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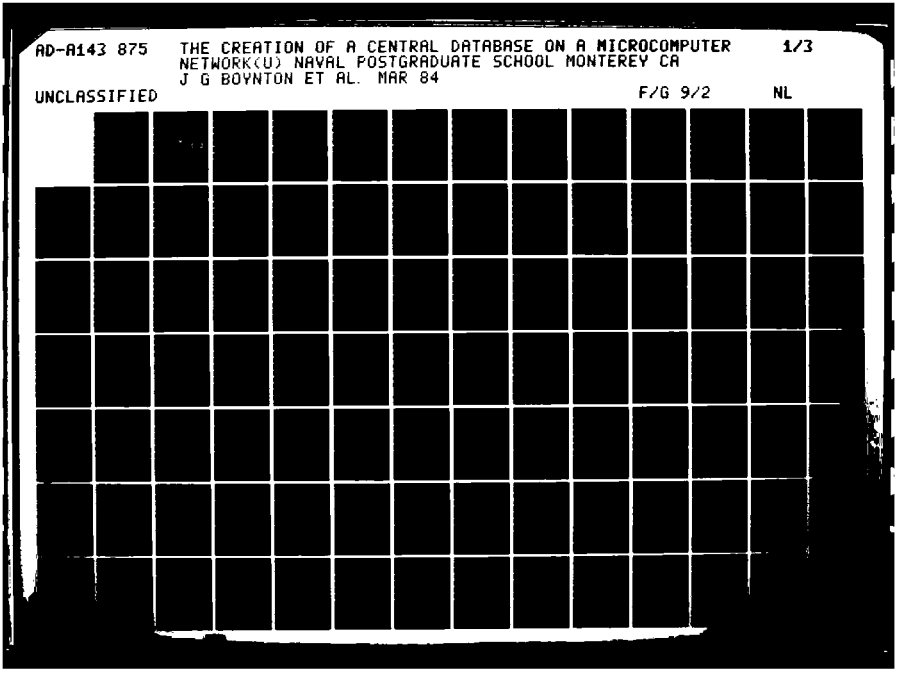

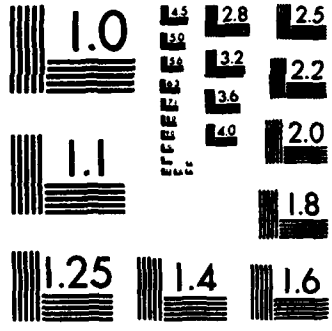

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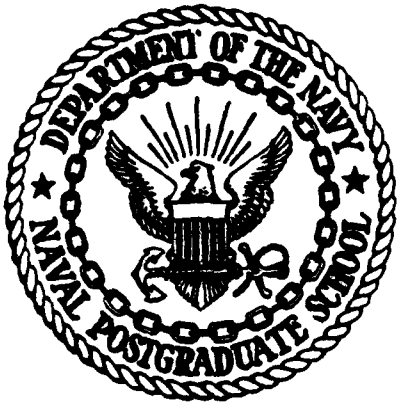

THESIS

THE CREATION OF A CENTRAL DATABASE
ON A MICROCOMPUTER NETWORK

by

John G. Boynton
and
Ronald G. Nichols

March, 1984

Thesis Advisor: N. R. Lyons

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This thesis discusses the design and development of a central database on a network of microcomputers. It provides an overview of the methodology utilized in creating the system, along with the problems associated with a central database. The thesis includes the source listings for the creation of the system and a discussion of the difficulties of controlling contention within the networked database environment.

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The Creation of a Central Database on a Microcomputer Network

by

John G. Boynton
Major, United States Army
B.S., United States Military Academy, 1972

and

Ronald G. Nichols
Lieutenant Commander, SC, United States Navy
B.S., Ohio State University, 1974

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN INFORMATION SYSTEMS

from the

NAVAL POSTGRADUATE SCHOOL
March 1984

Authors: John G. Boynton

Ronald G. Nichols

Approved by: Norman R. Lyons
Thesis Advisor

William J. Haga
Second Reader

Richard S. Elster
Chairman, Department of Administrative Science

Kneale T. Marshall
Dean of Information and Policy Sciences

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This thesis discusses the design and development of a central database on a network of microcomputers. It provides an overview of the methodology utilized in creating the system, along with the problems associated with a central database. The thesis includes the source listings for the creation of the system and a discussion of the difficulties of controlling contention within the networked database environment.

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I. INTRODUCTION

Current economic trends have brought about an increased awareness of the need for productivity gains in the workplace. Like all facets of business, government is finding increased pressures to reduce expenditures and still provide service to the people. To meet the challenges of reducing costs and maintaining service levels, government managers are looking toward office automation and computerization to increase individual productivity. The Navy Fleet Material Support Office (FMSO), like most Government Agencies, is doing its part to improve productivity.

The Defective Material Section of FMSO (Code 91423) is designated as the overall monitor for the quality deficiency management information reporting system. A Thesis entitled A System Analysis and Design For Updating the Internal Tracking of the Quality Deficiency Reporting System at the Navy's Fleet Material Support Office by Michael D. Carriger recommended the development of a prototype network of inexpensive microcomputers and the creation of a Central Database System. This prototype system will demonstrate the feasibility of automating the QDR Processing Procedures, and will allow the evaluation of processing with automated techniques. Additionally, the prototype will provide the basic design for future QDR Systems and its interaction with users. [Ref. 1]

Current microcomputer technology has allowed very powerful systems to be created at relatively low costs. Microprocessors with over 512,000 characters of memory can process over 500,000 instructions per second. Secondary storage units can access over 35 million characters of data at the rate of 5 million bits per second. Relational

Database systems allcw micrcccmputers to create, update, and manage large databases of information at relatively low costs.

The purpose of this Thesis is to develop a Protctype Database Management Information System for use at the Defective Material Section of FMSO (Code 91423). This system will utilize current microcomputer technology and off-the-shelf hardware and scftware. Application programs will be generated with a high level database manipulation language. For this applicatien, dBASE II (by Ashton-Tate), IBM-PC micrccomputers, PCnet (by Orchid Technology), and 20 MB hard disk storage devices (by Tallgrass Technology) are utilized to create the Management Information System. This hardware and software was selected because: 1) it had already been evaluated and was in use at other sections of FMSO; 2) it appeared that it could meet the processing requirements for the QDR System; 3) it could be easily obtained with minimal cost to the project; and 4) it could be incorporated intc both the short term and lcng term processing goals for FMSO [Ref. 1].

The major areas of concern for the project center around: 1) contention caused by multiple users accessing the same Data Base Files over a microcomputer network; 2) Security logon protection fcr the system; 3) Flexibility to respond to ad hoc information requests; and 4) providing meaningful system dialcg for untrained computer users.

II. METHODOLOGY

The development of the Quality Deficiency Reporting (QDR) System was based on modern software engineering and design principles. Data flow diagrams, structure charts, and a high level programming language aided in the creation of the system. Using top-down design to provide a logical basis for development, the software creation involved: 1) studying and understanding the QDR process, 2) identifying at least one method of solving the problem, 3) creating data flow diagrams to show the gross data transformations, 4) using the data flow diagrams to construct a structure chart, and 5) describing each abstraction used in the solution in a manner that lends itself to eventual coding in a high level language. [Ref. 2]

The initial study of the QDR System was based on Michael D. Carriger's thesis work. This provided much of the background information that was necessary to formulate a possible solution. Based on the operational environment and the users' level of computer familiarity, it was decided that a menu driven system be created. This would provide an easy to understand interface for the unfamiliar user. Data flow diagrams were generated to identify the transformation of data from input to output. This provided a pictorial representation of the data used by the QDR System and established a means of identifying the changes that took place during the life of a QDR Case (See figure 2.1 and 2.2).

The data flow diagrams provided the basis for creating the system's hierarchical structure. By reviewing the basic transformations performed by the system, it became apparent that there are three main activities necessary for maintaining the Central Database. These basic activities

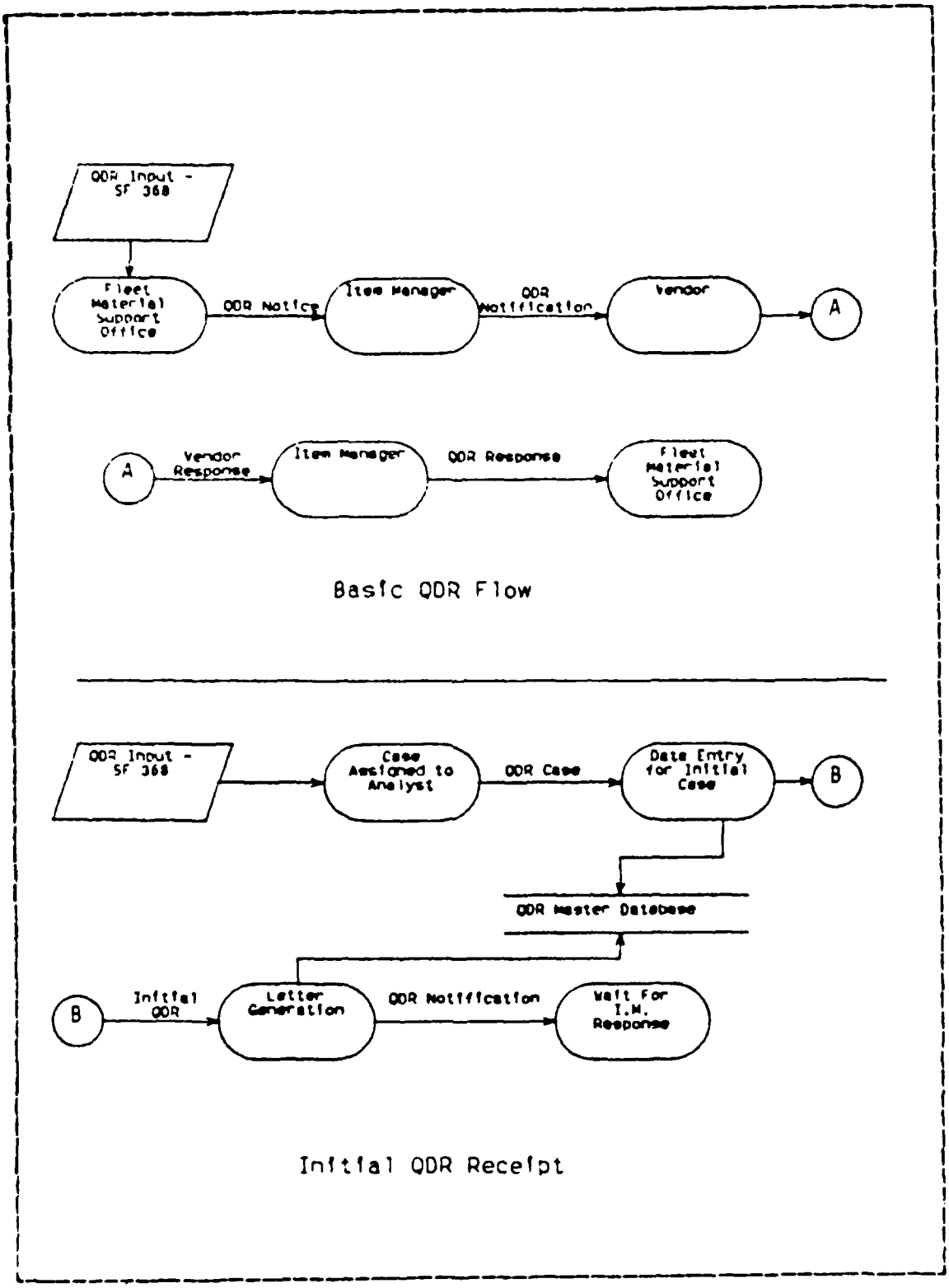


Figure 2.1 Basic QDR Flow and Initial QDR Receipt.

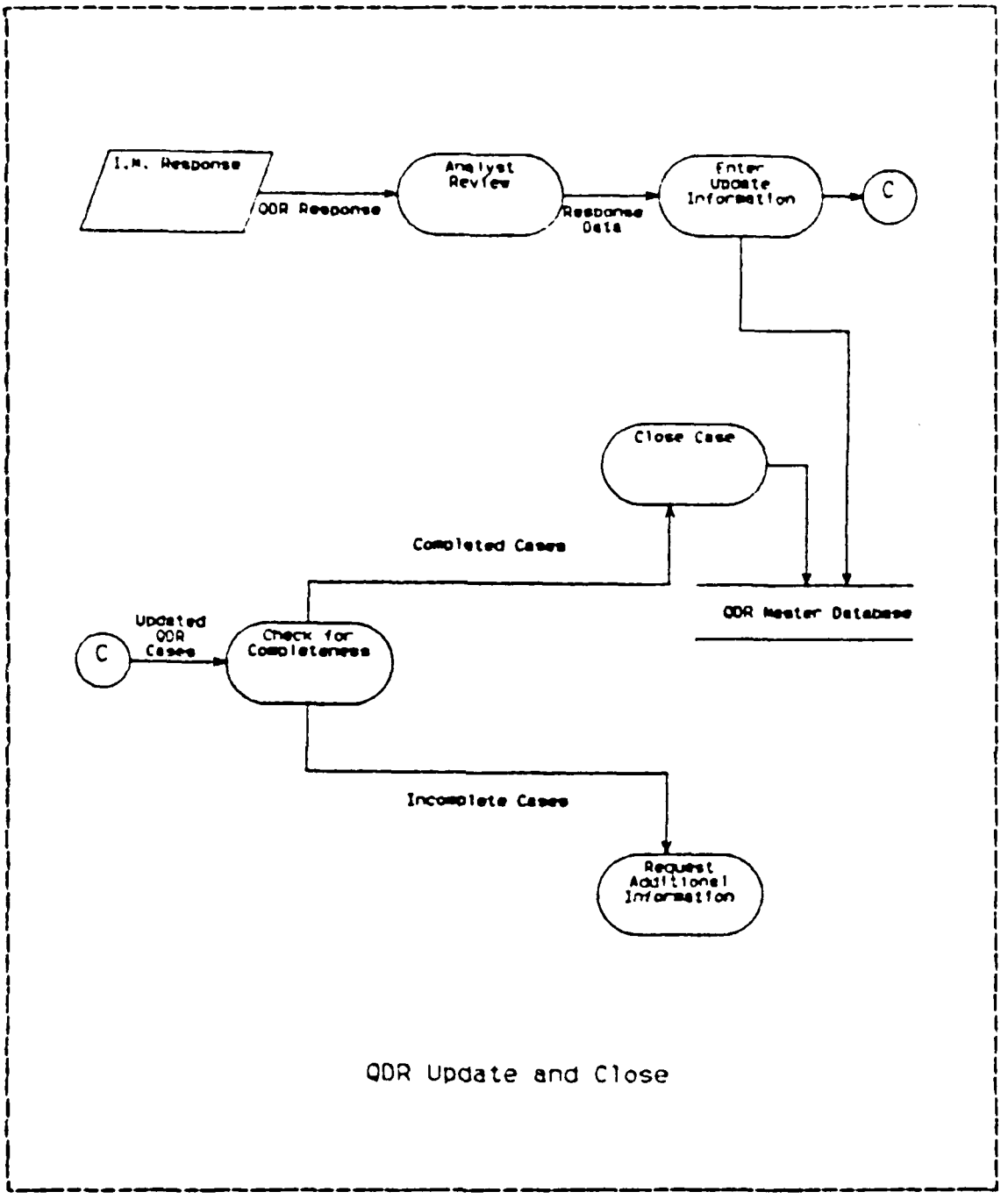


Figure 2.2 Qdr Update and Close.

prompted the creation of the Open Case, Update, and Close Case modules. All other functions associated with the QDR

System are support modules for presenting the Database information to the end user, maintaining support Database Files, and generating management information (See figures 2.3 and 2.4).

The QDR System was implemented using the command language for dBASE II, a Relational Database Product. This command language is a high level language that supports block structured development. It is an interpretive language that must be re-evaluated through each pass of the program execution. To ensure program clarity, the programs utilized meaningful names to identify variables and make the flow of information more apparent to the reader. Information hiding was utilized to reduce the amount of unnecessary information handled by each program. Required information is passed between programs as the data is needed for processing (See Appendix A for a complete listing of Passed Variables). Information hiding also conceals the processing algorithms used within a program. When interfacing programs, the programmer only needs to know what information passes between programs and not how the information is treated internally. The use of information hiding techniques reduces the complexity of systems development by allowing the programs to be developed independently based on interfacing requirements only. [Ref. 3] Another mechanism to simplify the programs is to include comment lines to make them more readable and understandable to maintenance personnel.

