs, set DONE flag to  *
   *  flase and repeat the current loop.                          *

   IF (DONE)
      @ 23, 0
      DONE = .F.
      LOOP
   ELSE
      DONE = .T.
   ENDIF
ENDDO

*  Check to see if query termination condition has been previously *
*  set to 'true'.                                                   *

IF (STOP_LOOP)
   EXIT
ELSE

*  vvvvvvvvvvvv  #5.  BUILD QUERY OUTPUT FORMAT  vvvvvvvvvvvv  *

   HDR1A = ''
   HDR1B = ''
   HDR2A = ''
   HDR2B = ''
   DATA1_S = ''
   DATA1_L = ''
   DATA2_S = ''
   DATA2_L = ''
```

```
          HDR1A = 'First            Middle   Last                            ';
              + '           AS     Cat    Schl'
          HDR1B = 'Name             Name     Name             SSAN            ';
              + 'Matric  Class  Type   Type'
          DATA1_S = "LEFT(FN,14)+S2+LEFT(MN,7)+S2+LEFT(LN,14)+S2";
                + "+TRANSFORM(F2,'@R 999-99-9999')+S2+MT+S3+STR(ASC,1)+S6";
                + "+CT+S5+STR(ST,3,1)"
          HDR2A = ' Pay      Start       Stop     Res              Book      FT ';
              + '  ATP    FSP    Num    Cum'
          HDR2B = 'Period   Pay Date   Pay Date   Stat  Tuition    Fees     Days';
              + '  Days   Days   Days   Days'
DATA2_S = "S2+STR(REC_NUM,2)+S4+DTOC(PAY_DATE1)+S2+DTOC(PAY_DATE2)+S3";
+ "+RES_STATUS+S4+STR(TUITION,7,2)+S3+STR(BOOK_FEES,6,2)+S3+STR(FT_DAYS,2)+S4";
+ "+STR(ATP_DAYS,2)+S4+STR(FSP_DAYS,2)+S4+STR(SUB_DAYS,3)+S2+STR(TOT_DAYS,4)"
*
        DATA_TOTS = "'(Column Totals)-->              '+STR(TOT_TUIT,8,2)+S2";
                  + "+STR(TOT_BKFE,7,2)+S3+STR(TOT_FTDY,2)+S4+STR(TOT_ATPD,2)";
                  + "+S4+STR(TOT_FSPD,2)"
          SEP_LINE = REPLICATE('_',80)
          SQG_LINE = REPLICATE('~',80)
*
          IF (QO_SELECT = 'J')
             DATA1_L = "S2"
             DATA2_L = "S2"
             SEP_LINE = SEP_LINE + REPLICATE('_',57)
             SQG_LINE = SQG_LINE + REPLICATE('~',57)
          ENDIF

          *  vvvvvvvvvvvvvv  #6.  BUILD FILTER STRING  vvvvvvvvvvvvvv    *

          FILT_STR = ''
          IF (LEN(LTRIM(F1A)) > 0)
             FILT_STR = 'F_NAME =' + "'" + F1A + "'"
          ENDIF
          IF (LEN(LTRIM(F1B)) > 0)
             IF (LEN(FILT_STR) > 0)
                FILT_STR = FILT_STR + '.AND.M_NAME =' + "'" + F1B + "'"
             ELSE
                FILT_STR = 'M_NAME =' + "'" + F1B + "'"
             ENDIF
          ENDIF
          IF (LEN(LTRIM(F1C)) > 0)
             IF (LEN(FILT_STR) > 0)
                FILT_STR = FILT_STR + '.AND.L_NAME =' + "'" + F1C + "'"
             ELSE
                FILT_STR = 'L_NAME =' + "'" + F1C + "'"
             ENDIF
          ENDIF
          IF (LEN(LTRIM(F2)) > 0)
             IF (LEN(FILT_STR) > 0)
                FILT_STR = FILT_STR + '.AND.SSAN =' + "'" + F2 + "'"
             ELSE
                FILT_STR = 'SSAN =' + "'" + F2 + "'"
             ENDIF
          ENDIF
```

```
DONE = .T.

*  vvvvvvvvvv  #7.  ACCESS DATABASE & DIRECT OUTPUT  vvvvvvvvvv  *

IF (LEN(FILT_STR) > 0)
   @ 23, 0
   @ 23,14 SAY 'SEARCHING DATABASE FILES FOR CORRESPONDING RECORD(S)'
   SELECT 1
   IF (.NOT. FILE(M_NDX_F))
      INDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   SET INDEX TO &M_NDX
   IF (LEN(LTRIM(F2)) = 0)
      COUNT FOR &FILT_STR TO REC_CNT
      IF (REC_CNT > 1)
         @ 23, 0
         ? CHR(7)
         @ 23, 0 SAY 'NAME ASSIGNED TO MORE THAN ONE RECORD (ENTER';
                   + ' SSAN).  PRESS ANY KEY & TRY AGAIN.'
         WAIT ''
         DONE = .F.
         LOOP
      ENDIF
   ENDIF
   SET FILTER TO &FILT_STR
   GOTO TOP
   DO CASE

      *  If no Master record exists for the input key con-    *
      *  straints, give the user the option to try again or   *
      *  to terminate the query.                               *

      CASE  EOF()
            DO ERR_NF
            IF (M_CHOICE)
               DONE = .F.
               LOOP
            ELSE
               EXIT
            ENDIF

      *  If some database records meet the constraints, ini-  *
      *  tialize the print environment and perform print loop *
      *  until all records are printed.                        *

      CASE  .NOT. EOF()
            F2  = SSAN
            FN  = F_NAME
            MN  = M_NAME
            LN  = L_NAME
            MT  = MATRIC
            ASC = AS_CLASS
            CT  = CAT_TYPE
            ST  = SCHLR_TYPE
            SELECT 2
```

```
IF (.NOT. FILE(P_NDX_F))
   INDEX ON &P_NDX_STR TO &P_NDX
ENDIF
SET INDEX TO &P_NDX
SET FILTER TO SSAN = F2
SEEK F2
DO CASE

   *  If none of the database records meet all the  *
   *  input constraints, give the user the option to*
   *  try again or to terminate the query.          *

   CASE  EOF()
         DO ERR_NF
         IF (M_CHOICE)
            DONE = .F.
            LOOP
         ELSE
            EXIT
         ENDIF

   *  If some database records meet the constraints, *
   *  initialize the print environment and perform   *
   *  print loop until all records are printed.      *

   CASE  .NOT. EOF()
         IF QO_SELECT <> 'H'
            SET PRINT ON
            SET DEVICE TO PRINT
            IF QO_SELECT = 'J'
               @  0, 1 SAY CHR(27) + CHR(15)
            ELSE
               @  0, 1 SAY CHR(27) + CHR(77)
            ENDIF
         ENDIF
         IF (QO_SELECT <> 'J')
            SPACER = SPACE(23)
         ELSE
            SPACER = SPACE(57)
         ENDIF
         CLEAR
         DISP_LINE = 0
*
         IF (QO_SELECT <> 'H')
            DISP_LINE = 5
         ENDIF
         @ DISP_LINE, 0 SAY ;
                   SPACER + 'INDIVIDUAL CADET PAY REPORT'
*
         IF (QO_SELECT <> 'H')
            DISP_LINE = DISP_LINE + 1
         ENDIF
         @ DISP_LINE + 2, 0 SAY HDR1A
         @ DISP_LINE + 3, 0 SAY HDR1B
*
```

```
                                            IF (QO_SELECT <> 'H')
                                               @ DISP_LINE + 3, 0 SAY SEP_LINE
                                            ENDIF
                                            @ DISP_LINE + 4, 0 SAY &DATA1_S
*
                                            IF (QO_SELECT = 'J')
                                               @ DISP_LINE + 4, 80 SAY &DATA1_L
                                            ENDIF
*
                                            IF (QO_SELECT <> 'H')
                                               DISP_LINE = DISP_LINE + 1
                                            ENDIF
                                            @ DISP_LINE + 6, 0 SAY HDR2A
                                            @ DISP_LINE + 7, 0 SAY HDR2B
*
                                            IF (QO_SELECT <> 'H')
                                               @ DISP_LINE + 7, 0 SAY SEP_LINE
                                            ENDIF
                                            DISP_LINE = DISP_LINE + 8
                                            REC_NUM = 1
                                            TOT_DAYS = 0
                                            TOT_TUIT = 0
                                            TOT_BKFE = 0
                                            TOT_FTDY = 0
                                            TOT_ATPD = 0
                                            TOT_FSPD = 0

                                            *  vvvvv  #8.  DATABASE RECORD LOOP  vvvvv  *

                                            DO WHILE (REC_NUM <= 16)  .AND.  (.NOT. EOF())
                                               SUB_DAYS = (PAY_DATE2-PAY_DATE1)+1-FT_DAYS;
                                                        -FSP_DAYS-ATP_DAYS
                                               TOT_DAYS = TOT_DAYS + SUB_DAYS
                                               TOT_TUIT = TOT_TUIT + TUITION
                                               TOT_BKFE = TOT_BKFE + BOOK_FEES
                                               TOT_FTDY = TOT_FTDY + FT_DAYS
                                               TOT_ATPD = TOT_ATPD + ATP_DAYS
                                               TOT_FSPD = TOT_FSPD + FSP_DAYS
                                               DL = DISP_LINE

*  The position of the following line is critical for it to print properly. *
*  The string varaible is so long that DOS will not accept it unless it is  *
*  <= 256 characters when combined with the other commands on the same line.*

**********************************
@ DL, 0 SAY &DATA2_S
**********************************
                                               IF (QO_SELECT = 'J')
                                                  @ DISP_LINE, 80 SAY &DATA2_L
                                               ENDIF
                                               DISP_LINE = DISP_LINE + 1
*
                                               IF (QO_SELECT <> 'H')
                                                  DISP_LINE = DISP_LINE + 1
                                               ENDIF
```

```
                                    REC_NUM  = REC_NUM + 1

                                    *  Issue dBASE III PLUS command to go to  *
                                    *  the next record which meets the input  *
                                    *  constraints.                           *

                                    SKIP
                                 ENDDO
*
                                 IF (QO_SELECT <> 'H')
                                    @ DISP_LINE - 1, 0 SAY SEP_LINE
                                 ENDIF
                                 @ DISP_LINE, 0 SAY &DATA_TOTS
*
                                 IF (QO_SELECT <> 'H')
                                    @ DISP_LINE + 2, 0 SAY SQG_LINE
                                 ENDIF

                                 *  If the output media is the screen, issue  *
                                 *  the user paging prompt.                   *

                                 IF (QO_SELECT = 'H')
                                    @  0,52 SAY '(Press any key to continue)'
                                    CLEAR TYPEAHEAD
                                    WAIT ''
                                 ENDIF
*
                                 IF (QO_SELECT <> 'H')
                                    @ DISP_LINE + 27, 0 SAY CHR(10)
                                    EJECT
                                    IF (QO_SELECT = 'J')
                                       @  0, 1 SAY CHR(18)
                                    ELSE
                                       @  0, 1 SAY CHR(27) + CHR(80)
                                    ENDIF
                                    SET PRINT OFF
                                 ENDIF
                                 SET DEVICE TO SCREEN
                                 SET FILTER TO
                           ENDCASE
                     ENDCASE

                  *  If the user fails to enter any data in the input fields,   *
                  *  issue a prompt for them to please enter data (if they had  *
                  *  intended to cancel the query, they should not have gotten  *
                  *  this far in the procedure).                                *

                  ELSE
                     @ 23, 0
                     ? CHR(7)
                     @ 23, 4 SAY 'PLEASE ENTER DATA.  PRESS ANY KEY TO CONTINUE.'
                     CLEAR TYPEAHEAD
                     WAIT ''
                     @ 23, 0
                     DONE = .F.
```

```
              ENDIF
           ENDIF
        ENDDO
        CLEAR

        *  If the user has not previously entered a response to terminate the *
        *  query (M_CHOICE would be "false"), then give them the opportunity  *
        *  to do another query or terminate the function.                     *

        IF (M_CHOICE)
           DO RCIS_HDR
           DO M_PROMPT
        ENDIF
     ENDDO

     *  Close the database files used in this query.  *

     SELECT 1
     USE
     SELECT 2
     USE
     F_PARA = STUFF(F_PARA,1,1,'C')
     ON ERROR
    *
    RETURN
```

```
*-----------------------------------------------------------------------------*
*                              HELP_SCRN                                      *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       The HELP_SCRN procedure builds a help menu at the bottom of each      *
*       query input screen which provides an example of how to enter query    *
*       requests.                                                             *
*                                                                             *
* INVOKING PROCEDURES:                                                        *
*                              Procedure Name            Location             *
*                              --------------            -------------        *
*                              WPSS_QRY                  RCIS_P3.PRG          *
*                              SCHA_QRY                  RCIS_P3.PRG          *
*                              DCFY_QRY                  RCIS_P3.PRG          *
*                              CLAS_QRY                  RCIS_P3.PRG          *
*                              HRAX_QRY                  RCIS_P3.PRG          *
*                              CGDT_QRY                  RCIS_P3.PRG          *
*                              SEDT_QRY                  RCIS_P3.PRG          *
*                              WTAR_QRY                  RCIS_P3.PRG          *
*                              INDV_QRY                  RCIS_P3.PRG          *
*                              PAYI_QRY                  RCIS_P3.PRG          *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE HELP_SCRN
*
 HLP_O1 = '>='
 HLP_O2 = ' <'
 HLP_V1 = 'ANDERSON        '
 HLP_V2 = 'SMITH           '
 @ 17,11 SAY "Query Item     Operators[<,>,=,<>,<=,>=]        Query Values"
 @ 18,11 TO 18,79
 @ 19, 0 SAY "  EXAMPLE   Last Name           * Absence of Operator"
 @ 20,33 SAY "field defaults to '='"
 @ 19,26 GET HLP_O1
 @ 19,59 GET HLP_V1
 @ 20,26 GET HLP_O2
 @ 20,59 GET HLP_V2
 @ 16, 0 TO 21,10
 @ 16,10 TO 21,79
 CLEAR GETS
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                  ERR_NF                                     *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*         The ERR_NF procedure displays an error message informing the user  *
*         that a record with the requested key value doesn't exist and then  *
*         accepts a continuation option.                                     *
*                                                                             *
* INVOKING PROCEDURES:                                                        *
*                               Procedure Name           Location             *
*                               --------------           -------------        *
*                               WPSS_QRY                 RCIS_P3.PRG          *
*                               SCHA_QRY                 RCIS_P3.PRG          *
*                               DCFY_QRY                 RCIS_P3.PRG          *
*                               CLAS_QRY                 RCIS_P3.PRG          *
*                               HRAX_QRY                 RCIS_P3.PRG          *
*                               CGDT_QRY                 RCIS_P3.PRG          *
*                               SEDT_QRY                 RCIS_P3.PRG          *
*                               WTAR_QRY                 RCIS_P3.PRG          *
*                               INDV_QRY                 RCIS_P3.PRG          *
*                               PAYI_QRY                 RCIS_P3.PRG          *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE ERR_NF
*
@ 23, 0
? CHR(7)
M_CHOICE = .T.
@ 23,11 SAY 'NO RECORD(S) FOUND.  DO YOU WANT TO TRY AGAIN [Y/N]? ';
        GET M_CHOICE PICTURE 'Y'
CLEAR TYPEAHEAD
READ
@ 21, 0
@ 23, 0
IF .NOT. M_CHOICE
   @ 21,33 SAY 'CLOSING FILES'
   @ 24, 0
ENDIF
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                RCIS_HDR                                     *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       The RCIS_HDR procedure redisplays the selected mode by repainting     *
*       the pop-up menus.                                                     *
*                                                                             *
* INVOKING PROCEDURES:                                                        *
*                              Procedure Name              Location           *
*                              --------------              -------------      *
*                              WPSS_QRY                    RCIS_P3.PRG        *
*                              SCHA_QRY                    RCIS_P3.PRG        *
*                              DCFY_QRY                    RCIS_P3.PRG        *
*                              CLAS_QRY                    RCIS_P3.PRG        *
*                              HRAX_QRY                    RCIS_P3.PRG        *
*                              CGDT_QRY                    RCIS_P3.PRG        *
*                              SEDT_QRY                    RCIS_P3.PRG        *
*                              WTAR_QRY                    RCIS_P3.PRG        *
*                              INDV_QRY                    RCIS_P3.PRG        *
*                              PAYI_QRY                    RCIS_P3.PRG        *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE RCIS_HDR
*
 CLEAR
 @ 1, 0 TO 3,79
 @ 2,22 SAY 'ROTC CADET INFORMATION SYSTEM (RCIS)'
 CALL MENU WITH F_PARA
 CALL MENU WITH G_PARA
 IF F_SELECT = 'M'
    CALL MENU WITH QS_PARA
    CALL MENU WITH QO_PARA
 ELSE
    IF (F_SELECT <> 'L')
       CALL MENU WITH R_PARA
    ENDIF
 ENDIF
 @ 24, 0
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                  M_PROMPT                                  *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*       The M_PROMPT procedure displays a continuation message and accepts   *
*       the user option.                                                     *
*                                                                            *
* INVOKING PROCEDURES:                                                       *
*                              Procedure Name             Location           *
*                              --------------             -------------      *
*                              WPSS_QRY                   RCIS_P3.PRG        *
*                              SCHA_QRY                   RCIS_P3.PRG        *
*                              DCFY_QRY                   RCIS_P3.PRG        *
*                              CLAS_QRY                   RCIS_P3.PRG        *
*                              HRAX_QRY                   RCIS_P3.PRG        *
*                              CGDT_QRY                   RCIS_P3.PRG        *
*                              SEDT_QRY                   RCIS_P3.PRG        *
*                              WTAR_QRY                   RCIS_P3.PRG        *
*                              INDV_QRY                   RCIS_P3.PRG        *
*                              PAYI_QRY                   RCIS_P3.PRG        *
*                                                                            *
*----------------------------------------------------------------------------*

PROCEDURE M_PROMPT
*
@ 21, 0
M_CHOICE = .T.
@ 21,16 SAY 'DO YOU WANT TO CONTINUE WITH THIS MODE [Y/N]? ';
        GET M_CHOICE PICTURE 'Y'
CLEAR TYPEAHEAD
READ
IF .NOT. M_CHOICE
   @ 21, 0
   @ 21,33 SAY 'CLOSING FILES'
   @ 24, 0
ENDIF
RETURN
```

```
*-------------------------------------------------------------------------*
*                                  RO_CHK                                 *
*-------------------------------------------------------------------------*
*                                                                         *
* SUMMARY:                                                                *
*       The RO_CHK procedure is invoked to check the validity of the rela- *
*       tional operators entered on the query input screen.  Invalid en-  *
*       tries are flagged and passed back to the invoking procedure.      *
*                                                                         *
* INVOKING PROCEDURES:                                                    *
*                              Procedure Name           Location          *
*                              --------------           -------------     *
*                              WPSS_QRY                 RCIS_P3.PRG       *
*                              SCHA_QRY                 RCIS_P3.PRG       *
*                              DCFY_QRY                 RCIS_P3.PRG       *
*                              CLAS_QRY                 RCIS_P3.PRG       *
*                              HRAX_QRY                 RCIS_P3.PRG       *
*                              CGDT_QRY                 RCIS_P3.PRG       *
*                              SEDT_QRY                 RCIS_P3.PRG       *
*                              WTAR_QRY                 RCIS_P3.PRG       *
*                              INDV_QRY                 RCIS_P3.PRG       *
*                              PAYI_QRY                 RCIS_P3.PRG       *
*                                                                         *
*-------------------------------------------------------------------------*


PROCEDURE RO_CHK
*
 PARAMETER ROCHK
*
 GOOD_RO = .F.
 DO CASE
    CASE ROCHK = '<>'
         GOOD_RO = .T.
    CASE (ROCHK = '= ')  .OR.  (ROCHK = ' =')
         GOOD_RO = .T.
    CASE (ROCHK = '> ')  .OR.  (ROCHK = ' >')
         GOOD_RO = .T.
    CASE (ROCHK = '< ')  .OR.  (ROCHK = ' <')
         GOOD_RO = .T.
    CASE (ROCHK = '>=')  .OR.  (ROCHK = '<=')
         GOOD_RO = .T.
 ENDCASE
*
RETURN
```

```
*------------------------------------------------------------------------------*
*                                  SET_DB                                      *
*------------------------------------------------------------------------------*
*                                                                              *
* SUMMARY:                                                                     *
*        The SET_DB procedure is used to set up the string variables used     *
*        to identify the different source and destination database files     *
*        (both data and index files).  All procedures in this file use        *
*        these strings (GLOBAL) as opposed to building their own.             *
*                                                                              *
* VARIABLE DECLARATIONS:                                                       *
*                                                                              *
*     Variable Name     Status                     Purpose                     *
*     -------------     ------     ----------------------------------------*
*      S_PREFIX         LOCAL      Used to store a one letter identifier for*
*                                  the source files.                           *
*                                                                              *
*------------------------------------------------------------------------------*


PROCEDURE SET_DBQ
*
 PRIVATE S_PREFIX
*
 M_FILE  = 'X_CDT_MS'
 P_FILE  = 'X_CDT_PY'
 CT_FILE = 'X_CDT_CT'