As each program was created, it was tested to ensure that it accurately performed the function for which it was designed and did not contain errors. As individual programs were tested, they were combined with other tested units to ensure compatibility between the various system segments. This integration testing was performed to ensure that the individual programs worked in conjunction with other

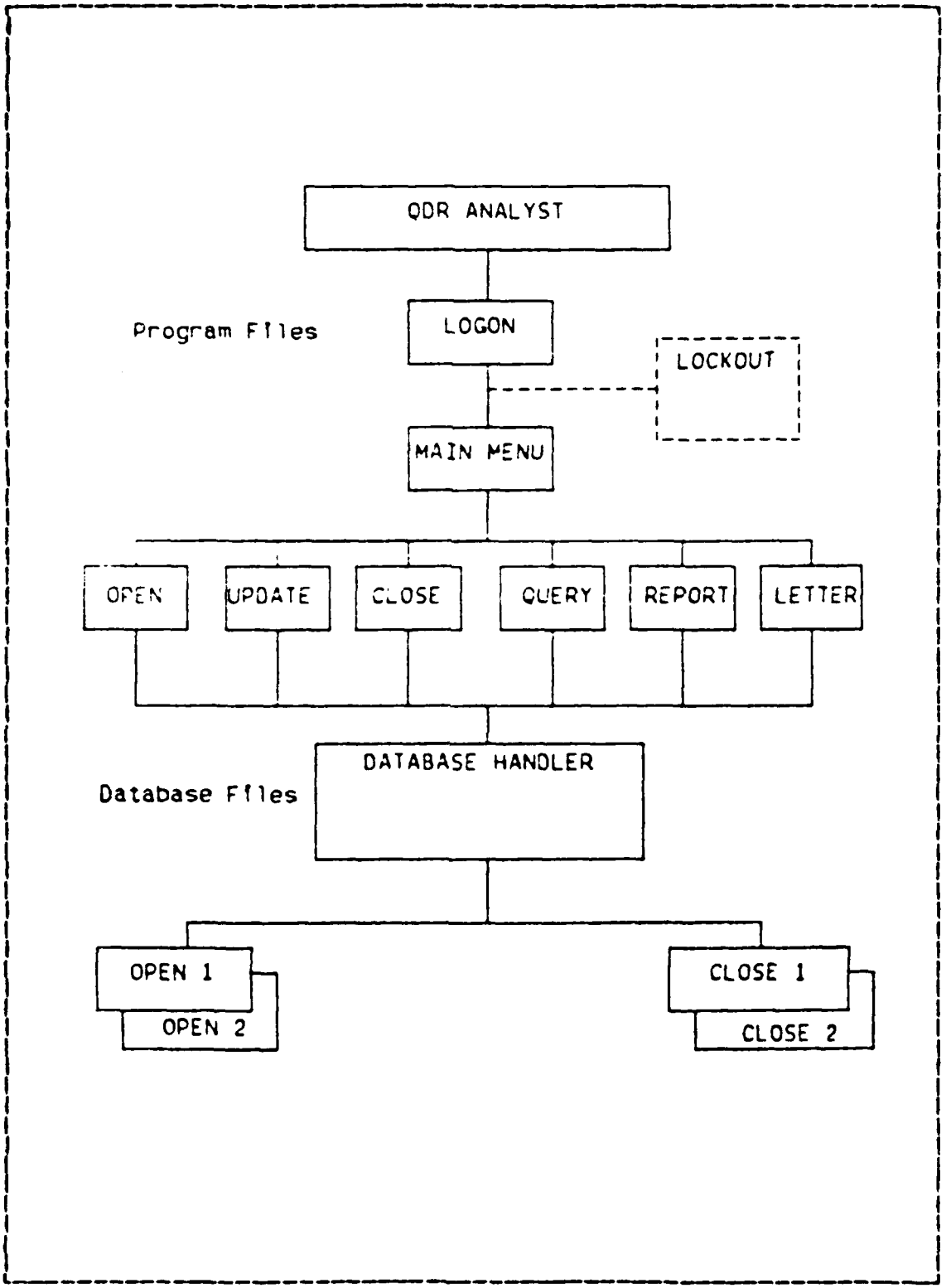


Figure 2.3 User's System Hierarchy.

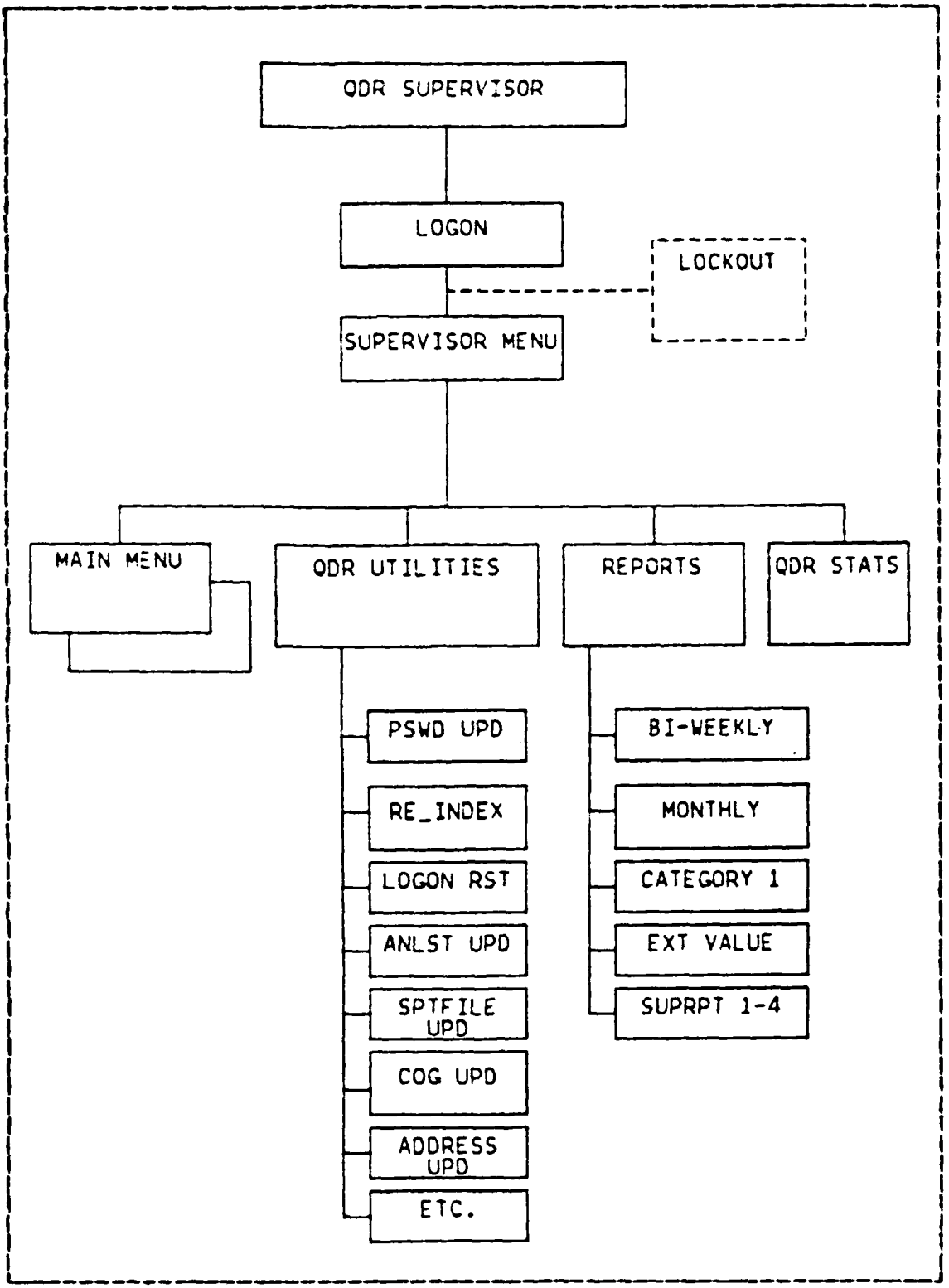


Figure 2.4 Supervisor's System Hierarchy.

programs and modules. As errors were detected in programs and modules, these bugs were corrected and then retesting was performed for both individual and integration tests. All of the initial tests were performed in a single user environment to reduce some of the system complexity. Once a program or module had completed both individual and integration testing, these units were then tested in the multi-user environment. Other aspects of the software development are discussed in more depth later.

III. SYSTEM DEVELOPMENT

The development of the QDR System considered many aspects of computer utilization. The system was designed as an integrated package of hardware and software that was to be utilized as a management information tool. To produce the desired results, both hardware selection and software development requirements were made considering the utilization of the system and the target group of system operators. Such things as user interface, the multi-user environment, security, system cost, and the availablity of system components were integrated in the methodology of developing the QDR System.

A. SOFTWARE

The original QDR software design centered around a data base consisting of 8,000 - 10,000 records in the Open File and 16,000 - 20,000 records in the Closed File. Each of these records contained thirty data fields and required 275 characters of data. Headquarters level changes to QDR processing procedures expanded the scope of the data files considerably. New data requirements in support of the Product Deficiency Reporting System and Evaluation Program (PDREP) increased the files to fifty four data elements requiring over 600 characters of data per QDR Case. (See Appendix B for a complete list of Database structures and Appendix C for the Data Element Definitions.) To accomodate these additional data items, the case records had to be split into two parts. This was necessary because of a restriction in the Database Management Software used for the system. The current DBMS allowed a maximum of thirty two data elements per database file.

The scope of the changes mentioned above required a total redesign of the QDR System. Up to that point, a substantial amount of design work and actual programming and testing had been completed. Although many of the "lessons learned" during the initial design could be applied to the redesign, and many of the initial algorithms could be modified and reused, the redevelopment effort required a significant amount of time and effort. All user interface programs had to be redesigned and, in many cases, reprogrammed to accomodate the new data elements and provide a meaningful interface. The change in scope drastically reduced the time available for complete testing, documentation and implementation thus resulting in the prototype system being more capable, but requiring additional effort in the above areas.

Much of the software development was aimed at providing a system that had an easy to understand user interface, could be used in a multi-user environment, provided a degree of security, and was maintainable. The following sections discuss each of these areas and provide some insight into how these were achieved. Throughout this chapter, the terms module and program are used interchangably.

1. User Interface With QDR System

The interface between the user and the QDR System was a major point of concentration to ensure the usefulness of the entire system. In order to allow for the lack of experience of the analysts with automated tools and to avoid training costs for newly assigned personnel, the perception that the personal computers were really "QDR Machines" was utilized. The entire dialog of a user with the machine was centered around the functional aspects of the current working environment. A menu based system was utilized to guide the analysts through their case processing. At each

point where a choice could be made, the user was presented with an explicit message. If an invalid choice was made, the system would then provide a message indicating an error, and show the valid range of choices available to the user at that particular point. If the user was familiar with the range of valid inputs and did not make an entry error, then the messages would not appear on the screen. This allowed for the more experienced user to avoid some of the screen prompting. The System was written such that each of the user "QDR Machines" would automatically initialize itself and be in a state waiting for the user to logon (See figure 3.1).

Figure 3.1 Logon Prompt.

This isolated the user from any of the underlying machine operating system and preparatory steps that are normally associated with putting today's microcomputers into operation. The only function that the computer was available for was the processing of QDR's. When an analyst terminated operations for the day the terminal would again go into a state ready for another user to logon or for the analyst to re-enter the system.

The procedure for an analyst to enter the QDR System is demonstrated by the following selection of screen displays and choices that are available. The process begins with entry into the system at the beginning of the day. Each analyst has been assigned a user I.D. and a unique

password by the system supervisor. The system has earlier been brought up by the supervisor. The first screen presented prompts for the analyst to enter his unique access identification (See figure 3.1). If the access I.D. is not on file, or was entered incorrectly, a message comes on the

Figure 3.2 Invalid I.D. Message.

screen (See figure 3.2). A check is also made to determine if the user is currently logged onto another terminal in the system. If currently logged on, then access is denied and the following message will then be displayed (See figure

Figure 3.3 Currently Logged Message.

3.3). If the correct Access I.D. is entered then the system will prompt to enter the password. The password requires

Figure 3.4 Login Prompt.

exact upper/lower case entry (Figure opn4). Three chances are given to successfully enter the password and if unsuccessful, the console is locked out and may only be put back into operation by the system supervisor. A successful logon will be followed by a greeting to the QDR System, and the user will be presented with the main menu which contains all of his processing options (See figure 3.5).

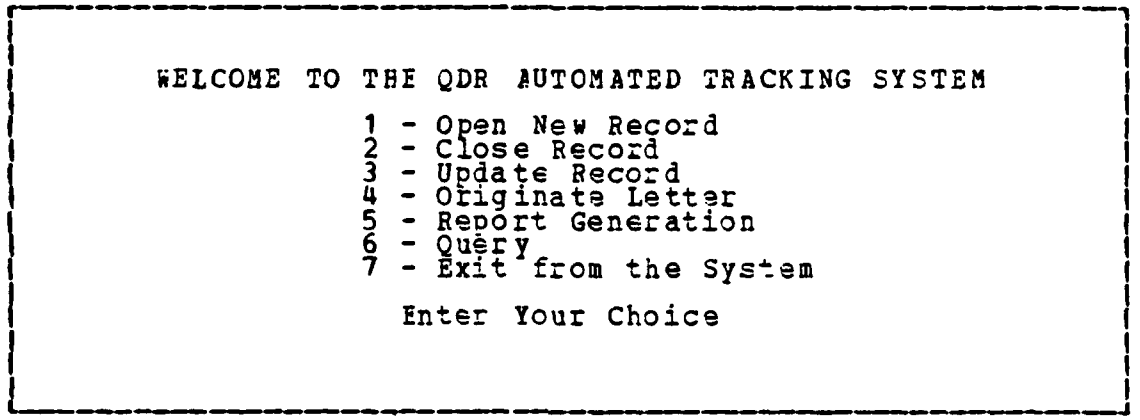


Figure 3.5 Main Menu.

From the main menu (figure 3.5), the analyst has the option to open a new case, update an existing case, close a case, originate a letter to an item manager, get a listing of all of his open cases in the QDR System, query the databases for information or to leave the QDR System.

As an example of the process required to open a new QDR case, the following sequence shows the screens as presented to the analyst. In order to open a case, the analyst chooses a "1" from the main menu and then is presented with a screen where verification of desire is required. This allows the analyst to change his mind before beginning the process and to return to the main menu. A choice of "1" puts the user in the case opening process (See figure 3.6).

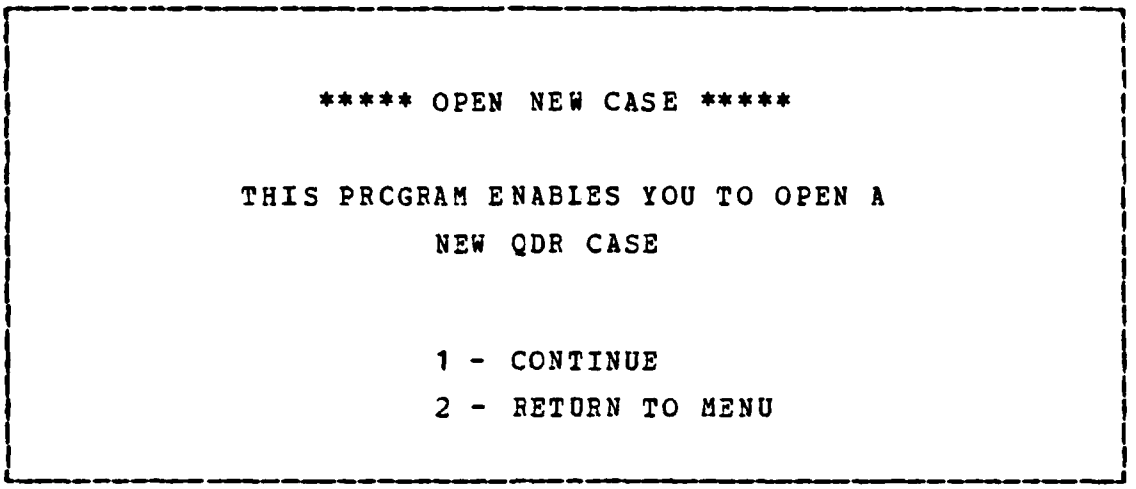


Figure 3.6 Verification Message.

The input screens presented to the user are designed with the source input document Standard Form 368 (SF 368) as the basis. Each of the items of information are captured from the numbered blocks of the SF 368. Where information is not identified on the form, yet is needed for the QDR case, input is requested at the location where most often written in by the analyst or by the originating office. The purpose of this was to maximize the ease and fluidity of data entry by the analyst by considering the physical location of the data as well as the logical relationship of the elements.

The first entry required was the date the case was received by FMSO. A standard (MMDDYY) format for dates was utilized throughout the QDR programs, based upon user specifications (See figure 3.7).

After entry of the national stock number, a prompt to verify the initial data is put on the screen. This enables the analyst to ensure that the correct case will be created and will alleviate a later need to delete an invalid case from the database (See figure 3.8). A choice of "2" allows the changing of any initial data item before continuing to the second screen.

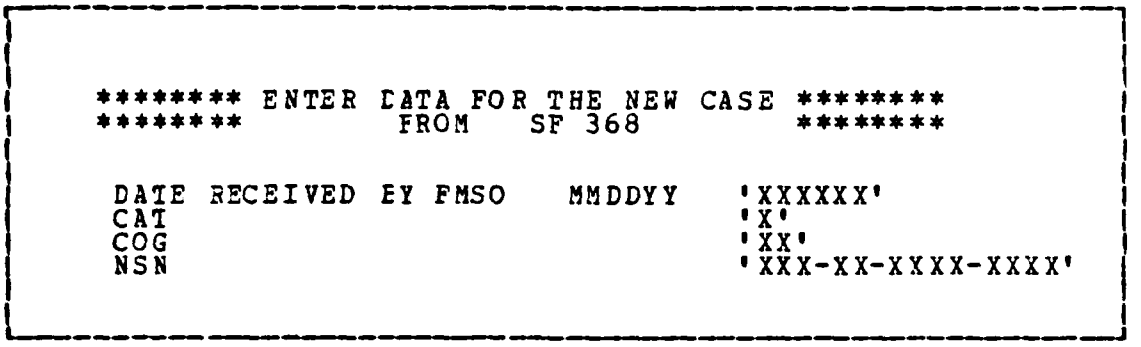


Figure 3.7 Initial Entry Screen.

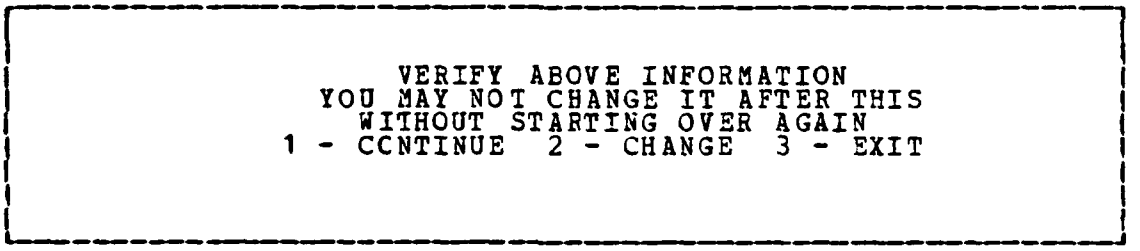


Figure 3.8 Bailout /Change Option.

The analyst is next presented with a full screen of data elements. The layout is such that the left side of the item labels contains the numbers relating to the SF 368 blocks. This portion is blank where the element is not on the SF 368. Following each element label is a reverse video representation showing the correct length of the input item. The inputs which are optional are marked by a <O> (See figure 3.9). The cursor moves from one data element to the next one as the analyst completes item entry. Any incorrect or out of bounds entry will result in a specific error message to the user showing the valid range of inputs. These error messages, when activated, appear on the last line of the screen. The user can thus consistently look to a single location for status or error messages from the QDR System.

```
SF368
5.      NSN
        CATEGORY
        SMIC
1A.     UIC
3.      REPORT CONTROL
4.      DATE DISCOVERED    MMDDYY
6.      NOMENCLATURE
7.      FSCM                        <O>
8.      MFG. PART NUMBER            <O>
9.      SERIAL/LOT/BATCH            <O>
10.     CONTRACT/PO                 <O>
        DOCUMENT NUMBER             <O>
11.     ITEM          N OR O        <O>
12.     DATE MFG/REP/OVHL           <O>
13.     CPN TIME AT FAILURE         <O>
14.     GOV FURNISHED MATL          <O>
15.     QTY: REC/INSP/DEF/STK
16a1.   TYPE/MODEL/SERIES            <O>
  a2.   SERIAL NUMBER                <O>
  b.    NEXT HIGHER ASSY            <O>
        SUB-ASSEMBLY                <O>

*******   CHECK PREVIOUS ENTRIES   *******
CHOOSE 1- CONTINUE ENTRY   2- MAKE CORRECTIONS
```

Figure 3.9 First Screen of data.