 *  Designate code for access to active or inactive files.  *

 IF (G_SELECT = 'H')
    S_PREFIX  = 'A'
 ELSE
    S_PREFIX  = 'I'
 ENDIF
 M_FILE  = STUFF(M_FILE,1,1,LTRIM(S_PREFIX))
 P_FILE  = STUFF(P_FILE,1,1,LTRIM(S_PREFIX))
 CT_FILE = STUFF(CT_FILE,1,1,LTRIM(S_PREFIX))
*
 M_NDX  = 'X_XXXX'
 P_NDX  = 'X_XXXX'
 CT_NDX = 'X_ASCL'

 *  Build index string variables used to build query index files.  *

 DO CASE
    CASE  QS_SELECT = 'H'
          M_NDX     = 'X_WPSS'
          M_NDX_STR = 'AS_CLASS+(WPSS/1000.0)'
    CASE  QS_SELECT = 'I'
          M_NDX     = 'X_SCHA'
          M_NDX_STR = 'AS_CLASS+(CUM_GPA/10.0)'
    CASE  QS_SELECT = 'J'
          M_NDX     = 'X_DCFY'
          M_NDX_STR = 'YEAR(COM_DATE+92)+(FY_RTNG/100.00)+(DC_RTNG/1000.000)'
    CASE  (QS_SELECT = 'K')  .OR.  (QS_SELECT = 'L')  .OR.  (QS_SELECT = 'O')
          M_NDX      = 'X_CLAS'
          M_NDX_STR = 'STR(AS_CLASS,1)+CAT_TYPE+L_NAME+F_NAME'
    CASE  QS_SELECT = 'M'
          M_NDX      = 'X_CGDT'
          M_NDX_STR = 'STR(AS_CLASS,1)+STR(YEAR(COM_DATE),4)';
                    + '+STR(MONTH(COM_DATE),2)+STR(DAY(COM_DATE),2)'
    CASE  QS_SELECT = 'N'
          M_NDX      = 'X_SEDT'
          M_NDX_STR = 'STR(AS_CLASS,1)+STR(YEAR(SCHLR_DATE),4)';
                    + '+STR(MONTH(SCHLR_DATE),2)+STR(DAY(SCHLR_DATE),2)';
                    + '+STR(SCHLR_TYPE,3,1)'
    CASE  QS_SELECT = 'P'
          M_NDX      = 'X_SSAN'
          M_NDX_STR = 'SSAN'
    CASE  QS_SELECT = 'Q'
          M_NDX      = 'X_SSAN'
          P_NDX      = 'X_PAYD'
          M_NDX_STR = 'SSAN'
          P_NDX_STR = 'SSAN+STR(YEAR(PAY_DATE1),4)+STR(MONTH(PAY_DATE1),2)';
                    + 'STR(DAY(PAY_DATE1),2)'
 ENDCASE
 M_NDX     = STUFF(M_NDX,1,1,LTRIM(S_PREFIX))
 P_NDX     = STUFF(P_NDX,1,1,LTRIM(S_PREFIX))
 CT_NDX    = STUFF(CT_NDX,1,1,LTRIM(S_PREFIX))
 M_NDX_F   = M_NDX + '.NDX'
 P_NDX_F   = P_NDX + '.NDX'
 CT_NDX_F  = CT_NDX + '.NDX'
*
RETURN
```

```
*------------------------------------------------------------------------*
*                              DB3_Q_ERR                                 *
*------------------------------------------------------------------------*
*                                                                        *
* SUMMARY:                                                               *
*       The DB3_Q_ERR procedure displays system error messages and provides*
*       limited corrective action capabilities.  If a corrupted index con- *
*       dition is detected, the system attempts to repair it by creating a *
*       replacement.  For other errors, the system will display an advisory*
*       message and the error number detected.  This error number can be  *
*       used to locate the problem area.  An exact decoding of error num-  *
*       bers can be found in the dBASE III PLUS User's Manual Appendices.  *
*                                                                        *
* INVOKING PROCEDURES:                                                   *
*                              Procedure Name           Location         *
*                              --------------           -------------    *
*                              QUERIES                  RCIS_P3.PRG      *
*                              WPSS_QRY                 RCIS_P3.PRG      *
*                              SCHA_QRY                 RCIS_P3.PRG      *
*                              DCFY_QRY                 RCIS_P3.PRG      *
*                              CLAS_QRY                 RCIS_P3.PRG      *
*                              HRAX_QRY                 RCIS_P3.PRG      *
*                              CGDT_QRY                 RCIS_P3.PRG      *
*                              SEDT_QRY                 RCIS_P3.PRG      *
*                              WTAR_QRY                 RCIS_P3.PRG      *
*                              INDV_QRY                 RCIS_P3.PRG      *
*                              PAYI_QRY                 RCIS_P3.PRG      *
*                                                                        *
* VARIABLE DECLARATIONS:                                                 *
*                                                                        *
*     Variable Name    Status                     Purpose                *
*     -------------    ------    --------------------------------------- *
*      ERR_NUM        PARAMETER  Used to hold the system error number    *
*                                returned by the built-in function ERROR().*
*                                                                        *
*      ERR_MSG        PARAMETER  Used to hold the system error number re- *
*                                turned by the built-in function MESSAGE().*
*                                                                        *
*      PRFX_SAV         LOCAL    Used to store a one letter identifier for *
*                                the source files.                       *
*                                                                        *
*------------------------------------------------------------------------*


PROCEDURE DB3_Q_ERR
*
 PARAMETERS ERR_NUM, ERR_MSG
*
 PRIVATE PRFX_SAV
*
 @ 21, 0
 ? CHR(7)
 @ 21, 0
 ? CHR(7)
 @ 21, 0
```

```
? CHR(7)

*  If an index error has occured, try to correct the error by reindexing *
*  all query index files using appropriate index string variables.      *

IF (ERR_NUM = 68) .OR. (ERR_NUM = 114)
   @ 21, 0
   @ 21,15 SAY 'INDEX ERROR DETECTED.  ATTEMPTING TO REBUILD INDICES.'
   @ 24,0
   IF FILE(M_NDX_F)
      REINDEX ON &M_NDX_STR TO &M_NDX
   ENDIF
   IF (QS_SELECT = 'H' .OR. QS_SELECT = 'I' .OR. QS_SELECT = 'J' .OR. ;
       QS_SELECT = 'P')
*
      IF FILE(CT_NDX_F)
         REINDEX ON AS_CLASS TO &CT_NDX
      ENDIF
   ENDIF
*
   IF (QS_SELECT = 'O')
      IF FILE('T_HGHT.NDX')
         INDEX ON HEIGHT TO T_HGHT
      ENDIF
      IF FILE('T_AGEC.NDX')
         INDEX ON AGE_CAT TO T_AGEC
      ENDIF
   ENDIF
*
   IF (QS_SELECT = 'Q')
      IF FILE(P_NDX_F)
         REINDEX ON &P_NDX_STR TO &P_NDX
      ENDIF
   ENDIF
   @ 21, 0
   ? CHR(7)
   @ 21,15 SAY 'INDICES REBUILT.  ATTEMPTING TO CONTINUE PROCESSING.'
   @ 21, 0
   RETRY
ELSE
   IF (ERR_NUM = 126)
      @ 23, 0
      @ 23,10 SAY 'PRINTER ERROR. CHECK PRINTER AND PRESS ANY KEY TO' ;
               + ' CONTINUE.'
      CLEAR TYPEAHEAD
      WAIT ' '
      @ 23, 0
   ELSE
      @ 22, 0
      @ 23, 0
      @ 22, 0 SAY ERR_MSG
      @ 23, 0 SAY 'REPORT ERROR CODE ['
      @ 23,19 SAY ERR_NUM PICTURE '@B ###'
      @ 23,22 SAY '].  PRESS ANY KEY TO CONTINUE.'
      CLEAR TYPEAHEAD
```

```
        WAIT ' '
        @ 22, 0
        @ 23, 0
     ENDIF
  ENDIF
*
RETURN
```

```
*---------------------------------------------------------------------*
*                     BEGINNING OF RCISUTIL.PRG                       *
*---------------------------------------------------------------------*
*                                                                     *
* SUMMARY:                                                            *
*       The RCISUTIL procedure is the main driver for the RCIS utilities  *
*       function.  This module initializes program variables, activates a *
*       pop-up menu to determine user processing requirements, and invokes *
*       procedures to reload & backup database files and to change author- *
*       ization password.                                             *
*                                                                     *
* CALLED PROCEDURES:                                                  *
*                          Procedure Name          Location           *
*                          --------------          --------------     *
*                          INIT                    RCISUTL2.PRG       *
*                          MENU                    MENU.BIN           *
*                          UBACKUP                 RCISUTL2.PRG       *
*                          URELOAD                 RCISUTL2.PRG       *
*                          PASSWORD                RCISUTL2.PRG       *
*                                                                     *
* VARIABLE DECLARATIONS:                                              *
*                                                                     *
*   Variable Name     Status              Purpose                     *
*   -------------     ------   -------------------------------------- *
*     U_PARA          GLOBAL   Parameter for MENU.BIN that passes pop-up  *
*                              function menu descriptions and returns with*
*                              user selection.  A more detailed discussion*
*                              of this parameter is provided in RCIS_P1.PRG
*                                                                     *
*---------------------------------------------------------------------*


 PUBLIC U_PARA
*
 SET STATUS OFF
 SET SCOREBOARD OFF
*
 @  1, 0 TO  3,79
 @  2,32 SAY 'RCIS UTILITIES'
 @  5, 0 TO 17,79
 @  7,33 SAY 'Version 1.10'
 @  9,30 SAY 'Copyright (C) 1987'
 @ 11,38 SAY 'by'
 @ 13,31 SAY 'Carter L. Frank'
 @ 15,30 SAY 'All rights reserved'
 @ 23, 0

 *  Designate RCISUTL2.PRG as the active procedure file.  *

 SET PROCEDURE TO RCISUTL2

 *  Call procedure U_INIT from RCISUTL2.PRG  *

 DO U_INIT
 @ 5,0 CLEAR
```

```
*
 LOOP_CNTRL = .T.

 *  Continue loop until user selects the "Done" option.  *

 DO WHILE (LOOP_CNTRL)
    U_PARA = STUFF(U_PARA,1,1,'A')

    *  Call menu assembly routine, passing the utility menu parameter.  *

    CALL MENU WITH U_PARA
    F_SELECT = SUBSTR(U_PARA,6,1)
    DO CASE
       CASE F_SELECT = 'H'
            DO UBACKUP
       CASE F_SELECT = 'I'
            DO URELOAD
       CASE F_SELECT = 'J'
            DO PASSWORD
       CASE F_SELECT = 'K'
            EXIT
    ENDCASE
 ENDDO

 *  Restore initial dBASE III PLUS environment.  *

 SET CONFIRM OFF
 SET SCOREBOARD ON
 SET TALK ON
 SET ESCAPE ON
 SET SAFETY ON
 SET BELL ON
 SET STATUS ON
 CLEAR ALL
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                         BEGINNING OF RCISUTL2.PRG                            *
*-----------------------------------------------------------------------------*
*-----------------------------------------------------------------------------*
*                                 U_INIT                                       *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       U_INIT is the main initialization procedure for the RCIS utilities *
*       function.  This module initializes the database and index file      *
*       string variables and builds the character string which is used by  *
*       menu to build the pop-up menu.                                        *
*                                                                             *
* VARIABLE DECLARATIONS:                                                      *
*                                                                             *
*   Variable Name     Status                   Purpose                        *
*   -------------     ------     ---------------------------------------- *
*     NDX_STRG        GLOBAL     String variable which contains all possible*
*                                database index file names.                   *
*                                                                             *
*     FIL_STRG        GLOBAL     String variable which contains all possible*
*                                database data file names.                    *
*                                                                             *
*     --------        LOCAL      All local variables are explicitly defined *
*                                in the RCIS_P1.PRG program.                  *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE U_INIT
*
 PUBLIC NDX_STRG
 PUBLIC FIL_STRG
*
 SET DELETED OFF
 SET CONFIRM ON
 SET CENTURY ON
 SET BELL OFF
 SET TALK OFF
 SET ESCAPE OFF
 SET SAFETY OFF
 LOAD MENU.BIN
*
 NDX_STR1 = "X_ASCL.NDX,X_CGDT.NDX,X_CLAS.NDX,X_DCFY.NDX,X_PAYD.NDX,X_SCHA.NDX"
 NDX_STR2 = ",X_SEDT.NDX,X_SSAN.NDX,X_WPSS.NDX,X_AGEC.NDX,X_HGHT.NDX"
 NDX_STRG = NDX_STR1 + NDX_STR2
*
 FIL_STR1 = "X_CDT_CT.DBF,X_CDT_MS.DBF,X_CDT_PY.DBF,X_CDT_HW.DBF,X_CDT_RT.DBF,"
 FIL_STR2 = "X_CDT_WP.DBF"
 FIL_STRG = FIL_STR1 + FIL_STR2
*
 TL_BOX = CHR(201)
 X_BAR  = CHR(205) + CHR(205) + CHR(205) + CHR(205) + CHR(205)
 X_BAR  = X_BAR + X_BAR
 TR_BOX = CHR(187)
 LM_BOX = CHR(204)
 RM_BOX = CHR(185)
 V_BAR  = CHR(186)
 BL_BOX = CHR(200)
 BR_BOX = CHR(188)
*
 SEQ_1  = CHR(65 +  0)
 ACT_1  = CHR(64 +  1)
 SROW_1 = CHR(65 +  4)
 SCOL_1 = CHR(65 + 34)
 BROW_1 = CHR(65 + 11)
 AROW_1 = CHR(65 +  7)
 SLEN_1 = CHR(65 + 12)
*
 U_PARA = SEQ_1 + ACT_1 + SROW_1 + SCOL_1 + BROW_1 + AROW_1 + SLEN_1
 U_PARA = U_PARA + TL_BOX + X_BAR + TR_BOX
 U_PARA = U_PARA + V_BAR  + ' FUNCTION ' + V_BAR
 U_PARA = U_PARA + LM_BOX + X_BAR + RM_BOX
 U_PARA = U_PARA + V_BAR  + ' BackUp   ' + V_BAR
 U_PARA = U_PARA + V_BAR  + ' ReLoad   ' + V_BAR
 U_PARA = U_PARA + V_BAR  + ' PassWord ' + V_BAR
 U_PARA = U_PARA + V_BAR  + ' Done     ' + V_BAR
 U_PARA = U_PARA + BL_BOX + X_BAR + BR_BOX
*
RETURN
```

```
*----------------------------------------------------------------------*
*                              CHK_NDX                                 *
*----------------------------------------------------------------------*
*                                                                      *
* SUMMARY:                                                             *
*       The CHK_NDX procedure is used by the Reload function to erase any *
*       existing database index files that are on the main disk drive (hard*
*       disk drive labeled C).                                         *
*                                                                      *
* VARIABLE DECLARATIONS:                                               *
*                                                                      *
*   Variable Name     Status                  Purpose                  *
*   -------------     ------     ------------------------------------- *
*     STRT_POS        LOCAL      Used as a pointer to locate the beginning *
*                                of each file name.                    *
*                                                                      *
*     PRFX_LTR        LOCAL      Used to store a one letter identifier for *
*                                the active and inactive database files. *
*                                                                      *
*     MAX_POS         LOCAL      Used to indicate different transition *
*                                points within the string variables.   *
*                                                                      *
*----------------------------------------------------------------------*


PROCEDURE CHK_NDX
*
*
 STRT_POS = 1
 PRFX_LTR = 'A'
 MAX_POS  = 99
 DO WHILE (PRFX_LTR <> 'X')
    DO WHILE (STRT_POS < MAX_POS)
       NDX_NAM_F = RTRIM(SUBSTR(NDX_STRG,STRT_POS,10))
       NDX_NAM_F = STUFF(NDX_NAM_F,1,1,PRFX_LTR)
       IF FILE(NDX_NAM_F)
          ERASE &NDX_NAM_F
       ENDIF
       STRT_POS = STRT_POS + 11
    ENDDO
    IF (PRFX_LTR = 'A')
       STRT_POS = 1
       PRFX_LTR = 'I'
    ELSE
       IF (PRFX_LTR = 'I')
          MAX_POS  = 121
          PRFX_LTR = 'T'
       ELSE
          PRFX_LTR = 'X'
       ENDIF
    ENDIF
 ENDDO
*
RETURN
```

```
*-----------------------------------------------------------------------------*
*                                 CHK_DSK                                     *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       The CHK_DSK procedure is used by the Backup function to erase any     *
*       existing database data files that are on the backup floppy disk       *
*       (disk drive labeled A).                                               *
*                                                                             *
* VARIABLE DECLARATIONS:                                                      *
*                                                                             *
*   Variable Name     Status                     Purpose                      *
*   -------------     ------     ---------------------------------------      *
*     STRT_POS        LOCAL      Used as a pointer to locate the beginning    *
*                                of each file name.                           *
*                                                                             *
*     PRFX_LTR        LOCAL      Used to store a one letter identifier for    *
*                                the active and inactive database files.      *
*                                                                             *
*     MAX_POS         LOCAL      Used to indicate different transition        *
*                                points within the string variables.          *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE CHK_DSK
*
 STRT_POS = 1
 PRFX_LTR = 'A'
 MAX_POS  = 36
 DO WHILE (PRFX_LTR <> 'X')
    DO WHILE (STRT_POS < MAX_POS)
       FIL_NAM_F = SUBSTR(FIL_STRG,STRT_POS,12)
       FIL_NAM_F = 'A:' + STUFF(FIL_NAM_F,1,1,PRFX_LTR)
       IF FILE(FIL_NAM_F)
          ERASE &FIL_NAM_F
       ENDIF
       STRT_POS = STRT_POS + 13
    ENDDO
    IF (PRFX_LTR = 'A')
       STRT_POS = 1
       PRFX_LTR = 'I'
    ELSE
       IF (PRFX_LTR = 'I')
          MAX_POS  = 72
          PRFX_LTR = 'T'
       ELSE
          PRFX_LTR = 'X'
       ENDIF
    ENDIF
 ENDDO
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                                 SET_DSK                                    *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*       The SET_DSK procedure is used by the Reload function to erase any   *
*       data that exists on the database data files that are on the main    *
*       disk drive (hard disk drive labeled C).                              *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*   Variable Name     Status                     Purpose                     *
*   -------------     ------     ---------------------------------------     *
*     STRT_POS        LOCAL      Used as a pointer to locate the beginning   *
*                                of each file name.                          *
*                                                                            *
*     PRFX_LTR        LOCAL      Used to store a one letter identifier for   *
*                                the active and inactive database files.     *
*                                                                            *
*     MAX_POS         LOCAL      Used to indicate different transition       *
*                                points within the string variables.         *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE SET_DSK
*
 SELECT 2
 STRT_POS = 1
 PRFX_LTR = 'A'
 MAX_POS  = 36
 DO WHILE (PRFX_LTR <> 'X')
    DO WHILE (STRT_POS < MAX_POS)
       FIL_NAM_F = SUBSTR(FIL_STRG,STRT_POS,8)
       FIL_NAM_F = STUFF(FIL_NAM_F,1,1,PRFX_LTR)
       USE &FIL_NAM_F
       ZAP
       STRT_POS = STRT_POS + 13
    ENDDO
    IF (PRFX_LTR = 'A')
       STRT_POS = 1
       PRFX_LTR = 'I'
    ELSE
       IF (PRFX_LTR = 'I')
          MAX_POS  = 72
          PRFX_LTR = 'T'
       ELSE
          PRFX_LTR = 'X'
       ENDIF
    ENDIF
 ENDDO
*
 USE
*
RETURN
```

```
*----------------------------------------------------------------------------*
*                              LOAD_DBF                                     *
*----------------------------------------------------------------------------*
*                                                                           *
* SUMMARY:                                                                  *
*       The LOAD_DBF procedure is used by the Reload function to copy data-*
*       base data files from the floppy disk (disk drive labeled A) to the *
*       main disk drive (hard disk drive labeled C).                        *
*                                                                           *
* VARIABLE DECLARATIONS:                                                    *
*                                                                           *
*   Variable Name     Status                   Purpose                      *
*   -------------     ------     ------------------------------------------ *
*     STRT_POS        LOCAL      Used as a pointer to locate the beginning  *
*                                of each file name.                         *
*                                                                           *
*     PRFX_LTR        LOCAL      Used to store a one letter identifier for  *
*                                the active and inactive database files.    *
*                                                                           *
*     MAX_POS         LOCAL      Used to indicate different transition      *
*                                points within the string variables.        *
*                                                                           *
*----------------------------------------------------------------------------*


PROCEDURE LOAD_DBF
*
 @ 20, 0
 @ 20,14 SAY 'Insert backup diskette in drive A and press any key.'
 CLEAR TYPEAHEAD
 WAIT ' '
 @ 20, 0
 @ 20,21 SAY 'Loading backup files.  Please wait...'
 STRT_POS = 1
 PRFX_LTR = 'A'
 MAX_POS  = 36
 DO WHILE (PRFX_LTR <> 'X')
    DO WHILE (STRT_POS < MAX_POS)
       FIL_NAM_F = SUBSTR(FIL_STRG,STRT_POS,12)
       FIL_NAM_F = 'A:' + STUFF(FIL_NAM_F,1,1,PRFX_LTR)
       FIL_USE   = SUBSTR(FIL_NAM_F,3,8)
       FIL_APND  = SUBSTR(FIL_NAM_F,1,10)
       IF FILE(FIL_NAM_F)
          USE &FIL_USE
          APPEND FROM &FIL_APND
       ENDIF
       STRT_POS = STRT_POS + 13
    ENDDO
    IF (PRFX_LTR = 'A')
       STRT_POS = 1
       PRFX_LTR = 'I'
    ELSE
       IF (PRFX_LTR = 'I')
          MAX_POS  = 72
          PRFX_LTR = 'T'
```