Consistent with the previous choices of leaving a particular screen, the analyst has the ability to make changes before proceeding. The next screen of data presents the same basic format to the user, and allows the input of the second half of the data elements. The NSN and category of the case being input are echoed at the top of the screen so the analyst may keep track of them for later reference. Data items are calculated by the program where possible and then inserted into the screen at the appropriate point. The extended price is one such item which was previously hand computed (See figure 3.10).

Upon completion of data element entry, the analyst may elect to change an item, post the case or exit the opening program and go back to the main menu without posting the case. This is critical at this time in the entry

```
     UI
     UNIT PRICE                EXTENDED PRICE
18.  EST. CORRECTION COST                    <O>
19.  WARRANTY - Y/N/U
20.  WORK UNIT CODE                          <O>
21.  ACTICN/DISPOSITION -H/I/D/R/O           <O>
22.  DETAILS OF DISCREPANCY - FIRST 2
      LETTERS MUST BE DISCOVERY CODE
23A. ACTICN POINT
     DEFECT VERIFICATION CODE - N/O/U/Y      <O>
     DEFECT RESPONSIBILITY - C/N/S/U/X       <C>
     9Q
     ORIGIN CODE
30.  TYPE DOC
     TYPE DEFICIENCY


          1 - POST CASE
          2 - CHANGE DATA
          3 - EXIT WITHOUT POSTING
```

Figure 3.10 Second Screen of Data.

process. If a major mistake had been detected, it would be best to re-initiate the entry of a particular case instead of using the update program to change each item. This gives the analyst a final point where the process can start over without any interaction with the current cases. From the users point of view it is comforting to know that an earlier mistake could be eliminated prior to posting. On a busy network, the posting process may take a few minutes, thus the analyst is re-assured that "all is well" by a screen giving a status report on the process (See figure 3.11).

After successful assignment of a case number and posting to the database, the case number is displayed on the screen (See figure 3.12). After noting the case number on the SF 368 for any future reference as needed, the analyst can clear the screen by pressing any key, and then will be back at the point where he may input another new QDR case or return to the main menu.

```
CASE BEING POSTED TO DATA BASE
PLEASE STANDBY

***   DO NOT INTERRUPT   ***
```

Figure 3.11 Response to POST Choice.

```
CASE NUMBER OF THE NEW CASE
'400192A'

PRESS ANY KEY TO CONTINUE
```

Figure 3.12 Feedback to Analyst.

The above sequence gives a flavor of the screens and messages that are present in the QDR System. Foremost consideration in design of screens and menus was the ease of use by the analysts. The screen design in a pattern which matched the source document as much as possible while considering additional input requirements led to a clean, easy to understand representation. The error messages were directed at identifying a specific range of acceptable input values and presenting these to the analysts for their review. Consistency of input parameters was maintained to enable the user to react to prompts and choice points thus requiring a minimum of additional thought and attention to the process of data entry and interaction with the "QDR Machine" itself.

2. Multi-User Environment

The QDR System uses dBASE II to handle all aspects of the system's operations. This database management product is designed for a single user and does not provide the locking mechanisms necessary for a multi-user environment. To overcome this deficiency, a Database Handler was created to control access to the various database files. Access to the Database is achieved by calling the Database Handler routine and providing it with a two character alpha-numeric type code which represents the type of the desired access (See figure 3.13). The Database Handler will either expect additional parameters or will provide information depending on the selected access type.

In order to perform record locking or file write functions, the Database Handler must first establish write access to the database file that is being written to. A special "File Status" data file provides the mechanism to determine write access. As each user process calls the Database Handler for file write transactions, the file status is checked to see if the file is currently locked by another process. If the file is locked, the Database Handler enters into a test and wait loop until the file is made available. When the file is unlocked, the Database Handler will then lock the required file by placing the User I.D. of the operator into the file status file. There is a point of contention at the moment the file is released by a process. Each terminal on the network has its own copy of the Database Handler and as such, when a file is unlocked, other processes will perform the same locking action. To ensure that a process has obtained write access, a verification check is made just prior to actually performing the write operation. If write access has been obtained, the Database Handler will perform the write and release the data

The first character of the Access Code represents the file being accessed and the second character represents type of access desired.

First Character	Database File Used
1	OPEN1
2	OPEN2
3	CLOSE1
4	CLOSE2

Second Character	Database Action
A	Read - NSN Access (See note 1)
B	Read - Case Number Access
C	Write - Unlock Record
D	Read/Lock - NSN Access
E	Read/Lock - Case Access
F	New Record Creation (See note 2)
G	Record Unlock
H	Read - Record Number Access
I	Skip/Read - Record Number Access

Note 1: Open2 and Close2 do not have NSN Access and default to Case Number Access.

Note 2: Close1 and Close2 create new records from the Open File records being closed.

Figure 3.13 Database Handler Access Codes.

file for others. If write access is not obtained, the test and wait loop is entered again.

To perform a write operation, the entire database file is locked so that no one else can write to it. When an individual record must be updated, it is undesirable to leave the Database file locked while the operator is making updates to the record. To prevent this, a record locking

capability was added to the Database Handler. This is done by including a timestamp data element in each data record. Prior to retrieving a record for update, the Database Handler checks to see if the record has previously been locked. Any attempt to update a locked record will result in a code being returned to the calling program/module (See

The Data Base Handler will return a one digit Code indicating the Success/Failure of a Data Base Access.

Return Code	Definition
0	Data Base Access Successful
1	Record Currently Locked
2-8	Unassigned (Available for future growth)
9	Record Not Found

Figure 3.14 Data Base Handler Return Codes.

Figure 3.14). As with general write operations, the database must be temporarily locked to allow the timestamp to be written out to the file. This record locking mechanism allows multiple users to function without unintentionally overwriting information.

3. System Security

Because of the amount of data held by the QDR System and the value of the information to FMSO Code 91423, the QDR System required some degree of security. There are basically two levels of security available for the system. The first level of security is the protection of the System Disks. The Master Network Station is the gateway to the QDR

Programs and Data Files. By keeping the master station operating disks under lock and key, the system is not generally accessible to unauthorized personnel. Access to these disks should be controlled by the system supervisor or his assistant supervisor.

The second level of security involves a logon and password system incorporated into the QDR Software. Each authorized user is provided a unique user identification code which will allow him access to the system. In addition to the required I.D. Code, a password is required to complete the logon procedure. The passwords may and should be changed periodically by the system supervisor to reduce the likelyhood of unauthorized personnel becoming familiar with the passwords. To utilize the QDR System, the user accesses the system as described in the section on user interface. The user is given three attempts to access the System. If all three access attempts fail, the system will display an "Illegal Access Attempt" message and will lockout the terminal. The only way to return a locked terminal to an operational mode is to "reboot" the affected terminal.

Although this method of security is simplistic, it is the method most suitable for a system of this nature. As the value of the data held by the system increases, the security procedures should be reviewed to ensure they are adequate.

4. Flexibility And Maintenance

The fact that the QDR System could expect to undergo changes was considered in not only program development, but also in the database organization. Flexibility and maintainability of the entire system represented development objectives in order to support the earlier discussed design goals of modularity and information hiding.

IBASE II with its command language and relational database provided a powerful vehicle to construct the programs and databases for the system. The English-like quality of the command language provides the programmers a sense of code function over and above relying on algorithm inspection alone. Comments were spread throughout the program listing where they would assist understanding of specific portions of the processing, especially in QUERY and XDBHNDLR (See Appendix D for a complete set of QDR System Program Listings). Additionally, comments were provided in the program headers to identify critical information. Variables passed between the module of interest and all other modules as well as a list of subordinate and superordinate modules were provided. Maintenance of the programs could then be conducted with a knowledge of the current interface between the modules.

The structured programming technique of indentation was used to enhance readability and understandability of the code. This provided anyone reviewing the source listings with an easy to understand view of the control structures. Each level of control was indented to identify and clarify the hierarchy of control. Each hierarchical level can thus be traced from level to level by following the indentation pattern.

In addition to the general aids to maintainability described above, some specific areas were identified for likely future changes. Internally generated change was expected from assignment of different analysts, additional or modified internal reports and standard queries. External changes were likely in the areas of Cognizance Group (COG) assignments, changing addresses of Item Managers and report modifications.

The supervisor was provided with the means to update currently authorized users and their passwords via

the supervisor's main menu. The updating of COGs and Item Manager's information were also included. These were seen as routine housekeeping modifications which did not demand a programmer's attention.

If demand for specific, repetitive queries arise, the addition of this capability by maintenance programmers is very easy. Currently each analyst is able to receive a listing of each of his currently open cases as a standard query from his "report menu". To add any additional query would require modification of only one program module.

As an example, suppose that a commonly occuring query by all analysts was to receive a list of their open cases from a particular COG. The programmer would be able to provide this capability by adding only a few lines of code. The addition of a menu selection item would be accomplished by the following:

```
***** MENU ADDITION
    ' 2 - List of assigned open cases for specific COG '

***** VALIDATING ENTRY

  STORE T TO BADCOG
  DO WHILE BADCOG
      @ LINE,COLUMN SAY 'Enter COG' GET ANSWER
      READ
      USE D:COGS
      FIND ANSWER
      IF  # = 0
         @ 23,20 SAY 'COG NOT FOUND, TRY AGAIN'
      ELSE
         STORE F TO BADCOG
      ENDIF
  ENDDO <BADCOG>

***** NOW FIND THE OPEN CASES FOR THIS ANALYST
***** CHOICE OF MEDIUM WAS MADE IN ORIGINAL MENU

  USE D:OPEN1
  DISPLAY CASE,NSN,NOMEN,$(DATES,11,5) FOR COG = ANSWER
          .AND. WHO = C:WHO
```

This is but one of the many methods that could be used to provide the additional capability to the analysts.

The isolation of the functions within a single module combined with the power of a relational database are a definite asset to the programmer in extending the use of the system to its users.

While the capability to extend the functions provided has been built in, the decision to do so should not be taken without consideration of the impact on the system as a whole. An extension such as the one just described could be helpful and not be detrimental to the system operation if properly implemented. A choice would have to be made;

1. Restrict the use of this option to low use periods.
2. Implement it as a standard internal report, once a week for example.
3. Create an index file based on either COG or analyst and keep these updated during normal processing.

The supervisor must be aware of the impact of these alternatives. What in the first view looks like a very easy and useful method of producing the listings, may potentially cause system-wide problems. The two most likely drawbacks would be slowing processing response time to an unacceptable level or causing additional index files to steal precious space on the system hard disk. The first option would allow analysts to retain greatest flexibility, however it would be difficult to implement and control. The internal indexing of the databases for normal processing includes neither COG nor Analyst. For this reason a request as outlined above would require a sequential search of the OPEN1 database. A process that could take up to 30 minutes, not likely a satisfactory solution!

The second option has the advantage of being easy to control, has no impact on day to day processing

or storage and meets the requirement to provide a list to each analyst. Analyst flexibility would be compromised and the required periodicity would have to be determined.

Choice number three would allow the lists to be generated upon demand. The major drawback would be the addition of an additional index that would have to be updated at each case creation, update and closing. This would add overall processing requirements and thus slow down the complete system. Additionally, the index would require space on the hard disk, a critical resource.

The proper choice for the supervisor and programmer combination would balance the users needs and the system realities. Although the above example shows a simple, easy extension it points out the necessary considerations which must be included in all decisions. The micro computer system, as well as the mainframe computer does have application limits. In the QDR System all current requirements have been met, and while designed for ease of maintenance and extendability, the latter should be implemented with discretion and caution.

B. HARDWARE

The QDR System is a combined software and hardware suite which performs management information and database management functions. The hardware selected for the system was comprised of multiple microcomputers, secondary storage devices, printers, monitors, keyboards, and network hardware with controlling software. The selection of the supporting hardware is vital to the operation of the central database system because it provides the mechanism for sharing the database files and operating programs. To meet the demands of the network operation, the hardware must be compatible

and allow the equipment to be integrated into a complete system.

1. Selected Hardware

The microcomputer selected for the QDR System was the IBM-Personal Computer (PC). This provided expandability and supported both networking and relatively large hard disk storage devices. At the Naval Postgraduate School prototype site, the network was composed of four PC's. Each PC was equipped with a keyboard, a color monitor and color controller board which allowed the experimentation with color interfaces for users. All of the PC's contained two double-sided double-density 320 KByte floppy disk units with controllers and network controller boards for Orchid Technology's PCnet. Two of the four PC's had 128 KBytes of random access memory (RAM) while the other two had 320 KBytes of RAM. The 320 KB systems were also equipped with AST Research's MegaPlus board which provided 64 KB of the 320 KB RAM, a clock/calendar, a serial input/output (I/O) port, and a parallel I/O port. These I/O ports allowed the connection of either printers or modems. Two printers were connected to the network (one to each of the PCs with I/O ports). One printer provided letter quality output through its daisy wheel print, while the other provided the capability of printing text and drawing graphs through its dot matrix print.

The personal computers with the additional memory and I/O capabilities were also outfitted with interface cards for Tallgrass Technology's 20 MByte Hard Disk Storage Units. These disk units provided up to four logical disk drives and contained built-in tape backup units which allowed saving archival information.

2. Hardware Integration

The integration of the hardware was largely completed by the equipment manufacturers. The controller boards for both the network and the hard disk interfaces were specifically designed to become an integral part of the IBM-PC. The software that controlled both the hard disk and the network were created to work in conjunction with the PC-DOS operating system and with each other. The importance of this interface between the manufacturers became very apparent as system integration testing began. The initial versions of the network and hard disk software were not completely compatible. As a result, the system was prone to locking up during operations that involved large amounts of disk accessing. The respective companies worked together to solve the lockup problems and made available the corrected versions. Once the corrected versions were installed, the lockup problem appeared to be alleviated and cleared the path for the creation of the Central Database System.

3. Hardware Limitations

A limitation of the selected hardware suite is the inability for a shared PC to access files located on another shared PC. This means that the shared PCs are limited in their ability to access the total database. During the early design phases, this was not considered a problem because each record only required 275 bytes of information. Assuming a combined load of 30,000 records in the Open and Closed Database Files, the system required less than 9 Mega Bytes of storage. Under the revised QDR processing requirements, the same load of 30,000 records required over 18 MB of storage. The 18 MB requirement does not include overhead for programs, support files, or indices required by the QDR System. This meant that the Open and Closed Database Files

needed to be split across two hard disk units. Since the user PCs can have access to multiple shared devices, this limitation only restricts the use of the shared PCs. By utilizing the shared PCs as network controllers only, the databases can be split across the network and accessed by all users.

C. TESTING

Testing was conducted throughout the development period of the QDR System. The testing approach used was to progress from unit testing of one module to integration of tested modules. Validation of these modules against design criteria was followed by system testing using the complete software and hardware package. [Ref. 4]

1. Unit Testing

Unit testing of modules represented the first level of testing. Once the program modules were coded and had been cleansed of any syntactical ailments, they were individually tested. Both testing harnesses and program stubs were used at different stages of program development. The top down design had identified those key modules needed to support the function of the system. The first modules coded and tested were thus the Database Handler (XDBHNDLR) and the Open Case Module (XOPEN2). Testing XDBHNDLR required development of a harness in order to input expected parameters and make available specific data to the module. The emphasis of this module was two-fold. First it was expected to be the program's interface with the case databases, and as such had to properly read and write specific files according to the "type code" presented to it. The second concern was contention. Stepwise testing of the module was conducted. A testing harness

with a sample data set was used to exercise the Database Handler until it performed properly. The second testing stage was to use multiple inputs over the network to isolate any contention problems and eliminate them. Concurrently the Open Case module was undergoing parallel testing using the database directly.

2. Integration and System Testing

Integration testing was then conducted to bring together the XDBHNDLR and XOPEN2 modules. The purpose of this stage was to ensure the interface between the modules was in accordance with design. Once these programs were in this stage, the same sequence was utilized to test the other main modules, and bring them up to the integrated level.

By late October the main processing modules were integrated and the limited system was operating satisfactorily. The system re-design and development discussed earlier caused testing to begin anew. At that time the operating system version was changed from PC DOS 1.1 to PC DOS 2.0. The network and hard disk software were also upgraded.

Limited time for completion of system development and coding resulted in only partial system testing by mid January on the NPS prototype system. During demonstration at the FMSO site, the QDR system operated properly as a single user system but not with multiple simultaneous transactions over the network. The cause was not determined at that time. Orchid Technology and Tallgrass were contacted to discuss the difficulties, resulting in an updated release of both software packages being sent to NPS.

Limited system testing on the NPS network indicated that the problem had been corrected. Subsequent operation of the QDR system by personnel at FMSO (with the

upgraded software) was not successful. Multiuser system failure could not be duplicated at NPS. Reasons for the network failure at FMSO have not been identified.

3. Response Times

Multiple users and large databases affect response time on micro computer systems to a large degree. Figure 3.15 shows the time required for specific operations with different system loads. Where depicted, multiple users are performing the exact same operations simultaneously.

SIZE	100 rcds			6000 rcds		
Users	1	2	3	1	2	3
OPERATION						
1. Post Case:	:26	1:15	2:25	:59	2:29	3:36
2. Case Update						
1st screen	:38	1:27	1:58	:52	1:59	2:37
2d screen	:17	:37	1:12	:24	:50	1:08
3. Case Closing	1:28	3:25	4:24	1:48	4:07	6:10

Times shown as minutes:seconds. Where time represents multiple users, the time shown is completion time for all users

Figure 3.15 Response Times.

These times give an idea of the different response the user can expect with the loadings as indicated. The difference in times used by adding a second user is not significant. However, if numerous analysts were conducting operations at the same time then the times could increase to a level where input operations would be significantly

delayed. The differential in response times for added users reflects two items. The first is the contention induced for packet access to the network, which represents the main portion of the delay time. The second is a delay due to internal checking in XDBHNDLR to allow only one of the asynchronous processes access to the database. Time differences between the operations reflect the amount of data which has to be stored into the database as well as the number of different databases which must be accessed to complete the operation (2 for posting a case, 4 for closing a case).