```
            ELSE
               PRFX_LTR = 'X'
            ENDIF
         ENDIF
      ENDDO
      @ 20, 0
      USE
     *
     RETURN
```

```
*----------------------------------------------------------------------------*
*                              COPY_DBF                                      *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*       The COPY_DBF procedure processes the database data files and puts    *
*       them on the backup floppy disk (disk drive labeled A).  First, the   *
*       files are put into temporary files on the main disk (C) in a         *
*       specified sorted order.  Next, they are copied to temporary files    *
*       on the floppy disk (A).  As the system copies to the floppy disk     *
*       it continually checks the disk for the amount of available space.    *
*       If it runs out of space before the backup is finished, it prompts    *
*       the user to place another floppy disk in the disk drive.  Once the   *
*       backup copying is complete the temporary files on the floppy disk    *
*       (A) are renamed with valid database file names and the temporary     *
*       sorted files on the main disk (C) are erased.                        *
*                                                                            *
* CALLED PROCEDURES:                                                         *
*                              Procedure Name            Location            *
*                              --------------            --------------      *
*                              CHK_DSK                   RCISUTL2.PRG        *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*   Variable Name      Status                       Purpose                  *
*   -------------      ------   ---------------------------------------     *
*     DBF_NAME        PARAMETER  String variable containing the complete     *
*                                database file name to be processed.         *
*                                                                            *
*     TMP_SUB         PARAMETER  String variable containing a portion of the*
*                                database file name used to identify sort    *
*                                fields.                                     *
*                                                                            *
*     PHASE           PARAMETER  Used to store a one letter identifier for   *
*                                the active or the inactive database files.  *
*                                                                            *
*     SRT_NAME         LOCAL     String variable containing the name and     *
*                                access path for the temporary sorted file   *
*                                on the main drive (C).                      *
*                                                                            *
*     TMP_NAME         LOCAL     String variable containing the name and     *
*                                access path for the temporary file on the   *
*                                floppy disk drive (A).                      *
*                                                                            *
*     TARGET           LOCAL     String variable containing the name and     *
*                                access path for the valid database file on  *
*                                the floppy disk drive (A).                  *
*                                                                            *
*     TMP_CNT          LOCAL     Used to store the number of records con-    *
*                                tained in the database file being processed*
*                                                                            *
*     REC_POS          LOCAL     Used to store the number of the current     *
*                                database record being processed.  Is com-   *
*                                compared against TMP_CNT to ensure all      *
*                                records have been processed.                *
*                                                                          *
*--------------------------------------------------------------------------*


PROCEDURE COPY_DBF
*
 PARAMETERS DBF_NAME, TMP_SUB, PHASE
*
 SRT_NAME = 'C:S' + TMP_SUB + '.DBF'
 TARGET   = 'A:'  + PHASE + TMP_SUB + '.DBF'
 TMP_NAME = 'A:X' + TMP_SUB + '.DBF'
 SELECT 1
 USE &DBF_NAME
 REC_CNT = RECCOUNT()
 COPY STRUCTURE TO &TMP_NAME
 IF REC_CNT > 0

    *  If only one record, don't sort the file.  *

    IF REC_CNT = 1
       COPY TO &SRT_NAME

    *  If more than one record, sort the entire file.  *

    ELSE
       DO CASE
          CASE TMP_SUB = '_CDT_MS'
               SORT TO &SRT_NAME ON SSAN
          CASE TMP_SUB = '_CDT_PY'
               SORT TO &SRT_NAME ON SSAN, PAY_DATE1
          CASE TMP_SUB = '_CDT_CT'
               SORT TO &SRT_NAME ON AS_CLASS
          CASE TMP_SUB = '_CDT_HW'
               SORT TO &SRT_NAME ON HEIGHT
          CASE TMP_SUB = '_CDT_RT'
               SORT TO &SRT_NAME ON AGE_CAT
       ENDCASE
    ENDIF
 ENDIF
 USE
 SELECT 2
 USE &TMP_NAME
 SET DEFAULT TO A:
 TMP_CNT = 0

 *  Continue looping until all records have been processed.  *

 DO WHILE (TMP_CNT < REC_CNT) .AND. (REC_CNT <> 0)

    *  Copy from the sorted file until disk space runs low.  *

    APPEND FROM &SRT_NAME FOR (DISKSPACE() > 10000)
    REC_POS = RECCOUNT()
    TMP_CNT = TMP_CNT + REC_POS
    IF REC_POS > 0
```

```
   GO REC_POS

   *  Save the value of the sort field to be used as a starting      *
   *  point if the rest of the file needs to be put on another disk  *

   DO CASE
      CASE TMP_SUB = '_CDT_MS'
           SSAN_VAL = SSAN
      CASE TMP_SUB = '_CDT_PY'
           SRTV1 = 'SSAN+STR(YEAR(PAY_DATE1),4)+STR(MONTH(PAY_DATE1),2)'
           SRTV2 = '+STR(DAY(PAY_DATE1),2)'
           SRT_VAL = SRTV1 + SRTV2
           PAY_VAL = &SRT_VAL
      CASE TMP_SUB = '_CDT_CT'
           ASCL_VAL = AS_CLASS
      CASE TMP_SUB = '_CDT_HW'
           HGHT_VAL = HEIGHT
      CASE TMP_SUB = '_CDT_RT'
           AGEC_VAL = AGE_CAT
   ENDCASE
ENDIF

*  If the entire file did not fit on the same disk, prompt the    *
*  user for another disk and delete that portion of the sort file *
*  already copied.                                                *

IF TMP_CNT < REC_CNT
   SELECT 2
   USE
   RENAME &TMP_NAME TO &TARGET
   @ 20, 0
   ? CHR(7)
   @ 20,14 SAY 'Insert a formatted disk in drive A and press any key.'
   CLEAR TYPEAHEAD
   WAIT ' '
   @ 20, 0
   SET DEFAULT TO C:
   @ 20,21 SAY 'Checking target disk.  Please wait...'
   DO CHK_DSK
   @ 20, 0
   @ 20,20 SAY 'Continuing with backup.  Please wait...'
   SELECT 1
   USE &SRT_NAME
   COPY STRUCTURE TO &TMP_NAME
   DO CASE
      CASE TMP_SUB = '_CDT_MS'
           DELETE FOR SSAN     <= SSAN_VAL
      CASE TMP_SUB = '_CDT_PY'
           DELETE FOR &SRT_VAL <= PAY_VAL
      CASE TMP_SUB = '_CDT_CT'
           DELETE FOR AS_CLASS <= ASCL_VAL
      CASE TMP_SUB = '_CDT_HW'
           DELETE FOR HEIGHT   <= HGHT_VAL
      CASE TMP_SUB = '_CDT_RT'
           DELETE FOR AGE_CAT  <= AGEC_VAL
```

```
            ENDCASE
            PACK
            USE
            SELECT 2
            USE &TMP_NAME
            SET DEFAULT TO A:
         ENDIF
      ENDDO
      SET DEFAULT TO C:
      USE
      RENAME &TMP_NAME TO &TARGET
      IF FILE(SRT_NAME)
         ERASE &SRT_NAME
      ENDIF
     *
     RETURN
```

```
*-----------------------------------------------------------------------------*
*                                  UBACKUP                                    *
*-----------------------------------------------------------------------------*
*                                                                             *
* SUMMARY:                                                                    *
*       The UBACKUP procedure is the main driver for the Backup function.     *
*       It sets up the string variables needed to process the backup and      *
*       invokes the appropriate procedures to process them.                   *
*                                                                             *
* CALLED PROCEDURES:                                                          *
*                                  Procedure Name           Location          *
*                                  --------------           --------------    *
*                                  CHK_DSK                  RCISUTL2.PRG      *
*                                  COPY_DBF                 RCISUTL2.PRG      *
*                                                                             *
* VARIABLE DECLARATIONS:                                                      *
*                                                                             *
*   Variable Name     Status                    Purpose                       *
*   -------------     ------     ---------------------------------------      *
*     STRT_POS        LOCAL      Used as a pointer to locate the beginning    *
*                                of each file name.                           *
*                                                                             *
*     PRFX_LTR        LOCAL      Used to store a one letter identifier for    *
*                                the active and inactive database files.      *
*                                                                             *
*     MAX_POS         LOCAL      Used to indicate different transition        *
*                                points within the string variables.          *
*                                                                             *
*-----------------------------------------------------------------------------*


PROCEDURE UBACKUP
*
 @ 20, 0
 @ 20,14 SAY 'Insert a formatted disk in drive A and press any key.'
 CLEAR TYPEAHEAD
 WAIT ' '
 @ 20, 0
 @ 20,21 SAY 'Checking target disk.  Please wait...'
 DO CHK_DSK
 @ 20, 0
 @ 20,21 SAY 'Starting RCIS backup.  Please wait...'
 STRT_POS = 1
 PRFX_LTR = 'A'
 MAX_POS  = 36
 DO WHILE (PRFX_LTR <> 'X')
    DO WHILE (STRT_POS < MAX_POS)
       DBF_F_NAM = SUBSTR(FIL_STRG,STRT_POS,8)
       DBF_F_NAM = 'C:' + STUFF(DBF_F_NAM,1,1,PRFX_LTR)
       TMP_NAM   = SUBSTR(DBF_F_NAM,4,7)
       DO COPY_DBF WITH DBF_F_NAM, TMP_NAM, PRFX_LTR
       STRT_POS = STRT_POS + 13
    ENDDO
    IF (PRFX_LTR = 'A')
       STRT_POS = 1
```

```
            PRFX_LTR = 'I'
         ELSE
            IF (PRFX_LTR = 'I')
               MAX_POS  = 72
               PRFX_LTR = 'T'
            ELSE
               PRFX_LTR = 'X'
            ENDIF
         ENDIF
      ENDDO
      SELECT 1
      USE
      SELECT 2
      USE
      @ 20, 0
      @ 20,18 SAY 'Backup complete.  Press any key to continue.'
      CLEAR TYPEAHEAD
      WAIT ' '
      @ 20, 0
     *
     RETURN
```