IV. CONCLUSIONS AND RECOMMENDATIONS

A prctotype systeт is designed to provide an interface for users and acquaint them with the potential value of an automated operation. It allows the user to see how the final system will present and accept data and provides the cpportunity to modify the interface before final system implementation. Prototyping allows the rapid develcpment of a system but generally dces nct contain all of the capabilities of an operational system.

The QDR System, although a prototype, was designed with capabilities beyond normal prototyping. It provides not cnly user interface capabilities, but also full database management capabilities. The additional features were added to allcw the QDR System to be placed in an operational environment to be tested and to aquaint the user with automated systems and their operations. To provide functionality, the system was designed for multiple users to access the database files. This meant that the system allowed for record locking, multiple read/write operations, and security access to the system.

A. CONCLUSIONS

The design and implementation of an automated Quality Deficiency Reporting System prototype has been described in this study. A working protctype has been established and is available fcr future evaluation. Conclusions drawn from this develcpment include:

1. The prototype software design meets current QDR processing requirements and includes PDREP derived data elements identified for future inclusion in the QDR System.

2. There are two main operating limitations with the current system; speed of processing with multiple users and limited system capacity to meet increased QDR requirements.

3. The NPS prototype system demonstrated the feasibility of accomplishing QDR processing on a microcomputer based system.

4. If new software and hardware become available to alleviate network and database limitations, the prototype could be modified to provide an operational system.

B. RECOMMENDATIONS

1. Continue development of a microcomputer based system to provide automation of the QDR workflow.

2. Consider migration to a minicomputer or mainframe computer using the basic prototype design, in order to allow for faster response time and growth potential.

The recommendations above provide for the user to become familiar with the automation capabilities that can be implemented in the QDR processing environment. Additionally, it opens up the channels for user feedback to system designers that are working on future versions of QDR support systems. The initial design considerations that went into creating the prototype system are valid for mini/mainframe computer implementation. The data dictionary used, the menus and interface screens, and the security considerations will remain valid in both the microcomputer and mini/mainframe computer environments. The use of a higher level language in the prototype system provides the potential to directly convert the algorithms to a new system.

If it is more practical to continue utilizing the microcomputer network, the size of the database could be expanded

by the use of 35 ME hard disk units, thus approximately doubling the system capacity. Additional speed for the microcomputer network could possibly be achieved by converting the file and record locking/unlocking operations into assembly or machine language routines (although this is not recommended because of future maintenance headaches). Another avenue to explore is the acquisition of a multi-user version of dBase II that was recently announced. This would allow the elimination of file locking and control currently accomplished by the QDR System software, and with a small amount of reprogramming the XDBHNDLR program could be eliminated.

The prototype QDR System provided a starting point for future growth in the QDR processing environment. The groundwork that has been laid can be utilized for either a continuation in the microcomputer realm or can be utilized with larger computers.

APPENDIX A

GLOBAL MEMORY DEFINITIONS

There are various types of memory variables utilized by the QDR System. These variables are divided into Global and Local Variables. Global Variables are used to transfer data between programs and modules and are designated by either M: or C:. Local Variables are utilized for internal control within programs. These variables are identified by U: for XUPDATE, H: for XDBHNDLR, O: for XOPEN2, etc.

The variables listed below are the Global Variables utilized by the QDR System. They are presented as:

Variable Name	Using Modules
Description Of Variable	

C:JULIAN (CLOSREC, LOGON, MENU1, XDBHNDLR, XOPEN2, XUPDAT, XXBISTAT, XXMNSTAT)

MEMORY VARIABLE WHICH HOLDS TODAYS JULIAN DATE. THIS DATE IS GENERATED BY ACCESSING THE SYSTEM CALANDER AND CONVERTING TO A JULIAN DATE.

C:WHC (CLOSREC, COGCNT, C-REASGN, DEPACK, LOGON, MENU1, OCASERPT, QUERY, RPTMENU, STATGEN, SUPMENU1, SUPRPTS, SUPRPT2, UTILMENU, UTILNDX, XDBHNDLR, XOPEN2, XUPDAT, XXBISTAT, XXMNSTAT)

MEMORY VARIABLE THAT HOLD THE LOGON IDENTIFICATION OF THE ANALYST. THIS IS CAPTURED DURING THE LOGON PROCESS.

M:ACTDISP (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ACTION/DISPOSITION INSTRUCTIONS. ORIGINALLY CAPTURED FROM BLOCK 21 OF THE SF 368.

M:ACTPT (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ACTION POINT.

M:ACTTKN (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ACTION CODE. ORIGINALLY CAPTURED FROM BLOCK 21 OF THE SF 368.

M:CASE (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE USED TO CAPTURE THE NUMBER OF THE QDR CASE.

M:CAT (C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE CLASS OF THE QDR CASE. CASES MAY BE EITHER CATEGORY 1 (HIGH PRIORITY) OR CATEGORY 2 (NORMAL PRIORITY). ORIGINALLY CAPTURED FROM THE SF 368 OR QDR MESSAGE.

M:CAUSEC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE CAUSE CODE.

M:CCOST (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ESTIMATED CORRECTION COST. ORIGINALLY CAPTURED FROM BLOCK 18 OF SF 368.

M:CLOSE (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE THE CASE WAS CLOSED. ORIGINALLY ENTERED UPON CLOSING THE CASE.

M:COG (C-REASGN, XDBHNDLR, XOPEN2, XUPDAT, XXBISTAT)

MEMORY VARIABLE WHICH HOLDS THE COGNIZANCE SYMBOL FOR THE ASSOCIATED NSN. ORIGINALLY CAPTURED FROM BLOCK 5 OF THE SF 368.

M:COSTC (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE COST CODE.

M:CR (CLOSREC, XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE CREDIT CODE.

M:DATES (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2, XUPDAT, XXBISTAT, XXMNSTAT)

MEMORY VARIABLE WHICH HOLDS THE CONCATINATION OF THE MAJOR DATES ASSOCIATED WITH THE QDR SYSTEM.

M:DEF (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE TYPE DEFECT CODE.

M:DEFR (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DEFECT RESPONSIBILITY CODE.

M:DEFV (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DEFECT VERIFICATION CODE.

M:DETAILS (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE DETAILS OF THE QDR. ORIGINALLY CAPTURED FROM BLOCK 22 OF THE SF 368.

M:DIS (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE DISCOVERY CODE. ORIGINALLY CAPTURED FROM BLOCK 22 OF THE SF 368.

M:DITEM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH CONCATENATES MODEL, SERIAL NUMBER OF DEFICIENT PART, NEXT HIGHER ASSEMBLY, AND SUB ASSEMBLY. ORIGINALLY CAPTURED FROM BLOCK 16 OF SF 368.

M:DOC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE TYPE DOCUMENT. ORIGINALLY CAPTURED FROM BLOCK 30 OF THE SF 368.

M:DOCNO (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DOCUMENT NUMBER. ORIGINALLY CAPTURED FROM BLOCK 10 OF THE SF 368.

M:EPRC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE EXTENDED PRICE OF THE DEFICIENT MATERIAL. THE EXTENDED PRICE IS CALCULATED BY MULTIPLYING THE QUANTITY DEFICIENT BY THE UNIT PRICE.

M:FSCM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE FEDERAL SUPPLY CODE OF MANFACTURER. ORIGINALLY CAPTURED FROM BLOCK 7 OF THE SF 368.

M:GOV (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES GOVERNMENT FURNISHED MATERIAL. CRIGINALLY CAPTURED FROM BLOCK 14 OF THE SF 368.

M:ITEM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THAT THE ITEM IS NEW OF A REPAIR/OVERHAUL ITEM. ORIGINALLY CAPTURED FROM BLOCK 11 OF THE SF 368.

M:KEY (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2)

MEMORY VARIABLE WHICH CONTAINS THE DATABASE ACCESS KEY.

M:LDATE (CLOSREC, XOPEN2)

MEMORY VARIABLE WHICH HOLDS THE DATE THE CASE WAS TRANSMITTED TO THE ITEM MANAGER. ORIGINALLY ENTERED UPON TRANSMISSION OF THE CASE.

M:LOT (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE MANUFACTURERS LOT NUMBER. ORIGINALLY CAPTURED FROM BLOCK 16B(3) OF SF 368.

M:MFG (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE MANUFACTURERS PART NUMBER. ORIGINALLY CAPTURED FROM BLOCK 16B(3) OF SF 368.

M:NOMEN (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE NOMENCLATURE OF THE MATERIAL BEING REPORTED IN THE QDR. ORIGINALLY CAPTURED FROM BLOCK 6 OF THE SF 368.

M:NSN (C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE NATIONAL STOCK NUMBER. ORIGINALLY CAPTURED FROM BLOCK 5 OF SF 368.

M:NUM (XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE CONTRACT NUMBER UNDER WHICH THE REPORTED MATERIAL WAS RECEIVED. ORIGINALLY CAPTURED FROM BLOCK 10 OF THE SF 368.

M:09Q (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE GSA REGION CODE FOR 9Q ITEMS.

M:OPEN (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE THE CASE WAS OPENED. ORIGINALLY ENTERED BY THE SYSTEM UPON NEW CASE INPUT.

M:ORG (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE ORIGIN CODE.

M:OTF (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE OPERATING TIME AT FAILURE. ORIGINALLY CAPTURED FROM BLOCK 13 OF THE SF 368.

M:OVER (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE DATE OF MANUFACTURE/ OVERHAUL. ORIGINALLY CAPTURED FROM BLOCK 12 OF THE SF 368.

M:QTYDEF (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL REPORTED AS DEFICIENT. ORIGINALLY CAPTURED FROM BLOCK 15C OF THE SF 368.

M:QTYINS (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL INSPECTED BY THE REPORTING ACTIVITY. ORIGINALLY CAPTURED FROM BLOCK 15B OF THE SF 368.

M:QTYREC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL RECEIVED BY THE REPORTING ACTIVITY. ORIGINALLY CAPTURED FROM BLOCK 15A OF THE SF 368.

M:QTYSTK (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL IN STOCK AT THE REPORTING ACTIVITY WHEN THE QDR WAS SUBMITTED. ORIGINALLY CAPTURED FROM BLOCK 15D OF THE SF 368.

M:RDATE (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE RECEIVED FROM ORIGIN. ORIGINALLY CAPTURED FROM THE MAILROOM TIMESTAMP ON RECEIPT DATE.

M:REC1 (CLOSREC, XDBHNDLR, XOPEN2)

MEMORY VARIABLE WHICH IDENTIFIES THE RECORD NUMBER OF THE RECORD BEING PROCESSED. THIS IS A SYSTEM GENERATED VARIABLE.

M:REOPEN (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE A CLOSED CASE IS REOPENED. ORIGINALLY ENTERED UPON REOPENING A CLOSED CASE.

M:REPCON (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE REPORT CONTROL NUMBER. ORIGINALLY CAPTURED FROM BLOCK 3 OF THE SF 368.

M:REPLY (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE REPLY RECEIVED FROM THE ITEM MANAGER. ORIGINALLY CAPTURED FROM BLOCK 32 OF THE SF 368.

M:RETC (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE RETURN CODE OF THE QDR.

M:RIMDATE (CLOSREC, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE RETURNED FROM THE ITEM MANAGER. ORIGINALLY ENTERED UPON RECEIPT OF A RESPONSE FROM THE ITEM MANAGER.

M:SCR (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE SCREENING CODE.

M:SCRQTY (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE SCREENING QUANTITY.

M:SM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE SUPPLY MANAGEMENT INFORMATION CODE. ORIGINALLY CAPTURED FROM BLOCK 5 OF THE SF 368.

M:STATUSC (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE STATUS CODE.

M:TIME (LOGON, XDBHNDLR, XOPEN2)

MEMORY VARIABLE WHICH HOLDS THE TIMESTAMP. THIS IS A SYSTEM VARIABLE USED TO LOCK INDIVIDUAL RECORDS.

M:TYPE (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE CODE SPECIFYING THE DATABASE HANDLER ACCESS CODE.

M:UI (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE UNIT OF ISSUE FOR THE REPORTED MATERIAL. ORIGINALLY CAPTURED FROM THE ML-N BASED ON THE NSN BEING REPORTED.

M:UIC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE UNIT IDENTIFICATION CODE OF THE ACTIVITY SUBMITTING THE QDR. ORIGINALLY CAPTURED FROM BLOCK 1A OF THE SF 368.

M:UPRC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE UNIT PRICE FOR THE REPORTED MATERIAL. ORIGINALLY CAPTURED FROM THE ML-N BASED ON THE REPORTED NSN.

M:VLC (CLOSREC, XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE VENDOR LIABILITY CODE.

M:WHO (C-REASGN, XDBHNDLR)

MEMORY VARIABLE WHICH IDENTIFIES THE INDIVIDUAL CREATING THE RECORD. THIS IS A SYSTEM VARIABLE WHICH IS CAPTURED FROM THE SYSTEM LOGON.

M:WNTY (XOPEN2, XUPDAT, XDBHNDLR)

MEMORY VARIABLE WHICH IDENTIFIES THE WARRANTY STATUS OF THE ITEM. ORIGINALLY CAPTURED FROM BLOCK 19 OF SF 368.

M:WUC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE WORK UNIT CODE. ORIGINALLY CAPTURED FROM BLOCK 20 OF THE SF 368.

APPENDIX B

QDR DATABASE FILE STRUCTURES

STRUCTURE FOR FILE: D:OPEN1 .DBF

FLD	NAME	TYPE	WIDTH	DEC
001	CASE	C	007	
002	CCG	C	002	
003	NSN	C	013	
004	CAT	C	001	
005	NCMEN	C	019	
006	UIC	C	006	
007	UI	C	002	
008	QTYDEF	N	006	
009	UPRC	N	009	002
010	EPRC	N	012	002
011	ORG	C	003	
012	DCC	C	001	
013	DCCNO	C	014	
014	DATES	C	046	
015	REPCON	C	012	
016	FSCM	C	006	
017	TIME	C	011	
018	WHO	C	004	
019	NUM	C	017	
020	CR	C	001	
021	SCR	C	003	
022	SM	C	002	
023	O9Q	C	001	
024	DEF	C	002	
025	VLC	C	001	
026	ACTPT	C	011	
027	SCRQTY	N	006	

** TOTAL ** 00219 BYTES

STRUCTURE FOR FILE: D:OPEN2 .DBF

FLD	NAME	TYPE	WIDTH	DEC
001	CASE	C	007	
002	QTYINS	N	006	
003	QTYREC	N	006	
004	QTYSTK	N	006	
005	DEFV	C	001	
006	DEFR	C	001	
007	ITEM	C	001	
008	OVER	C	005	
009	OTF	C	005	
010	GCV	C	001	
011	TIME	C	011	
012	WHO	C	004	
013	DITEM	C	035	
014	CCOST	N	012	002
C15	WNTY	C	001	
016	WUC	C	007	
017	DIS	C	002	

018	DETAILS	C	120	
019	REPLY	C	120	
020	ACTTKN	C	003	
021	COSTC	C	001	
022	STATUSC	C	002	
023	CAUSEC	C	001	
024	RETC	C	001	
025	ACTDISP	C	001	
026	MFG	C	016	
027	LOT	C	009	

** TOTAL ** 00386 BYTES

STRUCTURE FCB FILE: D:CLOSE1 .DBF

FLD	NAME	TYPE	WIDTH	DEC
001	CASE	C	007	
002	CCG	C	002	
003	NSN	C	013	
004	CAT	C	001	
005	NCMEN	C	019	
006	UIC	C	006	
007	UI	C	002	
008	QTYDEF	N	006	
009	UPRC	N	009	002
010	EPRC	N	012	002
011	ORG	C	003	
012	DCC	C	001	
013	DCCNO	C	014	
014	DATES	C	046	
015	REPCON	C	012	
016	FSCM	C	006	
017	TIME	C	011	
018	WHO	C	004	
019	NUM	C	017	
020	CR	C	001	
021	SCR	C	003	
022	SM	C	002	
023	09Q	C	001	
024	DEF	C	002	
025	VIC	C	001	
026	ACTPT	C	011	
027	SCRQTY	N	006	

** TOTAL ** 00219 BYTES

STRUCTURE FCB FILE: I:CLOSE2 .DBF

FLD	NAME	TYPE	WIDTH	DEC
001	CASE	C	007	
002	QTYINS	N	006	
003	QTYREC	N	006	
004	QTYSTK	N	006	
005	DEFV	C	001	
006	DEFR	C	001	
007	ITEM	C	001	
008	OVER	C	005	
009	CTF	C	005	
010	GOV	C	001	
011	TIME	C	011	

012	WHO	C	004	
013	DITEM	C	035	
014	CCOST	N	012	002
015	WNTY	C	001	
016	WUC	C	007	
017	DIS	C	002	
018	DETAILS	C	120	
019	REPLY	C	120	
020	ACTTKN	C	003	
021	CCSTC	C	001	
022	STATUSC	C	002	
023	CAUSEC	C	001	
024	RETC	C	001	
025	ACTDISP	C	001	
026	MFG	C	016	
027	LCT	C	009	

** TOTAL ** 00386 BYTES

STRUCTURE FOR FILE: D:COG .DBF

FLD	NAME	TYPE	WIDTH	DEC
001	COG	C	002	
002	IM	C	007	
003	CCUN	N	004	

** TOTAL ** 00014 BYTES

STRUCTURE FOR FILE: D:TECHCODE.DBF

FLD	NAME	TYPE	WIDTH	DEC
001	NAME	C	020	
002	TECHCODE	C	004	
003	PSWD	C	008	
004	LOGGED	C	001	
005	ASSIGNED	N	004	
006	ACTIVE	N	004	
007	TRANSMIT	N	004	
008	RESPOND	N	004	
009	CLOSED	N	004	

** TOTAL ** 00054 BYTES

STRUCTURE FOR FILE: D:ADDRESS .DBF

FLD	NAME	TYPE	WIDTH	DEC
001	IM	C	007	
002	TITLE	C	018	
003	COMMAND	C	040	
004	COMMAND2	C	040	
005	ATTN	C	015	
006	STREET	C	020	
007	CITY	C	020	
008	STATE	C	002	
009	ZIP	C	005	
010	COUNT	N	004	

** TOTAL ** 00172 BYTES

STRUCTURE FOR FILE: D:WHERDIS .DBF

FLD	NAME	TYPE	WIDTH	DEC
001	CODE	C	002	
002	TEXT	C	020	

** TOTAL ** 00023 BYTES

STRUCTURE FOR FILE: D:FILESTAT.DBF

FLD	NAME	TYPE	WIDTH	DEC
001	OPEN1	C	004	
002	OPEN2	C	004	
003	CLOSE1	C	004	
004	CLOSE2	C	004	

** TOTAL ** 00017 BYTES

STRUCTURE FOR FILE: D:BIWKSTAT.DBF

FLD	NAME	TYPE	WIDTH	DEC
001	YEAR	C	004	
002	TOTALS	N	005	
003	LAST	C	005	

** TOTAL ** 00015 BYTES

APPENDIX C

DATA ELEMENT DEFINITIONS

This provides a list of the Data Element pictures that are used in various QDR programs. The column labeled "Data Element" contains a short description of the actual Element that the Variable represents. The column "ID" contains the variable name associated with the Data Element. The ID is further defined in Appendix A. The "Type" is either character "C" or numeric "N", with a length as shown. The "Picture" shows the size and character type of each Data Element. Standard representations are used:

'A' - Alphabetic
'9' - Numeric, 0-9
'X' - Either numeric or alphabetic

Data Element	ID	Picture	Type
Case Number	M:CASE	'999999A'	A7
Cognizance	M:CCG	'XX'	A2
Category	M:CAT	'9'	A1
Nomenclature	M:NCMEN	'XXX...XX'	A19
UIC	M:UIC	'AXXXXX'	A6
Unit of issue	M:UI	'AA'	A2
Unit Price	M:UPRC	'999999.99'	N9
Quantity Def.	M:QTYDEF	'999999'	N6
Quantity Insp.	M:QTYINS	'999999'	N6
Quantity Recvd	M:QTYREC	'999999'	N6
Qty in Stock	M:QTYSTK	'999999'	N6
Extended Price	M:EPRC	'999999999.99'	N12
Origin	M:ORG	'XXX'	A3
Deficiency Ver	M:DEFV	'A'	A1
Deficiency Resp	M:DEFR	'A'	A1
Type Document	M:DCC	'9'	A1
Discovery Date	M:DDATE	'99999'	A5
Date Rcvd fm Org	M:RDATE	'99999'	A5
Open Date	M:OPEN	'99999'	A5
Date Ltr Typed	M:LDATE	'99999'	A5
Screen Rpt Date	M:SCFDAT	'99999'	A5
Interim Resp Dat	M:IRDATE	'99999'	A5
Date rtn fm IM	M:RIMDAT	'99999'	A5
Close Date	M:CLOSE	'99999'	A5
Reopen Date	M:REOPEN	'99999'	A5
Dates concat'ned	M:DATES	See note 1	A46
Date change ID	M:DATECI	'X' See note 2	A1
Report Control #	M:REPCON	See note 3	A12
Document Number	M:DOCNO	See note 4	A14
FSCM	M:FSCM	'XXXXX'	A6
Time Stamp	M:TIME	'99999999999'	A11
Analyst Code	M:WHC	'XXXX'	A4
New-Repair/Ovhl	M:ITEM	'A'	A1
Date Mfg/Ovhl	M:OVER	'99999'	A5
Opn Time-Failure	M:OTF	'A9999'	A5
Govnment Furnish	M:GOV	'X'	A1
Work Unit Code	M:WUC	'XXXXXX'	A7

Discovery Code	M:DIS	'AA'	A2
Details Section	M:DETAILS	'XX...198..X'	A198
Return Code	M:RETC	'9'	A1
Record Variable	M:REC1	'99999A'	A6
Contract Number	M:NUM	See note 5	A17
Credit Code	M:CR	'A'	A1
Screening Code	M:SCR	'XXX'	A3
Reply Section	M:REPLY	'XX..198..X'	A198
Action Code	M:ACTTKN	'AAA'	A3
Cost Code	M:CCSTC	'A'	A1
Status Code	M:STATUSC	'AA'	A2
Cause Code	M:CAUSEC	'A'	A1
Action Disp'n	M:ACTDISP	'A'	A1
SMIC	M:SM	'AX'	A2
9Q Region Code	M:09C	'X'	A1
Type Defect	M:DEF	'99'	A2
Vendor Liab Code	M:VIC	'A'	A1
Action Point	M:ACTPT	'AXXXXX99999'	A11
Part Number	M:MFG	'XX..16..XX'	A16
Lot/ser/batch	M:LOT	'XXXXXXXXX'	A9
NSN	M:NSN	See note 6	A13
Type/Model/Ser	O:MODEL	'XXXXXXX'	A7
Def Item Ser #	O:DEFSER	'XXXXXX'	A6
Higher Assy	O:HASSY	'XXXXXXXXXX'	A10
Sub assembly	O:SASSY	'XXXXXXXXXXXX'	A12
Def Item	M:DITEM	'XXXX 35 XXXX'	A35
Est Corr Cost	M:CCOST	'999999999.99	N12
Warranty	M:WNTY	'A'	A1
Screen Quantity	M:SCRQTY	'999999'	N6

NOTES:

1. All dates, followed by M:DATECI, are concatenated into the variable M:DATES for storage into the databases. This is necessary to minimize the number of variables active in the CDR programs, and due to the 32 field limit per database.
2. This variable is the last field in M:DATES. Values are either a blank, "N", or "*". "N" depicts a newly formed case that has not been accounted for in the statistics. A "*" shows that a date was changed during a case update. These are blanked after statistics are calculated.
3. Report Control Number (RCN) 'XXXXXX-99-9999'
4. M:DOCNO PICTURE 'XXXXXX-9999-9999'
5. Contract number picture 'XXXXXX-99-A-9999-9999'
6. NSN (FSC+NATO+FIIN) '9999-XX-XXX-9999'

APPENDIX D

QDR PROGRAMS

I. LOGCN MODULE 59

II. LCCKCUT 62

III. MAIN PROCESSING MODULE 63

IV. NEW CASE INPUT MODULE 66

V. CASE UPDATE MCDULE 82

VI. CASE CLOSING MCDULE 101

VII. DATA BASE HANDIER MODULE 106

VIII. SUPERVISOR MENU 127

IX. SUPERVISOR UTILITY MENU 129

X. USER REPORT MENU 132

XI. SUPERVISOR REPCRT MENU 134

XII. QUERY MODULE 138

XIII. STATISTICS GENERATION MCDULE 158

XIV. JULIAN DATE CCNVERSICN MODULE 163

XV. CCG COUNT MODULE 164

XVI. BI-WEEKLY STATISTICS REPORT MODULE 166

XVII. MCNTHLY STATISTICS REPORT MODULE 172

XVIII. SCRTED LISTING REPORT MENU 182

XIX. CASE REASIGNMENT MODULE 190

XX. ITEM MANAGER FILE UPDATE 192

XXI. CCG FILE UPDATE MODULE 197

XXII. DATA BASE PACK MODULE 203

XXIII. ANALYST FILE UPDATE MODULE 205

XXIV. PASSWORD FILE UPDATE MODULE 210

XXV. DATA BASE RE-INDEX MODULE 212

XXVI. OPEN CASE REPORT 214

I. LOGON MODULE

```
*****************************************************************
**                                                             **
**   Date: 23 Nov 1983                                         **
**   Version: 1.0                                              **
**   Module Name: LOGCN                                        **
**   Module Purpose: Provide Password Logon Facilities         **
**                   for the QDR System                        **
**                                                             **
**   Module Interface Definition                               **
**      Inputs: None                                           **
**      Outputs: C:JULIAN, C:WHO                               **
**                                                             **
**   Module Processing Narrative Description:                  **
**         Accepts The Password From The Operator, Val-        **
**         idates The Password, and Calls The Necessary        **
**         Modules                                             **
**                                                             **
**   Superordinate Modules: None                               **
**   Subordinate Modules: SUPMENU1, MENU1, LOCKOUT             **
**   Author: R. G. NICHOLS                                     **
**                                                             **
*****************************************************************

SET TALK OFF
SET BELL OFF
SET COLOR TO 112,3
SET EXACT ON
SET CCLON OFF
STORE T TO V:CONTINUE

*****  Accept ID of Person Logging On To The System

DO WHILE V:CONTINUE
   ERASE
   STORE '     ' TO C:WHO
   @ 10,29 SAY 'ENTER YOUR ACCESS I.D.'
   @ 11,37 GET C:WHO
   READ
   STORE !(C:WHO) TO C:WHO
   IF C:WHO = 'QUIT'
      QUIT
   ENDIF

*****  Validate ID To See If A Valid User Is Logging On

   USE D:TECHCODE INDEX D:TECH
   FIND &C:WHO
   DO WHILE # = 0
      @ 13,28 SAY 'ACCESS I.D. NOT ON FILE'
      @ 14,33 SAY 'PLEASE REENTER'
      STORE '     ' TO C:WHO
      @ 11,37 GET C:WHO
      READ
      STORE !(C:WHO) TO C:WHO
      IF C:WHO = 'QUIT'
         QUIT
      ENDIF
      FIND &C:WHO
   ENDDO
   STORE F TO V:LOGGED
```

```
***** Check To See If Previously Logged On

   IF LOGGED <> ' '
      @ 16,28 SAY 'USER CURRENTLY LOGGED ON'
      @ 17,32 SAY 'LOGON TERMINATED'
      @ 23,0  SAY ' '
      STORE T TO V:LOGGED
   ENDIF

***** Allow Three Attempts to Enter The Correct Password

   IF .NOT. V:LOGGED
      STORE 2 TO V:ATTEMPTS
      @ 16,30 SAY 'ENTER YOUR PASSWORD'
      @ 17,30 SAY ' FOLLOWED BY <CR>'
      SET CONSOLE OFF
      @ 19,35 SAY ' '
      STORE T TO V:TRUE
      DO WHILE V:TRUE
         STORE '          ' TO V:PSWD
         ACCEPT TO V:PSWD
         IF V:ATTEMPTS = 0 .AND. PSWD <> V:PSWD
            SET CONSOLE ON

*****  If Three Unsuccessful Passwords Are Entered, Call
*****  For System Lockup Program

            DO C:LOCKOUT
         ELSE
            IF PSWD <> V:PSWD
               STORE V:ATTEMPTS-1 TO V:ATTEMPTS
               @ 21,27 SAY 'INCORRECT PASSWORD ENTERED'
               @ 19,35 SAY ' '+ CHR(7)
            ELSE
               STORE F TO V:TRUE
            ENDIF
         ENDIF
      ENDDO
      SET CONSOLE ON
      RELL LOGGED WITH '*'
      USE
      SET EXACT OFF
      RELEASE ALL LIKE V:*

*****  If Either Supervisor is Logging On The System Call
*****  For Supervisor Menu To Be Displayed Otherwise
*****  Display General User Menu

      IF C:WHO ='0000' .OR. C:WHO='0001'
         DO C:SUPMENU1
      ELSE
         DO C:MENU1
      ENDIF

      STORE T TO V:CONTINUE

*****  Allow The Logged User To Logoff

      USE D:TECHCODE INDEX D:TECH
      FIND &C:WHO
      IF # = 0
         ERASE
         @ 10,32 SAY 'LOG OFF FAILURE'+CHR(7)
         @ 11,27 SAY 'CONTACT SYSTEM SUPERVISOR'
         @ 23,26 SAY 'STRIKE ANY KEY TO CONTINUE '
         WAIT
      ELSE
         RELL LOGGED WITH ' '
         USE
```

```
*****  Clear The Screen, Read The Clock And Display The
*****  Logged Off Message and The Time

          ERASE
          STORE " " TO V:DUMMY
          POKE 61440, 180, 44, 205, 33, 137, 22, 13, 240,;
                      137, 14, 15, 240, 195
          SET CALL TO 61440
          CALL V:DUMMY
          STORE STR(PEEK(61456),2) TO V:HOUR
          STORE STR(PEEK(61455),2) TO V:MIN
          STORE STR(PEEK(61454),2) TO V:SEC
          IF $(V:HOUR,1,1)=" "
             STORE "0" +$(V:HOUR,2,1) TO V:HOUR
          ENDIF
          IF $(V:MIN,1,1)=" "
             STORE "0"+$(V:MIN,2,1) TO V:MIN
          ENDIF
          IF $(V:SEC,1,1)=" "
             STORE "0"+$(V:SEC,2,1) TO V:SEC
          ENDIF
          STORE V:HOUR+":"+V:MIN+":"+V:SEC TO M:TIME
          @  8,30 SAY 'LOG OFF COMPLETED AT'
          @ 10,36 SAY M:TIME
          RELEASE ALL
          STORE T TO V:CONTINUE
       ENDIF
    ENDIF
    @ 22,28 SAY 'PRESS ANY KEY TO CONTINUE '
    WAIT
    USE
ENDDO

***** NOTE:  This Program Will Continue To Accept Logons
*****        Until The Quit Command Is Entered

***** END OF PROGRAM
```

II. LOCKOUT

```
*****************************************************************
**                                                             **
**   Date: 23 Nov 1983                                         **
**   Version: 1.0                                              **
**   Module Name: LOCKOUT                                      **
**   Module Purpose: To Lock The System After An Illegal       **
**                   Logon Attempt                             **
**                                                             **
**   Module Interface Definition                               **
**      Inputs: None                                           **
**      Outputs: None                                          **
**                                                             **
**   Module Processing Narrative Description:                  **
**         This Program Will Display An Illegal Logon          **
**         Message and Will Sound The Buzzer                   **
**                                                             **
**   Superordinate Modules: LOGON                              **
**   Subordinate Modules: None                                 **
**   Author: R. G. NICHOLS                                     **
**                                                             **
*****************************************************************

SET TALK OFF
SET CCLCR TO 4,4
STORE T TO V:CONTINUE
STORE T TO V:TOGGLE

*****  Clear The Screen and Display The Illegal Access
*****  Message

ERASE
DO WHILE V:CONTINUE
   STORE 5 TO V:INNER
   DO WHILE V:INNER > 0
     IF V:TOGGLE
        @ 10,29 SAY 'ILLEGAL ACCESS ATTEMPT'
        @ 21, 0 SAY ' ' + CHR(7)
     ELSE
        @ 10,29 SAY '                      '
        @ 21, 0 SAY ' '
     ENDIF
     STORE V:INNER-1 TO V:INNER
   ENDDO
   IF V:TOGGLE
     STORE F TO V:TOGGLE
   ELSE
     STORE T TO V:TOGGLE
   ENDIF
ENDDO

***** NOTE: The System Must Be Rebooted To Exit From
*****       An Illegal Access Attempt

***** END OF PROGRAM
```

III. MAIN PROCESSING MODULE

```
*****************************************************************
**                                                             **
**   DATE: 15 NOVEMBER 1983                                    **
**   VERSION: 1.0                                              **
**   MODULE NAME: MENU1                                        **
**   MODULE PURPOSE: PROVIDE THE USER A MENU OF ALL            **
**           PROCESSING OPTIONS AVAILABLE TO HIM/HER IN        **
**           THE QDR SYSTEM.                                   **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: C:WHO                                          **
**      OUTPUTS: C:JULIAN                                      **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**           DISPLAYS ALL PROCESSING OPTIONS AVAILABLE TO      **
**           THE USER. UPON USER SELECTION, CALLS THE          **
**           APPROPRIATE MODULE FOR CONTINUED PROCESSING       **
**           ALLOWS USER TO EXIT FROM THE QDR SYSTEM.          **
**                                                             **
**   SUPERORDINATE MODULES: LOGON                              **
**   SUBORDINATE MODULES: OPEN,CLOSE,UPDAT,LTR,RPTMENU,        **
**                        QUERY                                **
**   AUTHOR: J.G. BOYNTON & R.G. NICHOLS                       **
**                                                             **
*****************************************************************

***** THIS SECTION ACCESSES THE SYSTEM DATE

STORE   TO V:DUMMY
POKE 61440, 180,42, 205, 33, 137, 22, 13, 240, 137,;
     14, 15, 240, 195
SET CALL TO 61440
CALL V:DUMMY
STORE PEEK(61454) TO V:MM
STORE PEEK(61453) TO V:DD
STORE PEEK(61456)*256+PEEK(61455)-1900 TO V:YY

***** THIS SECTION CONVERTS THE SYSTEM DATE TO A JULIAN DATE

DO CASE
   CASE V:MM = 01
      STORE V:DD TO V:DAY
   CASE V:MM = 02
      STORE V:DD + 31 TO V:DAY
   CASE V:MM = 03
      STORE V:DD + 59 TO V:DAY
   CASE V:MM = 04
      STORE V:DD + 90 TO V:DAY
   CASE V:MM = 05
      STORE V:DD + 120 TO V:DAY
   CASE V:MM = 06
      STORE V:DD + 151 TO V:DAY
   CASE V:MM = 07
      STORE V:DD + 181 TO V:DAY
   CASE V:MM = 08
      STORE V:DD + 212 TO V:DAY
   CASE V:MM = 09
      STORE V:DD + 243 TO V:DAY
   CASE V:MM = 10
      STORE V:DD + 273 TO V:DAY
   CASE V:MM = 11
      STORE V:DD + 304 TO V:DAY
```

```
   CASE V:MM = 12
      STORE V:DD + 334 TO V:DAY
ENDCASE
IF INT(V:YY/4)*4 = V:YY .AND. V:DAY >= 60
   IF V:MM= 02 .AND. V:DD= 29
     STORE V:DAY TO V:DAY
   ELSE
     STORE V:DAY + 1 TO V:DAY
   ENDIF
ENDIF
STORE V:YY * 1000 + V:DAY TO V:JULIAN
STORE STR(V:JULIAN,5) TO C:JULIAN
RELEASE ALL EXCEPT C:*

STORE T TO V:CONTINUE
DO WHILE V:CONTINUE
ERASE
SET TALK OFF
STORE ' ' TO V:CHOICE
TEXT



               WELCOME TO THE QDR AUTOMATED TRACKING SYSTEM


                        1 - OPEN NEW RECORD
                        2 - CLOSE RECORD
                        3 - UPDATE RECORD
                        4 - ORIGINATE LETTER
                        5 - REPORT GENERATION
                        6 - QUERY
                        7 - EXIT FROM THE SYSTEM


                        ENTER YOUR CHOICE

ENDTEXT
@ 19,30 GET V:CHOICE
READ
?
IF    V:CHOICE >= 1 .AND. V:CHOICE <= 7

?
      DO CASE
          CASE V:CHOICE= 1
               RELEASE ALL EXCEPT C:*
               DO C:XOPEN2.PRG
          CASE V:CHOICE= 2
               RELEASE ALL EXCEPT C:*
               DO C:CICSREC.PRG
          CASE V:CHOICE= 3
               RELEASE ALL EXCEPT C:*
               DO C:XUPDAT.PRG
          CASE V:CHOICE= 4
               RELEASE ALL EXCEPT C:*
               DO C:LTR.PRG
          CASE V:CHOICE= 5
               RELEASE ALL EXCEPT C:*
               DO C:RPTMENU
          CASE V:CHOICE=6
               RELEASE ALL EXCEPT C:*
               DO C:QUERY.PRG
          CASE V:CHOICE=7
               RELEASE ALL EXCEPT C:*
               RETURN
      ENDCASE
```

```
      STORE T TO V:CONTINUE
      STORE ' ' TO V:CHOICE
ELSE
  @ 21,20 SAY ' < PLEASE ANSWER WITH  1 - 7 ONLY >'
  @ 23,20 SAY '<PRESS ANY KEY TO CONTINUE>'
  WAIT
ENDIF <V:CHCICE>

ENDDO <V:CONTINUE>

***** END OF PROGRAM
```