```
*----------------------------------------------------------------------------*
*                                  URELOAD                                   *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*       The URELOAD procedure is the main driver for the Reload function.    *
*       It requires the user to input a password which is checked against    *
*       the system password for validity.  It invokes procedures which pre-*
*       pare the system files for reload and prompts the user for the num-   *
*       ber of reload disks to process.                                      *
*                                                                            *
* CALLED PROCEDURES:                                                         *
*                                 Procedure Name           Location          *
*                                 --------------           --------------    *
*                                 CHK_NDX                  RCISUTL2.PRG      *
*                                 SET_DSK                  RCISUTL2.PRG      *
*                                 LOAD_DBF                 RCISUTL2.PRG      *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*   Variable Name     Status               Purpose                           *
*   -------------     ------   ---------------------------------------- *
*     PWORD           LOCAL    Used to store the user input password which*
*                              is checked against the system password    *
*                                                                            *
*     DSK_NO          LOCAL    Used to store the user input for number of *
*                              disks to process for the reload.          *
*                                                                            *
*     CUR_DSK         LOCAL    Used to keep track of the current disk    *
*                              being processed.                          *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE URELOAD
*
 OPTION = .F.
 @ 20, 0
 ? CHR(7)
 @ 20[illegible] SAY 'WARNING:  This option will erase existing files.'
 @ [illegible] )+
 @ [illegible] 26 SAY 'Do you want to continue? ' GET OPTION PICTURE 'Y'
 CLEAR TYPEAHEAD
 READ
 @ 20, 0
 @ 22, 0
 IF OPTION
    SELECT 1
    USE RCIS_PW
    PWORD = '        '
    @ 20,28 SAY 'Enter password ' GET PWORD PICTURE '!!!!!!!!'
    CLEAR TYPEAHEAD
    READ
    @ 20, 0
    IF ACCESS_PW <> PWORD
```

```
           ? CHR(7)
           @ 20,19 SAY 'Access denied. Press any key to continue.'
           CLEAR TYPEAHEAD
           WAIT ' '
           @ 20, 0
        ELSE
           @ 20,22 SAY 'Erasing existing RCIS indices.  Please wait...'
           DO CHK_NDX
           @ 20, 0
           @ 20,23 SAY 'Erasing existing RCIS files.    Please wait...'
           DO SET_DSK
           @ 20, 0
           DSK_NO = 0
           @ 20,22 SAY 'How many disks will be processed? ';
                   GET DSK_NO PICTURE '@Z ##'
           CLEAR TYPEAHEAD
           READ
           @ 20, 0
           IF DSK_NO > 0
              CUR_DSK = 1
              DO WHILE CUR_DSK <= DSK_NO
                 DO LOAD_DBF
                 CUR_DSK = CUR_DSK + 1
              ENDDO
              @ 20, 0
              @ 20,17 SAY 'Reload complete.  Press any key to continue.'
              CLEAR TYPEAHEAD
              WAIT ' '
           ENDIF
        ENDIF
        @ 20, 0
        SELECT 1
        USE
     ENDIF
    *
    RETURN
```

```
*----------------------------------------------------------------------------*
*                                 PASSWORD                                   *
*----------------------------------------------------------------------------*
*                                                                            *
* SUMMARY:                                                                   *
*       The PASSWORD procedure allows the user to change the system pass-    *
*       word.  The user is required to know and input the current valid      *
*       password before the system will accept their new password.           *
*                                                                            *
* VARIABLE DECLARATIONS:                                                     *
*                                                                            *
*   Variable Name     Status                     Purpose                     *
*   -------------     ------     ---------------------------------------- *
*     OLDWORD          LOCAL     Used to store the user input password which*
*                                is checked against the system password     *
*                                                                            *
*     NEWWORD          LOCAL     Used to store the user input for the new   *
*                                password they would like to use.           *
*                                                                            *
*     VERWORD          LOCAL     Used to store the user input which is com- *
*                                pared against NEWWORD for system verifica- *
*                                tion.                                      *
*                                                                            *
*----------------------------------------------------------------------------*


PROCEDURE PASSWORD
*
 OLDWORD = '        '
 @ 16,26 SAY 'Enter old password  ' GET OLDWORD PICTURE '!!!!!!!!'
 CLEAR TYPEAHEAD
 READ
 NEWWORD = '        '
 @ 18,26 SAY 'Enter new password  ' GET NEWWORD PICTURE '!!!!!!!!'
 CLEAR TYPEAHEAD
 READ
 VERWORD = '        '
 @ 20,26 SAY 'Verify new password ' GET VERWORD PICTURE '!!!!!!!!'
 CLEAR TYPEAHEAD
 READ
 IF VERWORD = NEWWORD
    USE RCIS_PW
    IF OLDWORD = ACCESS_PW
       REPLACE ACCESS_PW WITH NEWWORD
       @ 22,17 SAY 'Password changed. Press any key to continue.'
       CLEAR TYPEAHEAD
       WAIT ' '
    ELSE
       ? CHR(7)
       @ 22,19 SAY 'Access denied. Press any key to continue.'
       CLEAR TYPEAHEAD
       WAIT ' '
    ENDIF
 ELSE
    ? CHR(7)
    @ 22,19 SAY 'Access denied. Press any key to continue.'
    CLEAR TYPEAHEAD
    WAIT ' '
 ENDIF
 @ 16, 0
 @ 18, 0
 @ 20, 0
 @ 22, 0
*
RETURN
```

```
;--------------------------------------------------------------------------;
;                              MENU.ASM                                    ;
;--------------------------------------------------------------------------;
;                                                                          ;
; SUMMARY:                                                                 ;
;       The MENU.ASM routine was written in assembler code by Stephen M.  ;
;       Curran.  It accepts the menu parameters from the calling RCIS pro- ;
;       cedures and builds pop-up menus based on those parameters.  It also;
;       provides the environment for the user to use the arrow keys to move;
;       a highlighted bar to the different menu options for them to make  ;
;       their selection.  Once a selection has been made or an escape se-  ;
;       quence has been executed,  this routine passes a code back to the  ;
;       calling procedure which indicates how the user responded in the    ;
;       current menu.                                                      ;
;                                                                          ;
;--------------------------------------------------------------------------;
;
;
TITLE       MENU.ASM
;
            ORG      00H
;
CSEG        SEGMENT  BYTE PUBLIC 'PROG'
            ASSUME   CS:CSEG
;
; parameters passed by dBASE III PLUS:
;
; DS:[BX]   = menu sequence
; DS:[BX+1] = active menu
; DS:[BX+2] = start row
; DS:[BX+3] = start column
; DS:[BX+4] = bottom row
; DS:[BX+5] = active row
; DS:[BX+6] = string length
; DS:[BX+7] = start of data strings
;
;****************************************
;*            MAIN ROUTINE              *
;****************************************
;
START       PROC     FAR
;
; save working registers to stack
;
            PUSH     AX
            PUSH     BX
            PUSH     CX
            PUSH     DX
            PUSH     DS
            PUSH     SS
            PUSH     SI
;
            MOV      AL,DS:[BX]
            CMP      AL,43H
            JNE      NEW_SCRN
            MOV      AX,41H
            MOV      DS:[BX],AL
            CALL     CUR_INIT
            CALL     VIDEO
            XOR      AX,AX
            MOV      AL,DS:[BX+2]
            ADD      AL,03H
            MOV      DS:[BX+5],AL
            JMP      ROW_MATRIX
NEW_SCRN:   CALL     INIT
;
; load SI with string index
;
            XOR      SI,SI
;
; print menu labels
;
;****************************************
;*            LABEL: DO_BOX             *
;****************************************
;
DO_BOX:     PUSH     CX
            XOR      CH,CH
            MOV      CL,DS:[BX+6]
            SUB      CL,41H
DO_STR:     PUSH     CX
            PUSH     BX
;
; get current video mode and page
;
;     on return: BH = video page
;
            XOR      AL,AL
            MOV      AH,0FH
            INT      10H
;
; set cursor position
;
            XOR      AL,AL
            MOV      AH,02H
            INT      10H
            MOV      CX,BX
            POP      BX
            PUSH     BX
            MOV      AL,DS:[BX+7+SI]
            MOV      AH,09H
            MOV      BH,CH
            MOV      CX,01H
            MOV      BL,07H
            INT      10H
;
; increment cursor column
;
            ADD      DL,01H
;
```

```
; increment string index
;
            ADD     SI,01H
;
; decrement loop counter
;
            POP     BX
            POP     CX
            LOOP    DO_STR
            ADD     DH,01H
            MOV     DL,DS:[BX+3]
            SUB     DL,41H
            POP     CX
            LOOP    DO_BOX
ROW_MATRIX: CALL    CUR_INIT
            CALL    VIDEO
;
; test if new sequence
;
            MOV     AL,DS:[BX]
            SUB     AL,41H
            CMP     AL,01H
            JNE     KEY_DB
            JMP     EXIT
KEY_DB:     MOV     AH,00H
            INT     16H
            CMP     AL,00H
            JE      DB_SPEC
            JMP     DB_NOSP
DB_SPEC:    CMP     AH,50H
            JNE     CUR_UP
            CALL    CUR_INIT
            CALL    VIDEO
            MOV     AL,DS:[BX+4]
            SUB     AL,42H
            CMP     AL,DH
            JNE     REV_VIDEO
            MOV     DH,06H
REV_VIDEO:  ADD     DH,01H
            MOV     DL,DS:[BX+3]
            SUB     DL,40H
            XOR     CH,CH
            MOV     CL,DS:[BX+6]
            SUB     CL,43H
            CALL    VIDEO
            ADD     DH,41H
            MOV     DS:[BX+5],DH
            JMP     KEY_DB
CUR_UP:     CMP     AH,48H
            JNE     KEY_DB
            CALL    CUR_INIT
            CALL    VIDEO
            SUB     DH,01H
            CMP     DH,06H
            JNE     SET_VID
            MOV     DH,DS:[BX+4]
            SUB     DH,42H
SET_VID:    MOV     DL,DS:[BX+3]
            SUB     DL,40H
            XOR     CH,CH
            MOV     CL,DS:[BX+6]
            SUB     CL,43H
            CALL    VIDEO
            ADD     DH,41H
            MOV     DS:[BX+5],DH
            JMP     KEY_DB
DB_NOSP:    CMP     AH,1CH
            JE      DB_ENTER
            MOV     AL,DS:[BX+1]
            CMP     AL,41H
            JNE     CHK_ESC
            JMP     KEY_DB
CHK_ESC:    CMP     AH,01H
            JE      ERASE
            JMP     KEY_DB
ERASE:      CALL    INIT
ERASE_BOX:  PUSH    CX
            PUSH    BX
            PUSH    DX
            XOR     AH,AH
            MOV     AL,DS:[BX+6]
            SUB     AL,41H
            PUSH    AX
            XOR     AL,AL
            MOV     AH,0FH
            INT     10H
            XOR     AL,AL
            MOV     AH,02H
            INT     10H
            POP     AX
            MOV     CX,AX
            MOV     AH,09H
            MOV     AL,20H
            MOV     BL,07H
            INT     10H
            POP     DX
            ADD     DH,01H
            POP     BX
            POP     CX
            LOOP    ERASE_BOX
            MOV     AL,41H
            MOV     DS:[BX],AL
            JMP     EXIT
DB_ENTER:   MOV     AL,42H
            MOV     DS:[BX],AL
;
; restore the original registers from
; the system stack
;
;***************************************
```