IV. NEW CASE INPUT MODULE

```
*****************************************************************
**                                                             **
**   DATE: 18 NOV 1983                                         **
**   VERSION: 1.0                                              **
**   MODULE NAME: OPEN                                         **
**   MODULE PURPOSE: NEW QDR CASE CREATION                     **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: C:WHO, C:JULIAN, V:JULDATE                     **
**      OUTPUTS: M:CASE, V:MM, V:DD, V:YY, AND ALL OF THE      **
**               DATA ELEMENTS IN OPEN1 AND OPEN2.             **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**         PROMPTS THE USER FOR INPUT OF ALL DATA FROM         **
**         SF 368 IN ORDER TO CREATE A NEW QDR CASE.           **
**         VALIDATION OF DATA ITEMS OCCURS UPON INPUT AND      **
**         IS BASED UPON CURRENT GE TIMESHARE VALIDATION,      **
**         AS MODIFIED BY FMSO TECHNICAL BRANCH. DATES         **
**         ARE CAPTURED FOR MANAGEMENT STATISTICS.             **
**                                                             **
**   SUPERORDINATE MODULES: MENU1                              **
**   SUBORDINATE MODULES: OJULIAN, XDBHNDLR                    **
**   AUTHOR: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************

STORE T TO C:TRUE
DO WHILE C:TRUE
ERASE
  STORE ' 'TO C:CHOICE
  TEXT
                          ***** OPEN NEW CASE *****


                     THIS PROGRAM ENABLES YOU TO OPEN A

                              NEW QDR CASE



                              1 - CONTINUE

                              2 - RETURN TO MENU
  ENDTEXT
  @ 20,30 SAY ' ' GET C:CHOICE
  READ
  DO WHILE C:CHOICE <> '1' .AND. C:CHOICE <> '2'
       @ 23,20 SAY 'ANSWER WITH A 1 OR 2 ONLY'
       @ 20,30 SAY ' ' GET C:CHOICE
       READ
  ENDDO
  ERASE
  IF C:CHOICE = '2'
     RELEASE ALL EXCEPT C:*
     RETURN
  ENDIF

***** INITIALIZE MEMORY VARIABLES

     STORE '                    ' TO C:KEY
```

```
      STORE  '          'TO M:CASE
      STORE  '   ' TO M:COG
      STORE  '   ' TO M:SM
      STORE  ' ' TO M:CAT
      STORE  '                    ' TO M:NOMEN
      STORE  '        ' TC M:UIC
      STORE  0 TO  M:QTYREC
      STORE  0 TO  M:QTYINS
      STORE  0 TO  M:QTYDEF
      STORE  0 TO  M:QTYSTK
      STORE  '                       ' TO M:NUM
      STORE  '      ' TC M:OPEN
      STORE  '      ' TC M:OVER
      STORE  '                  ' TO M:REPCON
      STORE  '       ' TC M:FSCM
      STORE  '            ' TO M:TIME
      STORE  '                ' TO M:MFG
      STORE  '          ' TO M:LOT
      STORE  ' ' TC M:ITEM
      STORE  '     ' TC M:OTF
      STORE  ' ' TC M:GCV
      STORE  '                    ' TO M:DOCNO
      STORE  '  ' TO M:DEF
      STORE  ' ' TO M:WNTY
      STORE  '        ' TC O:DDATE
      STORE  '         ' TO O:MCDEL
      STORE  '       ' TC O:DEFSER
      STORE  '            ' TO O:HASSY
      STORE  '              ' TO O:SASSY

***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS
***** FOR INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** C:JULIAN.  O:LLIMIT= YEAR MINUS TWO YEARS
***** O:ULIMIT = YEAR PLUS ONE YEAR

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO C:LLIMIT
STORE STR(ULMT,2) TO C:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT


*****  START OF THE INPUT FOR THE NSN

STORE '       ' TO O:RDATE
STORE T TO O:ANSWER
DO WHILE O:ANSWER
@ 5,20 SAY '******** ENTER DATA FOR THE NEW CASE ********'
@ 6,20 SAY '********          FROM   SF 368          ********'

STORE T TO O:RDATET
DO WHILE O:RDATET
     @ 8,20 SAY 'DATE RECEIVED BY FMSO   MMDDYY' ;
                GET O:RDATE PICTURE '999999'
     READ
     IF $(O:RDATE,1,2) <'01' .OR. $(O:RDATE,1,2) >'12';
        .OR.$(O:RDATE,3,2) <'01' .OR. $(O:RDATE,3,2) > '31';
        .OR. $(O:RDATE,5,2) < O:LLIMIT ;
        .OR. $(O:RDATE,5,2) > O:ULIMIT
           @ 23,30 SAY 'DATE OUT OF RANGE'
     ELSE
        STORE F TO O:RDATET
     ENDIF
ENDDO <O:RDATE>
```

```
@ 23,30 SAY '                                '

***** ENTER THE CALL TO C:OJULIAN TO CHANGE MMDDYY TO
***** JULIAN FORMAT, STORE TO M:RDATE THEN RELEASE O:RDATE

STORE VAL($(O:RDATE,1,2)) TO V:MM
STORE VAL($(O:RDATE,3,2)) TO V:DD
STORE VAL($(O:RDATE,5,2)) TO V:YY
DO C:CJULIAN
STORE V:JULDATE TO M:RDATE
RELEASE ALL LIKE V:*
RELEASE C:RDATET
STORE T TO C:CAT
DO WHILE O:CAT
     @ 10,20 SAY 'CAT'
     @ 10,50 SAY ' ' GET M:CAT PICTURE '9'
     READ
     IF M:CAT ='1' .OR. M:CAT ='2'
        STORE F TO O:CAT
     ELSE
        @ 23,20 SAY ' 1 OR 2 ONLY'
     ENDIF
ENDDO O:CAT
@ 23,20 SAY '                        '
RELEASE C:CAT

STORE T TO O:COG1
STORE T TO C:COG2
DO WHILE O:COG1 .OR. C:COG2
   DO WHILE O:COG1

      @ 12,20 SAY 'COG'
      @ 12,50 SAY ' '  GET M:COG PICTURE '9X'
      READ
        IF $(M:COG,2,1) = ' '
          @ 23,20  SAY ' NO BLANKS IN 2D POSITION'
      ELSE
         STORE F TO C:COG1
         STORE !(M:COG) TO M:COG
      ENDIF
   ENDDO <O:COG1>
   @ 23,20 SAY '                                                '

***** CHECKS THAT COG IS VALID IN CURRENT COG TABLE... MUST
***** BE VALID TO CONTINUE

       USE D:COG INDEX D:COGS
       FIND  &M:COG
       IF # = 0
          @ 23,10 SAY ' COG INVALID - ENTER CORRECTED ENTRY'
          STORE T TO C:COG1
       ELSE
          STORE F TO C:COG2
       ENDIF
  ENDDO <O:COG1 & O:COG2>
  RELEASE O:COG1, O:COG2
  @ 23,10 SAY '                                                '

@ 14,20 SAY 'NSN      '
@ 14,50 SAY ' 'GET O:KEY PICTURE '9999-XX-XXX-9999'
READ

STORE T TO O:NATOT
DO WHILE C:NATOT
    IF $(O:KEY,5,1) =' ' .OR. $(O:KEY,6,1) = ' '
       @ 23,20 SAY ' NATO CODE MAY NOT HAVE BLANKS'
       @ 14,50 SAY ' ' GET O:KEY PICTURE '9999-XX-XXX-9999'
       READ
    ELSE
```

```
        @ 23,20 SAY '                                                    '
        STORE F TO O:NATOT
    ENDIF
ENDDC   <O:NATOT>
RELEASE C:NATOT
@ 23,20 SAY '                                                    '

STORE T TO C:FIINT
DO WHILE O:FIINT
    IF $(O:KEY,7,1) = ' ' .OR. $(O:KEY,8,1)=' ';
       .OR. $(O:KEY,9,1)=' '
        @ 23,40 SAY 'NO BLANKS IN THE FIRST 3 POSITIONS'
        @ 14,50 SAY ' ' GET O:KEY PICTURE '9999-XX-XXX-9999'
        READ
    ELSE
        @ 23,40 SAY '                                    '
        STORE F TO O:FIINT
    ENDIF FIINT
ENDDO   <C:FIINT>
RELEASE C:FIINT
@ 23,20 SAY '                                                    '

STORE ' ' TO O:REPLY
@ 18,20 SAY '     VERIFY ABOVE INFORMATION '
@ 19,20 SAY ' YOU MAY NOT CHANGE IT AFTER THIS'
@ 20,20 SAY '    WITHOUT STARTING OVER AGAIN'
@ 22,25 SAY ' 1 - CONTINUE  2 - CHANGE  3 - EXIT'
@ 23,40 SAY ' ' GET C:REPLY
READ
IF O:REPLY  = '1'
   STORE F TO O:ANSWER
   ERASE
   @ 23,20 SAY 'SEARCHING FOR ANOTHER CASE WITH THIS NSN'
   RELEASE O:RDATE
ELSE
   IF O:REPLY = '3'
       RELEASE ALL EXCEPT C:*
       RETURN
   ELSE
       CLEAR GETS
       @ 22,25 SAY '                                    '
       @ 23,25 SAY '                                    '
   ENDIF
ENDIF
ENDDO O:ANSWER


STORE $(O:KEY,1,4) +$(O:KEY,6,2) + $(O:KEY,9,3);
      + $(O:KEY,13,4) TO M:KEY
STORE M:KEY TO M:NSN

*****  M:TYPE CODES TELL THE DBHANDLER WHAT TO DO WITH
*****  THE PARAMETERS

STORE '1A' TO M:TYPE
DO C:XIBHNDLR.PRG

***** CONTROL RETURNS TO THIS PROGRAM NOW
***** IF M:TYPE = 9 THEN THERE IS NOT A CURRENTLY
***** OPEN FILE

IF M:TYPE='9'
   STORE T TO O:ONONE
ELSE
   STORE F TO O:ONONE
   STORE M:REC1 TO O:PREVREC

   STORE T TO O:WHICH
   DO WHILE O:WHICH
```

```
      STORE '1I' TO M:TYPE
      DO C:XDBHNDLR.PRG

      IF M:NSN <> M:KEY .OR. ECF
         STORE O:PREVREC TO M:REC1
         STORE '1H' TO M:TYPE
         DO C:XDBHNDLR.PRG
         STORE F TO C:WHICH

***** THESE MUST BE RELEASED OR ELSE TOO MANY VARIABLES
***** WILL BE ASSIGNED (IE >64)

         RELEASE M:UI,M:UPRC,M:WUC,M:ACTDISP,M:ACTPT,;
                 M:DETAILS,M:DEFV,M:DEFR,;
                 M:OSC,M:DOC,M:ORG
         STORE '                                                    ';
               +'       ' TO M:DATES
         STORE '      ' TO M:CLOSE
         STORE '       ' TO M:UIC
         STORE '       ' TO M:FSCM
         STORE '                          ' TO M:NUM
         STORE '                    ' TO M:MFG
         STORE '      ' TO M:REOPEN
         STORE '                    ' TO M:DOCNO
         STORE '      ' TO M:SCRDAT
         STORE '                    ' TO M:REPCON
         STORE '              ' TO M:TIME
         STORE 0 TO M:QTYINS
         STORE 0 TO M:QTYREC
         STORE 0 TO M:QTYSTK
         STORE 0 TO M:QTYDEF


      ELSE
         STORE M:REC1 TO O:PREVREC
      ENDIF

   ENDDO <O:WHICH>
ENDIF <OPENFILE>
   STORE M:CASE TO O:CCASE

***** SAVE THE CASE FROM THE OPENFILE FOR FUTURE COMPARISON
***** GO TO THE CLOSED DATA BASE AND CHECK FOR CASE WITH
***** THAT NSN

STORE '3A' TO M:TYPE
DO C:XDBHNDLR.PRG

***** CONTROL RETURNS TO THIS PROGRAM
***** IF M:TYPE = 9 THEN THERE IS NOT A CASE IN THE CLOSED
***** FILE

IF M:TYPE= '9'
   STORE T TO O:CNONE
ELSE
   STORE F TO O:CNONE
   STORE M:REC1 TO O:PREVREC

   STORE T TO O:WHICH
   DO WHILE O:WHICH
      STORE '3I' TO M:TYPE
      DO C:XDBHNDLR.PRG
      STORE M:REC1 TO O:PREVREC

      IF M:NSN <> M:KEY .OR. ECF
         STORE O:PREVREC TO M:REC1
         STORE '3H' TO M:TYPE
         DO C:XDBHNDLR.PRG
         STORE F TO C:WHICH
```

```
***** THESE MUST BE RELEASED OR ELSE TOO MANY VARIABLES
***** WILL BE ASSIGNED (IE >64)

        RELEASE M:UI,M:UPRC,M:WUC,M:ACTDISP,M:ACTPT,;
                M:DETAILS,M:DEFV,M:DEFR,M:OSQ,M:DOC,;
                M:ORG,M:REPLY,M:ACTTKN,M:STATUSC,;
                M:CAUSEC,RETC

        STORE '                                                    ';
              +'       ' TO M:DATES
        STORE '      ' TO M:CLOSE
        STORE '       ' TO M:UIC
        STORE '       ' TO M:FSCM
        STORE '                          ' TO M:NUM
        STORE '                      ' TO M:MFG
        STORE '      ' TO M:REOPEN
        STORE '                      ' TO M:DOCNO
        STORE '      ' TO M:SCRDAT
        STORE '                      ' TO M:REPCON
        STORE '              ' TO M:TIME
        STORE 0 TO M:QTYINS
        STORE 0 TO M:QTYREC
        STORE 0 TO M:QTYSTK
        STORE 0 TO M:QTYDEF

      ELSE
        STORE M:REC1 TO O:PREVREC
      ENDIF

   ENDDO <O:WHICH>
   STORE M:CASE TO O:CCASE
ENDIF <CLOSEFILE>

***** COMPARE THE VALUES OF CASE NUMBER FROM OPEN AND
***** CLOSE, AND USE THE LARGEST ONE FOR SUFFIX
***** CALCULATION

     IF C:OCASE > O:CCASE
        STORE O:OCASE TO M:CASE
        RELEASE O:CCASE,O:OCASE
     ELSE
        STORE O:CCASE TO M:CASE
        RELEASE O:OCASE,O:CCASE
     ENDIF

***** ONLY GO INTO THE NEXT IF-ENDIF WHERE THE NSN WAS NOT
***** FOUND IN EITHER THE OPEN OR THE CLOSED FILE

IF O:ONONE .AND. O:CNONE

ELSE

***** CALCULATE SUFFIX FOR THE ADDITIONAL CASE FOR THE NSN

      STORE $(M:CASE,7,1) TO O:LAST
      IF O:LAST = ' '
         STORE $(M:CASE,1,6) + 'A' TO M:CASE
      ELSE
         STORE RANK(C:LAST) +1 TO O:SUFFIX
         STORE CHR(C:SUFFIX) TO O:LETTER
         STORE $(M:CASE,1,6) + O:LETTER TO M:CASE
      ENDIF
ENDIF


ENDIF
RELEASE C:LAST,O:LETTER,O:KEY,O:PREVREC,O:ONONE,O:CNONE,O:WHICH
ERASE
```

```
*****  START OF NEW CASE DATA ENTRY

@  0,1 SAY 'SF368'
@  1,2 SAY '5.     NSN                                '
@  2,2 SAY '       CATEGORY                           '
@  3,2 SAY '       SMIC                               ' GET M:SM ;
       PICTURE 'AX'
@  4,2 SAY '1A.    UIC                                ' GET M:UIC
@  5,2 SAY '3.     REPORT CONTROL
           '.
       GET M:REPCON PICTURE 'XXXXXX-99-9999'
@  6,2 SAY '4.     DATE DISCOVERED   MMDDYY           ';
       GET C:DDATE PICTURE 'XXXXXX'
@  7,2 SAY '6.     NOMENCLATURE                       ';
       GET M:NOMEN PICTURE 'XXXXXXXXXXXXXXXXXXX'
@  8,2 SAY '7.     FSCM                          <O>  ';
       GET M:FSCM PICTURE 'XXXXXX'
@  9,2 SAY '8.     MFG. PART NUMBER              <O>  ';
       GET M:MFG PICTURE 'XXXXXXXXXXXXXXXXXX'
@ 10,2 SAY '9.     SERIAL/LOT/BATCH              <O>  ';
       GET M:LOT PICTURE 'XXXXXXXXX'
@ 11,2 SAY '10.    CONTRACT/PO                   <O>  ';
       GET M:NUM PICTURE 'XXXXXX-99-A-XXXX-XXXX'
@ 12,2 SAY '       DOCUMENT    NUMBER            <O>  ';
       GET M:DOCNO PICTURE 'XXXXXX-9999-9999'
@ 13,2 SAY '11.    ITEM          N OR O          <O>  ';
       GET M:ITEM PICTURE 'A'
@ 14,2 SAY '12.    DATE MFG/REP/OVHL             <O>  ';
       GET M:OVER PICTURE '99999'
@ 15,2 SAY '13.    OPN TIME AT FAILURE           <O>  ';
       GET M:OTF PICTURE 'AXXXX'
@ 16,2 SAY '14.    GOV FURNISHED MATL            <O>  ';
       GET M:GOV PICTURE 'X'
@ 17,2 SAY '15.    QTY: REC/INSP/DEF/STK              ';
       GET M:QTYREC PICTURE '999999'
@ 18,2 SAY '16A1. TYPE/MODEL/SERIES              <O>  ' GET O:MODEL
@ 19,2 SAY '  A2. SERIAL NUMBER                  <O>  ' GET O:DEFSER
@ 20,2 SAY '  B.  NEXT HIGHER ASSY               <O>  ' GET O:HASSY
@ 21,2 SAY '      SUB-ASSEMBLY                   <O>  ' GET O:SASSY

@ 1,38 SAY  $(M:KEY,1,4)+'-'+$(M:KEY,5,2)+'-'+$(M:KEY,7,3);
            +'-'+$(M:KEY,10,4)
@ 2,38 SAY   M:CAT
CLEAR GETS

STORE T TO C:CORRECT
DO WHILE O:CORRECT

IF M:COG = '1H' .OR. M:COG = '2H' .OR. M:COG = '7H'
    STORE T TO O:SMIC1
    DO WHILE O:SMIC1
         @ 3,2 SAY '       SMIC                                ' GET;
           M:SM PICTURE 'AX'
         READ
         STORE !(M:SM) TO M:SM
         IF $(M:SM,1,1) = 'X' .OR. $(M:SM,1,1) = 'L'
            STORE F TO O:SMIC1
         ELSE
            @ 23,30 SAY 'X OR L ONLY'
         ENDIF
    ENDDO <C:SMIC1>
ENDIF
RELEASE O:SMIC1
@ 23,30 SAY '                    '

STORE T TO C:UIC1
DO WHILE O:UIC1
     @ 4,35 SAY ' ' GET M:UIC PICTURE 'AXXXXX'
```

```
      STORE !(M:UIC) TO M:UIC
      READ
      IF $(M:UIC,1,1) = ' ' .OR. $(M:UIC,2,1) = ' '.OR.;
         $(M:UIC,3,1) = ' ' .OR. $(M:UIC,4,1) = ' ' .OR.;
         $(M:UIC,5,1) = ' ' .OR. $(M:UIC,6,1) = ' '
         @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
      ELSE
         STORE F TO O:UIC1
      ENDIF
ENDDO <O:UIC1>
      @ 23,20 SAY '                                '
RELEASE C:UIC1

***** REPORT CONTROL

***** REPORT CONTROL NUMBER (RCN) FORMAT CHANGED DUE TO
***** MSG FROM FMSO NCV83
***** OLD: 'XXXXXX-XXXX-XXXX'     NEW: 'XXXXXX-99-9999'

      @ 5,35 SAY ' ' GET M:REPCON PICTURE 'XXXXXX-99-9999'
      READ

*****    1.TAKE DATE TO JULIAN FORMAT 2. NUMERIC DATA

STORE T TO C:DDATET
DO WHILE O:DDATET
      @ 6,35 SAY ' ' GET O:DDATE PICTURE '999999'
      READ
      IF C:DDATE = '      '
         @ 23,30 SAY 'MAY NOT BE BLANK          '
      ELSE
         IF $(O:DDATE,1,2) < '01'.OR. $(O:DDATE,1,2) > '12';
            .OR. $(O:DDATE,3,2) < '01';
            .OR. $(O:DDATE,3,2) > '31';
            .OR. $(O:DDATE,5,2) < O:LLIMIT;
            .OR. $(O:DDATE,5,2) > O:ULIMIT
               @ 23,30 SAY ' DATE OUT OF RANGE'
         ELSE
               STORE F TO O:DDATET
         ENDIF
      ENDIF
ENDDO <O:DDATET>
@ 23,30 SAY '                                '
RELEASE C:DDATET

*****  CALL C:OJULIAN TO CONVERT TO JULIAN DATE

STORE VAL($(O:DDATE,1,2)) TO V:MM
STORE VAL($(O:DDATE,3,2)) TO V:DD
STORE VAL($(O:DDATE,5,2)) TO V:YY
DO C:OJULIAN
STORE V:JULDATE TO M:DDATE
RELEASE ALL LIKE V:*

STORE T TO C:NOMEN
DO WHILE O:NOMEN
      @ 7,35 SAY ' 'GET M:NOMEN PICTURE 'XXXXXXXXXXXXXXXXXXX'
      READ
      IF $(M:NOMEN,1,1) = ' ' .OR. $(M:NOMEN,2,1) = ' ' ;
         .OR. $(M:NOMEN,3,1) = ' '
         @ 23,30 SAY ' NO BLANKS IN FIRST 3 POSITIONS'
      ELSE
         STORE F TO O:NOMEN
      ENDIF
ENDDO <O:NOMEN>
@ 23,30 SAY '                                '
RELEASE C:NOMEN

*****  INPUT FSCM
```

```
@  8,35 SAY ' ' GET M:FSCM PICTURE  'XXXXXX'

***** INPUT MANUFACTURERS PART NUMBER

@  9,35 SAY ' ' GET M:MFG PICTURE 'XXXXXXXXXXXXXXXX'