```
;*               LABEL: EXIT                 *
;*****************************************
;
EXIT:        POP      SI
             POP      SS
             POP      DS
             POP      DX
             POP      CX
             POP      BX
             POP      AX
             RET
START        ENDP
;
;*****************************************
;*        SUBROUTINE: INIT                   *
;*****************************************
;
INIT         PROC      NEAR
;
; get menu row count
;
;     load CL with the final menu row
;     subtract the initial menu row
;     increment row count
;
             XOR      CH,CH
             MOV      CL,DS:[BX+4]
             SUB      CL,DS:[BX+2]
             ADD      CL,01H
;
; initialize cursor position registers
;
;     load DH with start row
;     convert from ASCII to integer value
;     load DL with start column
;     convert from ASCII to integer value
;
             MOV      DH,DS:[BX+2]
             SUB      DH,41H
             MOV      DL,DS:[BX+3]
             SUB      DL,41H
             RET
INIT         ENDP
;
;*****************************************
;*        SUBROUTINE: VIDEO                  *
;*****************************************
;
VIDEO        PROC     NEAR
;
             PUSH     BX
CHG_VIDEO:   PUSH     CX
;
; get current video mode and page
;
```

```
;       on return BH = video page
;
                XOR      AL,AL
                MOV      AH,0FH
                INT      10H
;
; set cursor position
;
                XOR      AL,AL
                MOV      AH,02H
                INT      10H
;
; read character and attribute
;
;       on return: AH = attribute
;                  AL = character
;
                XOR      AL,AL
                MOV      AH,08H
                INT      10H
;
; write reverse video of character
;
                CMP      AH,70H
                JNE      REVERSE
                MOV      BL,07H
                JMP      STRING
REVERSE:        MOV      BL,70H
STRING:         MOV      CX,01H
                MOV      AH,09H
                INT      10H
;
; increment cursor column
;
                ADD      DL,01H
;
; decrement loop counter
;
                POP      CX
                LOOP     CHG_VIDEO
                PUSH     DX
                MOV      DH,1AH
                XOR      AX,AX
                MOV      AH,02H
                INT      10H
                POP      DX
                POP      BX
                RET
VIDEO           ENDP
;
;****************************************
;*          SUBROUTINE: CUR_INIT        *
;****************************************
;
CUR_INIT        PROC     NEAR
```

```
;
; load CX with field length
;
;     load CL with string length
;     convert ASCII to integer value
;     and adjust for border
;
            XOR      CH,CH
            MOV      CL,DS:[BX+6]
            SUB      CL,43H
;
; load DX with cursor position
;
;     load DH with active row
;     convert ASCII to integer value
;     load DL with column
;     convert ASCII to integer value
;     and adjust for border window
;
            MOV      DH,DS:[BX+5]
            SUB      DH,41H
            MOV      DL,DS:[BX+3]
            SUB      DL,40H
            RET
CUR_INIT    ENDP
;
CSEG        ENDS
            END
```

```
*------------------------------------------------------------------------------*
*                                  CDT_M.FMT                                   *
*------------------------------------------------------------------------------*
*                                                                              *
* SUMMARY:                                                                     *
*       The CDT_M format file contains the screen formats which allow the     *
*       user to make changes to the data items displayed on the screen.       *
*       There are four full screen pages in this format file.                 *
*                                                                              *
*------------------------------------------------------------------------------*


@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - PERSONAL INFORMATION       (Page 1 of 4)'
@  4,11 SAY 'SSAN '
@  4,17 SAY SSAN                              PICTURE '@R 999-99-9999'
@  6, 6 SAY 'First Name'      GET F_NAME      PICTURE '!!!!!!!!!!!!!!!'
@  7, 5 SAY 'Middle Name'     GET M_NAME      PICTURE '!!!!!!!!!!!!!!!'
@  8, 7 SAY 'Last Name'       GET L_NAME      PICTURE '!!!!!!!!!!!!!!!'
@  4,46 SAY 'Matric #'        GET MATRIC      PICTURE '999999'
@  6,45 SAY 'Birthdate'       GET BIRTHDATE
@  8,46 SAY 'Age'             GET AGE         PICTURE '99'
@  8,56 SAY 'Sex'             GET SEX         PICTURE '!'
@ 11,37 SAY ' LOCAL '
@ 12, 0 TO 16,79
@ 10,36 TO 12,44
@ 13, 2 SAY 'Street Address' GET LOCAL_STRT
@ 14,12 SAY 'City'            GET LOCAL_CITY
@ 15, 8 SAY 'Zip Code'        GET LOCAL_ZIP  PICTURE '@R 99999-NNNN'
@ 14,49 SAY 'Phone'           GET LOCAL_PHON PICTURE '@R 999-9999'
@ 18,35 SAY ' PERMANENT '
@ 19, 0 TO 23,79
@ 17,34 TO 19,46
@ 20, 2 SAY 'Street Address' GET PERM_STRT
@ 21,12 SAY 'City'            GET PERM_CITY
@ 22, 4 SAY 'State'           GET PERM_STAT     PICTURE 'AA'
@ 22,18 SAY 'Zip Code'        GET PERM_ZIP      PICTURE '@R 99999-NNNN'
@ 21,49 SAY 'Phone'           GET PERM_PHON     PICTURE '@R (999)999-9999'
READ
@ 19, 0 TO 23,79
@ 15, 0 TO 19,79
@  9, 0 TO 15,79
@  3, 0 TO  9,79
@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - ADMINISTRATIVE INFORMATION (Page 2 of 4)'
@  4,24 SAY 'SSAN '
@  4,30 SAY SSAN                           PICTURE '@R 999-99-9999'
@  6,21 SAY 'AS Class'                     GET AS_CLASS   RANGE 1,5
@  8,16 SAY 'Category Type'                GET CAT_TYPE   PICTURE '!'
@  4,47 SAY 'Four Year Cadet'              GET FOUR_YR    PICTURE 'Y'
@  6,49 SAY 'Prior Service'                GET PRIOR_SVC  PICTURE 'Y'
@  8,47 SAY 'Waiver Required'              GET WAIVER_REQ PICTURE 'Y'
@ 10,11 SAY 'Semester Interview'           GET SEM_INTRVW
@ 12,23 SAY 'Height'                       GET HEIGHT     RANGE 58,83
@ 14,23 SAY 'Weight'                       GET WEIGHT
@ 10,52 SAY 'Weigh Date'                    GET WEIGH_DATE
@ 12,54 SAY 'Run Time'                      GET RUN_TIME    PICTURE '@R 99:99'
@ 14,54 SAY 'Run Date'                      GET RUN_DATE
@ 16, 2 SAY 'Pursuing/Conditional Status'   GET PC_STATUS   PICTURE '!'
@ 18,25 SAY 'Race'                          GET RACE       PICTURE '!'
@ 16,54 SAY 'FSP Date'                      GET FSP_DATE
@ 18,55 SAY 'Form 48'                       GET FORM_48
@ 20, 2 SAY 'Physical Qualification Date'   GET PHY_DATE
@ 22,12 SAY 'Physical Category'             GET PHY_CAT     PICTURE '!'
@ 20,47 SAY 'Graduation Date'               GET GRAD_DATE
@ 22,47 SAY 'Commission Date'               GET COM_DATE
READ
@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - ACADEMIC INFORMATION      (Page 3 of 4)'
@  4, 0 SAY 'SSAN'
@  4, 5 SAY SSAN PICTURE '@R 999-99-9999'
@  4,19 SAY 'Scholarship Type'              GET SCHLR_TYPE RANGE 0,4
@  4,42 SAY 'Scholarship Expiration Date'   GET SCHLR_DATE
@  6, 0 SAY 'Major'                         GET MAJOR       PICTURE '!!!!'
@  6,14 SAY 'Semester GPA'                  GET SEM_GPA     RANGE 0,4
@  6,35 SAY 'Cumulative GPA'                GET CUM_GPA     RANGE 0,4
@  6,59 SAY 'AFOQT Date'                    GET AFOQT_DATE
@  8, 0 TO 18,37
@  8,40 TO 18,79
@ 19, 0 TO 24,37
@ 19,40 TO 24,79
@  8,56 SAY 'ACT SCORES'
@  8,12 SAY 'AFOQT SCORES'
@ 19,14 SAY 'SAT SCORES'
@ 19,44 SAY 'MINIMUM REQUIRED COURSES COMPLETE'
@  9, 9 SAY 'Quanitative'                   GET AFOQT_QUAN RANGE 0,99
@ 11,14 SAY 'Verbal'                        GET AFOQT_VERB RANGE 0,99
@ 13,03 SAY 'Academic Aptitude'             GET AFOQT_AA    RANGE 0,99
@ 15,15 SAY 'Pilot'                         GET AFOQT_PLT   RANGE 0,99
@ 17,11 SAY 'Navigator'                     GET AFOQT_NAV   RANGE 0,99
@  9,56 SAY 'Math'                          GET ACT_MATH    RANGE 0,36
@ 11,53 SAY 'English'                       GET ACT_ENGL    RANGE 0,36
@ 13,45 SAY 'Natural Science'               GET ACT_NSCI    RANGE 0,36
@ 15,46 SAY 'Social Science'                GET ACT_SSCI    RANGE 0,36
@ 17,50 SAY 'Cumulative'                    GET ACT_CUM     RANGE 0,36
@ 21, 7 SAY 'Math'                          GET SAT_MATH    RANGE 0,800
@ 21,22 SAY 'Verbal'                        GET SAT_VERB    RANGE 0,800
@ 23,12 SAY 'Cumulative'                    GET SAT_CUM     RANGE 0,1600
@ 21,48 SAY 'Math'                          GET M_R_MATH     PICTURE 'Y'
@ 21,62 SAY 'English'                       GET M_R_ENGL     PICTURE 'Y'
@ 23,50 SAY 'Foreign Language'              GET M_R_FLAN     PICTURE 'Y'
READ
@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - CORPS INFORMATION         (Page 4 of 4)'
@  4, 0 TO  10,79
@  5,21 SAY 'SSAN '
@  5,27 SAY SSAN                                          PICTURE '@R 999-99-9999'
@  9, 2 SAY 'AS Class Rank'                   GET AS_RNK_POS
@  9,20 SAY 'out of'
@  9,27 SAY CLAS_NUM
@  5,53 SAY 'Fiscal Year Rating'            GET FY_RTNG    RANGE 0,50
@  7,42 SAY "Detachment Commander's Rating" GET DC_RTNG    RANGE 0,8
@  9,50 SAY 'Field Training Rating'         GET FT_RTNG    RANGE 0,999
@ 11, 0 TO  15,79
@ 12,22 SAY 'ALTU'                          GET ALTU       PICTURE 'Y'
@ 14, 2 SAY 'Field Training Completed'      GET FT_COMP    PICTURE 'Y'
@ 12,56 SAY "Pilot's License"               GET PLT_LICENS PICTURE 'Y'
@ 14,57 SAY 'Part Time Work'                GET WORK       PICTURE 'Y'
@ 16, 0 TO  22,79
@ 17,12 SAY 'Corps Position'                GET CORPS_POS
@ 19, 9 SAY 'Corps Auxiliaries'
@ 19,27                      GET CORPS_AUX PICTURE '@R !!|!!|!!|!!|!!|!!|!!|!!'
@ 21, 3 SAY 'Significant Information'       GET OTHER_INFO
```