@ 10,35 SAY ' ' GET M:LOT PICTURE 'XXXXXXXXX'

*****  INPUT CONTRACT NUMBER

@ 11,35 SAY ' ' GET M:NUM PICTURE 'XXXXXX-99-A-XXXX-XXXX'

***** INPUT DOCUMENT NUMBER

STORE T TO O:UICT
STORE T TO O:PREPT
STORE T TO O:DOCT
DO WHILE C:DOCT .OR. C:UICT
      @ 12,35 SAY ' ' GET M:DOCNO PICTURE 'AXXXXX-9999-9999'
      READ
      IF M:DOCNO = '      -     -     '
         STORE F TO O:DOCT
         STORE F TO O:UICT
      ELSE

         IF $(M:DOCNO,1,1) =' ' .OR. $(M:DOCNO,2,1)= ' ';
            .OR. $(M:DOCNO,3,1) = ' ';
            .OR. $(M:DOCNO,4,1) = ' ';
            .OR. $(M:DOCNO,5,1) = ' '
            @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
         ELSE
            STORE F TO O:DOCT
         ENDIF
         IF $(M:DOCNO,12,3) >'366';
            .OR. $(M:DOCNO,12,3) = '   ';
            .OR. $(M:DOCNO,11,4) = '    '
            @  23,50 SAY 'PREP DATE OUT OF RANGE '
         ELSE
            STORE F TO O:UICT
         ENDIF
      ENDIF <ALL BLANKS>
ENDDO <O:DOCT .AND. C:UICT>
RELEASE C:UICT,O:DOCT
@ 23,20 SAY '                                                    '

***** DOCUMENT NUMBER END

STORE T TO O:ITEM
DO WHILE O:ITEM

      @ 13,35 SAY ' ' GET M:ITEM PICTURE 'A'
      READ
      IF M:ITEM = 'N' .OR. M:ITEM = 'O' .OR. M:ITEM = ' '
         STORE F TO C:ITEM
      ELSE
         @ 23,30 SAY ' USE N OR O '
      ENDIF
ENDDO  <C:ITEM>
@ 23,30 SAY '                                                '
RELEASE C:ITEM
IF M:ITEM <> ' '

***** THE NEXT FIVE LINES CALCULATE EARLIEST YEAR TO ALLOW
***** FOR OVERHAUL ENTRY

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('10') TO LOW
STORE TEMP1A-LOW TO TEMP2
```

```
STORE STR(TEMP2,2) TC O:TENYRS
RELEASE TEMP1,TEMP1A,TEMP2,LOW
    STORE T TO O:OVER
    DC WHILE O:OVER
        @ 14,35 SAY ' ' GET M:OVER PICTURE '99999'
        READ
        IF M:OVER='      '
            STORE F TC O:OVER
        ELSE
            IF $(M:OVER,3,3) > '365';
              .OR. $(M:OVER,1,2) < O:TENYRS ;
              .OR. $(M:OVER,1,2) > O:ULIMIT :
                @ 23,30 SAY 'DATE OUT OF RANGE'
            ELSE
                STORE F TO O:OVER
            ENDIF
        ENDIF
    ENDDC <O:OVER>
    @ 23,30 SAY '                          '
ENDIF
RELEASE C:OVER,O:TENYRS

STORE T TO O:OTF
DO WHILE O:CTF
    @ 15,35 SAY ' ' GET M:OTF PICTURE 'A9999'
    READ
    IF M:OTF = '      '
        STORE F TC O:CTF
    ELSE
        IF $(M:OTF,1,1) = 'N' .OR. $(M:OTF,1,1) ='O';
          .AND.$(M:OTF,2,4) > '0000'
            STORE F TO O:OTF
        ELSE
            @ 23,30 SAY 'USE N OR O AND THEN TIME (A9999)'
        ENDIF
    ENDIF
ENDDO  <O:OTF>
@ 23,30 SAY '                                                    '
RELEASE C:OTF
STORE T TO C:GOV
DO WHILE O:GOV
     @ 16,35 SAY ' ' GET M:GOV PICTURE 'X'
     READ
     IF  M:GOV = ' ' .OR.  M:GOV = 'Y'  .OR. M:GOV = 'N'
         STORE  F TO C:GOV
     ELSE
         @ 23,30 SAY 'USE EITHER Y OR N OR LEAVE BLANK'
     ENDIF
ENDDO <O:GOV>
@ 23,30 SAY '                                                    '
RELEASE C:GOV
STORE T TC C:QTYRECT
DO WHILE O:QTYRECT

@ 17,35 SAY ' ' GET M:QTYREC  PICTURE '999999'
READ
IF M:QTYREC < 0 .OR. M:QTYREC > 999999
    @ 23,30 SAY 'CUT OF RANGE'
ELSE
    STORE F TO O:QTYRECT
ENDIF
ENDDO
@ 23,30 SAY '                                                '
RELEASE C:QTYRECT
STORE T TO C:QTYINS
DO WHILE O:QTYINS
    @ 17,43 SAY '/' GET M:QTYINS  PICTURE '999999'
    READ
```

```
    IF M:QTYINS < 0 .CR. M:QTYINS > 999999
       @ 23,30 SAY ' OUT OF RANGE'
    ELSE
       STORE F TO O:QTYINS
    ENDIF
ENDDO <O:QTYINS>
@ 23,30 SAY '                                          '
RELEASE C:QTYINS
STORE T TO C:QTYDEF
DO WHILE O:QTYDEF
    @ 17,50 SAY '/'  GET M:QTYDEF PICTURE '999999'
    READ
    IF M:QTYDEF < 1 .CR. M:QTYDEF > 999999
       @ 23,30 SAY ' DEFICIENT
 OUT OF RANGE'
    ELSE
       STORE F TO O:QTYDEF
    ENDIF
ENDDO O:QTYDEF
RELEASE C:QTYDEF
@ 23,30 SAY '                                          '
STORE T TO O:QTYSTK
DO WHILE O:QTYSTK
    @ 17,57 SAY  '/' GET M:QTYSTK  PICTURE '999999'
    READ
    IF M:QTYSTK < 0 .CR. M:QTYSTK  > 999999
       @ 23,30 SAY 'IN STOCK
 OUT OF RANGE'
    ELSE
       STORE F TO O:QTYSTK
    ENDIF
ENDDO O:QTYSTK
@ 23,30 SAY '                                          '
RELEASE C:QTYSTK

@ 18,35 SAY ' ' GET C:MODEL PICTURE 'XXXXXXX'
READ
@ 19,35 SAY ' ' GET C:DEFSER PICTURE 'XXXXXX'
READ
@ 20,35 SAY ' ' GET C:HASSY PICTURE 'XXXXXXXXXX'
READ
@ 21,35 SAY ' ' GET C:SASSY PICTURE 'XXXXXXXXXXXX'
READ
STORE O:MODEL+O:DEFSER+O:HASSY+ O:SASSY TO M:DITEM

***** PRCMPT USER FOR RESPONSE

STORE T TO C:END
DO WHILE O:END

     STORE ' ' TO O:REPLY
     @ 22,10 SAY '   *******   CHECK PREVIOUS ENTRIES ';
             +'******* '
     @ 23,10 SAY ' CHOOSE 1- CONTINUE ENTRY   2- MAKE ';
             +'CORRECTIONS ' GET O:REPLY
     READ
     IF C:REPLY <> '1' .AND. O:REPLY <> '2'
        @ 23,10 SAY ' ANSWER WITH A 1 OR 2 ONLY          '
     ELSE
        STORE F TO C:END
     ENDIF
ENDDO <O:END>

IF O:REPLY = '2'
   STORE T TO O:CORRECT
   @ 22,10 SAY '                                         '
   @ 23,10 SAY '                                         '

ELSE
```

```
   STORE F TO O:CORRECT
ENDIF
ENDDO <C:CORRECT>
ERASE
RELEASE C:MODEL,O:DEFSER,O:HASSY,O:SASSY,O:END,O:COUNT

***** HERE IS THE COMPRESSION OF M:REPCON,M:NUM,M:DOCNO

STORE $(M:REPCON,1,6)+$(M:REPCON,8,2)+$(M:REPCON,11,4) TO ;
      O:REPCON
STORE C:REPCON TO M:REPCON
STORE $(M:NUM,1,6)+$(M:NUM,8,2)+$(M:NUM,11,1)+$(M:NUM,13,4);
      +$(M:NUM,18,4)  TO O:NUM
STORE O:NUM TO M:NUM
STORE $(M:DOCNO,1,6)+$(M:DOCNO,8,4)+$(M:DOCNO,13,4) TO ;
      O:DOCNO
STORE O:DOCNO TO M:DOCNO
RELEASE C:REPCON,O:NUM,O:DOCNO

***** CAPTURE THE JULIAN DATE  AND PUT INTO OPENING DATE

         STORE C:JULIAN TO M:OPEN
         STORE M:DDATE+M:RDATE+M:OPEN+;
         +'                                    N' TO M:DATES
         RELEASE M:DDATE,M:RDATE,M:OPEN,O:ACTPTT,O:PREPT,;
                 O:LLIMIT,O:ULIMIT

***** THIS IS THE START OF THE SECOND SCREEN OF DATA ENTRY

STORE '  ' TO M:UI
STORE 0 TO M:UPRC
STORE '      ' TO M:WUC
STORE ' ' TO M:ACTDISP
STORE '              ' TO M:ACTPT
STORE '                                                  ';
      +'                                                 ';
      +'                        ' TO M:DETAILS
STORE ' ' TO M:DEFV
STORE ' ' TO M:DEFR
STORE '  ' TO M:DEF
STORE ' ' TO M:09Q
STORE ' ' TO M:DOC
STORE '    ' TO M:ORG
STORE  0 TO M:CCOST
     STORE T TO C:PAGE2
     DO WHILE O:PAGE2

@ 0,10 SAY '     UI                                          ';
       GET M:UI
@ 1,10 SAY '     UNIT PRICE        ' GET M:UPRC PICTURE ;
       '999999.99'
@ 2,10 SAY '18.  EST. CORRECTION COST                 <O> 'GET;
       M:CCOST PICTURE '999999999.99'
@ 3,10 SAY '19.  WARRANTY - Y/N/U                        'GET;
       M:WNTY PICTURE 'A'
@ 4,10 SAY '20.  WORK UNIT CODE                       <O> 'GET;
       M:WUC
@ 5,10 SAY '21.  ACTION/DISPOSITION -H/I/D/R/O        <O> 'GET;
       M:ACTDISP PICTURE 'X'
@ 6,10 SAY '22.  DETAILS OF DISCREPANCY - FIRST 2 '
@ 7,10 SAY '       LETTERS MUST BE DISCOVERY CODE'
@ 8,10 SAY '                ' GET M:DETAILS
@ 12,10 SAY '23A. ACTION POINT                          ';
        GET M:ACTPT PICTURE 'AXXXXX99999'
@ 13,10 SAY '     DEFECT VERIFICATION CODE - N/O/U/Y <O>';
        GET M:DEFV PICTURE 'A'
@ 14,10 SAY '     DEFECT RESPONSIBILITY - C/N/S/U/X  <O>';
        GET M:DEFR PICTURE 'A'
@ 15,10 SAY '     9Q                                    ';
```

```
        GET M:09Q PICTURE 'X'
@ 16,10 SAY '      ORIGIN CODE                                    ';
        GET M:ORG PICTURE 'AAX'
@ 17,10 SAY '30.   TYPE DOC                                       ';
        GET M:DOC PICTURE '9'
@ 18,10 SAY '      TYPE DEFICIENCY                                ';
        GET M:DEF PICTURE '99'

CLEAR GETS
        STORE T TO O:UI
        DO WHILE O:UI
            @ 0,10 SAY '      UI                                  ';
                       ' GET M:UI PICTURE 'AA'
            READ
            IF $(M:UI,1,1) = ' ' .OR. $(M:UI,2,1) = ' '
                @ 23,30 SAY ' NO BLANKS'
            ELSE
                STCRE F TO O:UI
            ENDIF
        ENDDO O:UI
        @ 23,30 SAY '                          '
        RELEASE O:UI

        STCRE T TO C:EPRC
        STCRE T TO C:UPRC
        DO WHILE O:UPRC .OR. O:EPRC

            DO WHILE O:UPRC
                @ 1,10 SAY '      UNIT PRICE          ' GET;
                       M:UPRC PICTURE '999999.99'
                READ
                IF M:UPRC < .01 .OR. M:UPPC > 999999.99
                    @ 23,30 SAY ' AMOUNT OUT OF RANGE '
                ELSE
                    STORE F TO O:UPRC
                ENDIF
            ENDDO <C:UPRC>
            @ 23,30 SAY '                          '
            STORE (M:UPRC * M:QTYDEF) TO M:EPRC

            @ 1,43 SAY 'EXT PRICE $'
            @ 1,54 SAY M:EPRC  PICTURE '999999999.99'
            IF M:EPRC >= 100000000
                @ 23,30 SAY ' EXTENDED PRICE OUT OF RANGE'
            ELSE
                STCRE F TO O:EPRC
            ENDIF
        ENDDO <O:UPRC & O:EPRC>
        RELEASE O:UPRC,O:EPRC
        @ 23,30 SAY '                                          '
            @ 2,10 SAY '18.  EST. CORRECTION COST          ';
                   +'<O> 'GET M:CCOST PICTURE '999999999.99'
            READ

        STCRE T TO C:WNTY
        DO WHILE O:WNTY
            @ 3,10 SAY '19.  WARRANTY - Y/N/U                  ';
                       ' GET M:WNTY PICTURE 'A'
            STORE !(M:WNTY) TO M:WNTY
            READ
            IF M:WNTY <> 'Y' .AND. M:WNTY <> 'N' ;
               .AND. M:WNTY <> 'U'
                @ 23,30 SAY 'USE Y,N OR U '
            ELSE
                STCRE F TO O:WNTY
            ENDIF
        ENDDO <O:WNTY>
        @ 23,30 SAY '                          '
        RELEASE O:WNTY
```

```
      @ 4,10 SAY '20.  WORK UNIT CODE                              ;
             <O>  ' GET M:WUC PICTURE 'XXXXXXX'
      STORE T TO C:ACTDISP
      DO WHILE O:ACTDISP
          @ 5,10 SAY '21.  ACTION/DISPOSITION ';
                 +'-H/I/D/R/O       <O> ' ;
                 GET M:ACTDISP PICTURE 'X'
          READ
          IF M:ACTDISP = 'H' OR. M:ACTDISP = 'I' ;
             .OR. M:ACTDISP = 'D' .OR. M:ACTDISP = 'R' ;
             .OR. M:ACTDISP = 'O' .OR. M:ACTDISP =' '
                STORE F TO O:ACTDISP
          ELSE
                @ 23,30 SAY ' ERROR IN CODE'
          ENDIF
      ENDDO <C:ACTDISP>
      @ 23,30 SAY '                                                '
      RELEASE O:ACTDISP

STORE T TO O:DISCODE
DO WHILE O:DISCODE

    @ 6,10 SAY '22.  DETAILS OF DISCREPANCY - FIRST 2 '
    @ 7,10 SAY '       LETTERS MUST BE DISCOVERY CODE'
    @ 8,10 SAY '                 ' GET M:DETAILS
    READ
    STORE  $(M:DETAILS,1,2) TO M:DIS
    STORE !(M:DIS) TO M:DIS
    USE D:WHEREDIS INDEX D:DISCODE
    FIND &M:DIS
       IF  # = 0
           @ 23,30 SAY 'WHERE DISCOVERED CODE INCORRECT'
       ELSE
           STORE F TO O:DISCODE
       ENDIF
       ENDDO <O:DISCODE>
       @ 23,30 SAY '                                                '
       RELEASE O:DISCODE

      STORE T TO C:ACTPTT
      DO WHILE O:ACTPTT
          @ 12,10 SAY '23a. ACTION POINT                           ;
                  ' GET M:ACTPT PICTURE 'AXXXXX99999'
          READ
          IF M:ACTPT= '          '
             @ 23,30 SAY 'MAY NOT BE BLANK'
          ELSE
             STORE F TO O:ACTPTT
          ENDIF
      ENDDO <O:ACTPTT>
      @ 23,30 SAY '                                                '

        STORE T TO O:DEFV
        DO WHILE O:DEFV
            @ 13,10 SAY '     DEFECT VERIFICATION CODE';
                    +'-N/O/U/Y <O>' GET M:DEFV PICTURE 'A'
            READ
            IF M:DEFV = 'N' .OR. M:DEFV = 'O' ;
              .OR. M:DEFV = 'U' ;
              .OR. M:DEFV= 'Y' .OR. M:DEFV = ' '
              STORE F TO O:DEFV
            ELSE
              @ 23,30 SAY 'CORRECT CODE MUST BE ENTERED'
            ENDIF
      ENDDO <O:DEFV>
      @ 23,30 SAY '                                                '
      RELEASE O:DEFV
```

```
STORE T TO C:DEFR
DO WHILE O:DEFR
    @ 14,10 SAY '      DEFECT RESPONSIBILITY -';
          +'C/N/S/U/X  <O>' GET M:DEFR PICTURE 'A'
    READ
    IF M:DEFR = 'C' .OR. M:DEFR = 'N' ;
       .OR. M:DEFR = 'S' .OR. M:DEFR = 'U' ;
       .OR. M:DEFR = 'X' .OR. M:DEFR = ' '
        STORE F TO O:DEFR
    ELSE
        @ 23,30 SAY 'CORRECT CODE MUST BE ENTERED'
    ENDIF
ENDDO <O:DEFR>
@ 23,30 SAY '                                          '
RELEASE O:DEFR

IF M:COG ='9C'
    STORE T TO O:9Q
    DO WHILE O:9Q
        @ 15,10 SAY '      9Q                          ';
              +'                ' GET M:09Q PICTURE 'X'
        READ
        IF M:09Q ='2' .OR. M:09Q ='4' ;
           .OR. M:09Q ='5' .OR. M:09Q ='7';
           .OR. M:09Q ='9' .OR. M:09Q =' '
            STORE F TO O:9Q
        ELSE
            @ 23,30 SAY ' OUT OF RANGE'
        ENDIF
    ENDDO <O:9Q>
    @ 23,30 SAY '                                          '
    RELEASE O:9Q
ENDIF <M:COG = 9Q>

STORE T TO O:ORG
DO WHILE O:ORG
    @ 16,10 SAY '      ORIGIN CODE                       ';
              +'            ' GET M:ORG PICTURE 'AAX'
    READ
    IF $(M:ORG,1,1) =' '.OR. $(M:ORG,2,1) = ' '
        @ 23,20 SAY ' FIRST 2 POSITIONS MAY NOT';
                +'CONTAIN BLANKS'
     ELSE
        STORE F TO O:ORG
     ENDIF
ENDDO <O:ORG>
@ 23,20 SAY '                                          '
RELEASE O:ORG

STORE T TO O:TYPE
DO WHILE O:TYPE
    @ 17,10 SAY '30.  TYPE DOC                         ';
              +'            ' GET M:DOC PICTURE '9'
    READ
    IF M:DOC < '1' .OR. M:DOC > '7'
        @ 23,30 SAY 'OUT OF RANGE'
    ELSE
        STORE F TO O:TYPE
    ENDIF
ENDDO <O:TYPE>
@ 23,30 SAY '                                          '
RELEASE O:UIC,O:UIC2,O:PREP,O:DOC,O:SERNO,O:TYPE

STORE T TO O:DEF
DO WHILE O:DEF
    @ 18,10 SAY '      TYPE DEFICIENCY                 ';
              +'            ' GET M:DEF PICTURE '99'
    READ
    IF M:DEF < '01' .OR. M:DEF > '19'
```

```
                @ 23,30 SAY 'USE 01 - 19 ONLY'
            ELSE
                STORE F TO O:DEF
            ENDIF
        ENDDO <O:DEF>
        RELEASE O:DEF
        @ 23,30 SAY '                                                    '

***** PROMPT USER FOR RESPONSE

        STORE T TO C:END
        DO WHILE O:END

            STORE ' ' TO O:REPLY
            @ 20,20 SAY '  1 - POST CASE'
            @ 21,20 SAY '  2 - CHANGE DATA'
            @ 22,20 SAY '  3 - EXIT WITHOUT POSTING '

            @ $+1,34 SAY ' ' GET O:REPLY
            READ
            IF O:REPLY <> '1' .AND. O:REPLY <> '2' ;
               .AND. O:REPLY <> '3'
                @ 23,5 SAY ' ANSWER WITH  1 - 2 - 3 ONLY '
            ELSE
                STORE F TO O:END
            ENDIF
        ENDDO <C:END>
        @ 23,10 SAY '                                                    '
        RELEASE O:END

        ERASE
        IF O:REPLY = '1'
            @ 10,20 SAY 'CASE BEING POSTED TO DATA BASE '
            @ 13,20 SAY '       PLEASE STANDBY          '
            @ 20,20 SAY '***   DO NOT INTERRUPT   ***   '

            STORE F TO O:PAGE2
            STORE '1F' TO M:TYPE
            DO C:XDEHNDLR.PRG
            STORE '2F' TO M:TYPE
            DO C:XDEHNDLR.PRG

            ERASE
            @ 10,20 SAY '  CASE NUMBER OF THE NEW CASE'
            @ 12,33 SAY  M:CASE
            @ 23,20 SAY '    PRESS ANY KEY TO CONTINUE'
            WAIT

        ENDIF
        IF O:REPLY = '2'
            STORE T TO O:PAGE2
        ELSE
            IF C:REPLY = '3'
                STORE F TO O:PAGE2
            ENDIF
        ENDIF

    ENDDO <C:PAGE2>
    RELEASE ALL EXCEPT C:*
    STORE T TO O:TRUE
  ENDDO <O:TRUE>
RETURN

***** END OF PROGRAM
```