```
*------------------------------------------------------------------------------*
*                                  CDT_M_VU.FMT                                *
*------------------------------------------------------------------------------*
*                                                                              *
* SUMMARY:                                                                     *
*       The CDT_M_VU format file contains the screen formats which only        *
*       allow the user to view data items displayed on the screen.  There      *
*       are four full screen pages in this format file.                        *
*                                                                              *
*------------------------------------------------------------------------------*


@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - PERSONAL INFORMATION       (Page 1 of 4)'
@  4,11 SAY 'SSAN '
@  4,17 SAY  SSAN             PICTURE '@R 999-99-9999'
@  6, 6 SAY 'First Name'
@  6,17 SAY F_NAME            PICTURE '!!!!!!!!!!!!!!!'
@  7, 5 SAY 'Middle Name'
@  7,17 SAY M_NAME            PICTURE '!!!!!!!!!!!!!!!'
@  8, 7 SAY 'Last Name'
@  8,17 SAY L_NAME            PICTURE '!!!!!!!!!!!!!!!'
@  4,46 SAY 'Matric #'
@  4,55 SAY MATRIC            PICTURE '999999'
@  6,46 SAY 'Age'
@  6,50 SAY AGE               PICTURE '99'
@  6,56 SAY 'Sex'
@  6,60 SAY SEX               PICTURE '!'
@  8,45 SAY 'Birthdate'
@  8,55 SAY BIRTHDATE
@ 11,37 SAY ' LOCAL '
@ 12, 0 TO 16,79
@ 10,36 TO 12,44
@ 13, 2 SAY 'Street Address'
@ 13,17 SAY LOCAL_STRT
@ 14,12 SAY 'City'
@ 14,17 SAY LOCAL_CITY
@ 15, 8 SAY 'Zip Code'
@ 15,17 SAY LOCAL_ZIP         PICTURE '@R 99999-NNNN'
@ 14,49 SAY 'Phone'
@ 14,55 SAY LOCAL_PHON        PICTURE '@R 999-9999'
@ 18,35 SAY ' PERMANENT '
@ 19, 0 TO 23,79
@ 17,34 TO 19,46
@ 20, 2 SAY 'Street Address'
@ 20,17 SAY PERM_STRT
@ 21,12 SAY 'City'
@ 21,17 SAY PERM_CITY
@ 22, 4 SAY 'State'
@ 22,10 SAY PERM_STAT
@ 22,18 SAY 'Zip Code'
@ 22,27 SAY PERM_ZIP          PICTURE '@R 99999-NNNN'
@ 21,49 SAY 'Phone'
@ 21,55 SAY PERM_PHON         PICTURE '@R (999)999-9999'
READ
```

```
@ 19, 0 TO 23,79
@ 15, 0 TO 19,79
@  9, 0 TO 15,79
@  3, 0 TO  9,79
@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - ADMINISTRATIVE INFORMATION (Page 2 of 4)'
@  4,24 SAY 'SSAN '
@  4,30 SAY SSAN                          PICTURE '@R 999-99-9999'
@  6,21 SAY 'AS Class'
@  6,30 SAY AS_CLASS
@  8,16 SAY 'Category Type'
@  8,30 SAY CAT_TYPE                      PICTURE '!'
@  4,47 SAY 'Four Year Cadet'
@  4,63 SAY FOUR_YR                       PICTURE 'Y'
@  6,49 SAY 'Prior Service'
@  6,63 SAY PRIOR_SVC                     PICTURE 'Y'
@  8,47 SAY 'Waiver Required'
@  8,63 SAY WAIVER_REQ                    PICTURE 'Y'
@ 10,23 SAY 'Height'
@ 10,30 SAY HEIGHT
@ 12,23 SAY 'Weight'
@ 12,30 SAY WEIGHT
@ 14,19 SAY 'Weigh Date'
@ 14,30 SAY WEIGH_DATE
@ 10,44 SAY 'Semester Interview'
@ 10,63 SAY SEM_INTRVW
@ 12,54 SAY 'Run Time'
@ 12,63 SAY RUN_TIME                      PICTURE '@R 99:99'
@ 14,54 SAY 'Run Date'
@ 14,63 SAY RUN_DATE
@ 16, 2 SAY 'Physical Qualification Date'
@ 16,30 SAY PHY_DATE
@ 18,12 SAY 'Physical Category'
@ 18,30 SAY PHY_CAT                       PICTURE '!'
@ 16,47 SAY 'Graduation Date'
@ 16,63 SAY GRAD_DATE
@ 18,47 SAY 'Commission Date'
@ 18,63 SAY COM_DATE
@ 20, 2 SAY 'Pursuing/Conditional Status'
@ 20,30 SAY PC_STATUS                     PICTURE '!'
@ 22,25 SAY 'Race'
@ 22,30 SAY RACE                          PICTURE '!'
@ 20,54 SAY 'FSP Date'
@ 20,63 SAY FSP_DATE
@ 22,55 SAY 'Form 48'
@ 22,63 SAY FORM_48                       PICTURE 'Y'
READ
@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - ACADEMIC INFORMATION       (Page 3 of 4)'
@  4, 0 SAY 'SSAN'
@  4, 5 SAY  SSAN                               PICTURE '@R 999-99-9999'
@  4,19 SAY 'Scholarship Type'
@  4,36 SAY SCHLR_TYPE
@  4,42 SAY 'Scholarship Expiration Date'
@  4,70 SAY SCHLR_DATE
@  6, 0 SAY 'Major'
@  6, 6 SAY MAJOR                               PICTURE '!!!!'
@  6,13 SAY 'Cumulative GPA'
@  6,28 SAY CUM_GPA
@  6,35 SAY 'Semester GPA'
@  6,48 SAY SEM_GPA
@  6,59 SAY 'AFOQT Date'
@  6,70 SAY AFOQT_DATE
@  8, 0 TO 18,37
@  8,40 TO 18,79
@ 19, 0 TO 24,37
@ 19,40 TO 24,79
@  8,14 SAY 'ACT SCORES'
@  8,54 SAY 'AFOQT SCORES'
@ 19,14 SAY 'SAT SCORES'
@ 19,44 SAY 'MINIMUM REQUIRED COURSES COMPLETE'
@  9,14 SAY 'Math'
@  9,19 SAY ACT_MATH
@ 11,11 SAY 'English'
@ 11,19 SAY ACT_ENGL
@ 13, 3 SAY 'Natural Science'
@ 13,19 SAY ACT_NSCI
@ 15, 4 SAY 'Social Science'
@ 15,19 SAY ACT_SSCI
@ 17, 8 SAY 'Cumulative'
@ 17,19 SAY ACT_CUM
@  9,49 SAY 'Quanitative'
@  9,61 SAY AFOQT_QUAN
@ 11,54 SAY 'Verbal'
@ 11,61 SAY AFOQT_VERB
@ 13,43 SAY 'Academic Aptitude'
@ 13,61 SAY AFOQT_AA
@ 15,55 SAY 'Pilot'
@ 15,61 SAY AFOQT_PLT
@ 17,51 SAY 'Navigator'
@ 17,61 SAY AFOQT_NAV
@ 21, 7 SAY 'Math'
@ 21,12 SAY SAT_MATH
@ 21,22 SAY 'Verbal'
@ 21,29 SAY SAT_VERB
@ 23,12 SAY 'Cumulative'
@ 23,23 SAY SAT_CUM
@ 21,48 SAY 'Math'
@ 21,53 SAY M_R_MATH                            PICTURE 'Y'
@ 21,62 SAY 'English'
@ 21,70 SAY M_R_ENGL                            PICTURE 'Y'
@ 23,50 SAY 'Foreign Language'
@ 23,67 SAY M_R_FLAN                            PICTURE 'Y'
READ
@  1, 0 TO  3,79 DOUBLE
@  2, 9 SAY 'INDIVIDUAL CADET DATA - CORPS INFORMATION          (Page 4 of 4)'
@  4, 0 TO  10,79
@  5,21 SAY 'SSAN '
@  5,27 SAY SSAN                            PICTURE '@R 999-99-9999'
@  7,16 SAY 'WPSS Score'
@  7,27 SAY WPSS                              PICTURE '999.99'
@  9, 2 SAY 'AS Class Rank'
@  9,16 SAY AS_RNK_POS
@  9,20 SAY 'out of'
@  9,27 SAY CLAS_NUM
@  5,53 SAY 'Fiscal Year Rating'
@  5,72 SAY FY_RTNG
@  7,42 SAY "Detachment Commander's Rating"
@  7,72 SAY DC_RTNG
@  9,50 SAY 'Field Training Rating'
@  9,72 SAY FT_RTNG
@ 11, 0 TO  15,79
@ 12,22 SAY 'ALTU'
@ 12,27 SAY ALTU       PICTURE 'Y'
@ 14, 2 SAY 'Field Training Completed'
@ 14,27 SAY FT_COMP    PICTURE 'Y'
@ 12,56 SAY "Pilot's License"
@ 12,72 SAY PLT_LICENS PICTURE 'Y'
@ 14,57 SAY 'Part Time Work'
@ 14,72 SAY WORK       PICTURE 'Y'
@ 16, 0 TO  22,79
@ 17,12 SAY 'Corps Position'
@ 17,27 SAY CORPS_POS
@ 19, 9 SAY 'Corps Auxiliaries'
@ 19,27 SAY CORPS_AUX PICTURE '@R !!¦!!¦!!¦!!¦!!¦!!¦!!¦!!'
@ 21, 3 SAY 'Significant Information'
@ 21,27 SAY OTHER_INFO
```