V. CASE UPDATE MODULE

```
*****************************************************************
**                                                             **
**   DATE: 8 DECEMBER 1983                                     **
**   VERSION: 1.0                                              **
**   MODULE NAME: UPDATE                                       **
**   MODULE PURPOSE: ALLOW ADDITION AND/OR CORRECTION OF       **
**                   DATA IN QDR CASE CURRENTLY IN QDR         **
**                   SYSTEM.                                   **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: CASE, C:WHO, C:JULIAN                          **
**      OUTPUTS: ALL DATA ELEMENTS IN OPEN1 & OPEN2,           **
**               M:TYPE                                        **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**      USER ENTERS CASE NUMBER OF CASE TO BE CHANGED.         **
**      MODULE SEARCHES DATA BASE FOR CASE AND                 **
**      DISPLAYS INFORMATION CURRENTLY ON FILE THROUGH         **
**      A SERIES OF THREE MENUS. DATA IS WRITTEN TO            **
**      FIRST DATA BASE MIDWAY IN PROCESS DUE TO               **
**      LIMIT OF 64 MEMORY VARIABLES AT ANY ONE TIME.          **
**      CHANGE OF DATES IS NOTED FOR STATISTIC                 **
**      MODULE UTILIZATION.                                    **
**                                                             **
**   SUPERORDINATE MODULES: MENU1                              **
**   SUBORDINATE MODULES: XDBHNDLR                             **
**   AUTHOR: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************

STORE T TO U:UPDATE
DO WHILE U:UPDATE
  STORE T TO U:TRUE
  DO WHILE U:TRUE
  ERASE
  STORE ' 'TO U:CHOICE
  TEXT
                                  ***** UPDATE *****


                               THIS PROGRAM ALLOWS YOU TO

                                   UPDATE A QDR CASE



                                    1 - CONTINUE

                                    2 - RETURN TO MENU
  ENDTEXT
  @ 20,40 SAY ' ' GET U:CHOICE
  READ
  DO WHILE U:CHOICE <> '1' .AND. U:CHOICE <> '2'
     @ 23,20 SAY 'ENTER 1 OR 2 FOR YOUR RESPONSE'
     @ 20,40 SAY ' ' GET U:CHOICE
     READ
  ENDDO <U:CHOICE>
  ERASE
  IF U:CHOICE = '2'
     RELEASE ALL EXCEPT C:*
```

```
      RETURN
   ENDIF

ERASE
      STORE  '          'TO M:CASE
TEXT
                        ***** SELECT RECORD FOR UPDATE *****

                                ENTER THE CASE NUMBER
                             OF THE RECORD TO BE UPDATED


ENDTEXT
STORE ' ' TO U:REPLY
@ 10, 29 SAY 'CASE ' GET M:CASE PICTURE '999999X'
READ
STORE M:CASE TO M:KEY
STORE '1E'  TO M:TYPE
DO C:XDBHNDLR
IF M:TYPE = '9'
   @ 12,25 SAY 'RECORD NOT FOUND IN OPEN FILE '
   @ 13,21 SAY 'DO YOU WISH TO CHECK THE CLOSED FILE ?'
   @ 14,40 GET U:REPLY PICTURE 'A'
   READ
   DO WHILE !(U:REPLY) <> 'Y' .AND. !(U:REPLY) <> 'N'
      @ 14,45 SAY 'ENTER Y OR N'
      @ 14,40 GET U:REPLY PICTURE 'A'
      READ
   ENDDO
   @ 14,45 SAY '              '
   IF !(U:REPLY) = 'Y'
      STORE '3E' TO M:TYPE
      DO C:XDBHNDLR
      IF M:TYPE = '9'
         @ 16,23 SAY 'RECORD NOT FOUND IN THE QDR SYSTEM'
         @ 17,27 SAY 'STRIKE ANY KEY TO CONTINUE'
         WAIT TO U:REPLY
      ELSE
        IF M:TYPE = '1'
           @ 18,28 SAY 'RECORD CURRENTLY IN USE'
           @ 19,27 SAY 'STRIKE ANY KEY TO CONTINUE'
           WAIT TO U:REPLY
        ELSE
           ERASE
           STORE F TO U:TRUE
           STORE 'CLOSE' TO U:FILE
        ENDIF
      ENDIF
   ENDIF
ELSE
   IF M:TYPE = '1'
      @ 12,28 SAY 'RECORD CURRENTLY IN USE'
      @ 13,27 SAY 'STRIKE ANY KEY TO CONTINUE'
      @ 14,40 GET U:REPLY
      READ
   ELSE
      ERASE
      STORE F TO U:TRUE
      STORE 'OPEN' TO U:FILE
   ENDIF
ENDIF
ENDDO <U:TRUE>

**** THIS SECTION FOR CURRENT DATES VALUE CAPTURE

ERASE

 STORE $(M:DATES,1,5) TO M:DDATE
```

```
STORE $(M:DATES,6,5) TO M:RDATE
STORE $(M:DATES,11,5) TO M:OPEN
STORE $(M:DATES,16,5) TO M:LDATE
STORE $(M:DATES,21,5) TO M:SCRDATE
STORE $(M:DATES,26,5) TO M:IRDATE
STORE $(M:DATES,31,5) TO M:RIMDAT
STORE $(M:DATES,36,5) TO M:CLOSE
STORE $(M:DATES,41,5) TO M:REOPEN

STORE M:DDATE TO T:DDATE
STORE M:RDATE TO T:RDATE
STORE M:OPEN TO T:OPEN
STORE M:LDATE TO T:LDATE
STORE M:SCRDATE TO T:SCRDATE
STORE M:IRDATE TO T:IRDATE
STORE M:RIMDAT TO T:RIMDAT
STORE M:CLOSE TO T:CLOSE
STORE M:RECPEN TO T:REOPEN


***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS FOR
***** INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** U:LLIMIT= YEAR MINUS TWO YEARS
***** U:ULIMIT = YEAR PLUS ONE YEAR

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO U:LLIMIT
STORE STR(ULMT,2) TO U:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT
ERASE

@  3,2 SAY '     DATES CURRENTLY IN FILE FOR CASE

@  3,45 SAY  M:CASE
@  8,2 SAY '        DISCOVERY DATE                 'GET M:DDATE
@  9,2 SAY '        RECEIVED FROM ORIGIN           'GET M:RDATE
@ 10,2 SAY '        OPENING DATE                 * '
@ 10,36 SAY  M:OPEN
@ 11,2 SAY '        TRANSMITTAL DATE               'GET M:LDATE
@ 12,2 SAY '        SCREEN REPORT DATE             'GET M:SCRDATE
@ 13,2 SAY '        INTERIM RESPONSE DATE          'GET M:IRDATE
@ 14,2 SAY '        RETURN FROM ITEM MGR           'GET M:RIMDAT
@ 15,2 SAY '        CLOSE                        * '
@ 15,36 SAY M:CLOSE
@ 16,2 SAY '        RECPEN                         'GET M:RECPEN
@ 18,2 SAY '  <* MAY NOT CHANGE THESE DATES>       '
CLEAR GETS

     STORE ' ' TO U:REPLY
     STORE T TO U:DATET
     DO WHILE U:DATET

          STORE  T TO U:DDATET
          DO WHILE U:DDATET

               @ 8,35 SAY  ' '   GET M:DDATE
               READ
                IF M:DDATE <>  '      '
                    IF  $(M:DDATE,1,2) < U:LLIMIT ;
                        .CR. $(M:DDATE,1,2) > U:ULIMIT;
                        .CR. $(M:DDATE,3,3) <'001' ;
                        .CR. $(M:DDATE,3,3) > '365';
                        .CR. M:DDATE > C:JULIAN
```

```
                @ 23,30 SAY 'DATE OUT OF RANGE'
            ELSE
                STORE F TO U:DDATET
            ENDIF
        ELSE
            STORE F TO U:DDATET
        ENDIF <BLANK>
ENDDO <U:DDATET>
@ 23,30 SAY '                              '

STORE  T TO U:RDATET
DO WHILE U:RDATET

    @ 9,35 SAY  ' '   GET M:RDATE
    READ
    IF $(M:RDATE,1,2) < U:LLIMIT ;
       .OR. $(M:RDATE,1,2) > U:ULIMIT ;
       .OR. $(M:RDATE,3,3) <'001' ;
       .OR. $(M:RDATE,3,3) > '365';
       .OR. M:RDATE > C:JULIAN ;
       .OR. M:RDATE < M:DDATE ;
       .OR. M:RDATE >M:OPEN
          @ 23,30 SAY 'DATE OUT OF RANGE'
    ELSE
        STORE F TO U:RDATET
    ENDIF
ENDDO <U:RDATET>
@ 23,30 SAY '                              '
RELEASE U:DDATET,U:RDATET

STORE  T TO U:LDATET
DO WHILE U:LDATET

    @ 11,35 SAY  ' '   GET M:LDATE
    READ
    IF M:LDATE <>  '      '
        IF $(M:LDATE,1,2) < U:LLIMIT ;
           .CR. $(M:LDATE,1,2) > U:ULIMIT ;
           .CR. $(M:LDATE,3,3) <'001' ;
           .CR. $(M:LDATE,3,3) > '365' ;
           .CR. M:LDATE > C:JULIAN ;
           .CR. M:LDATE < M:OPEN
              @ 23,30 SAY 'DATE OUT OF RANGE'
        ELSE
            STORE F TO U:LDATET
        ENDIF
   ELSE
        STORE F TO U:IDATET
   ENDIF
ENDDO <U:LDATET>
@ 23,30 SAY '                              '

STORE  T TO U:SCDATET
DO WHILE U:SCDATET

    @ 12,35 SAY  ' '   GET M:SCRDATE
    READ
    IF M:SCRDATE <> '      '

        IF $(M:SCRDATE,1,2) < U:LLIMIT ;
           .CR. $(M:SCRDATE,1,2) > U:ULIMIT ;
           .CR. $(M:SCRDATE,3,3) <'001' ;
           .CR. $(M:SCRDATE,3,2) > '365';
           .CR. M:SCRDATE < M:LDATE
              @ 23,30 SAY 'DATE OUT OF RANGE'
        ELSE
            STORE F TO U:SCDATET

        ENDIF
```

```
    ELSE
        STORE F TO U:SCDATET
    ENDIF
ENDDO <U:SCDATET>
@ 23,30 SAY '                                    '
RELEASE U:LDATET,U:SCDATET

STORE  T TO U:IRDATET
DO WHILE U:IRDATET

    @ 13,35 SAY  ' '   GET M:IRDATE
    READ
    IF M:IRDATE <> '      '

        IF $(M:IRDATE,1,2) <U:LLIMIT ;
            .OR. $(M:IRDATE,1,2) > U:ULIMIT;
            .OR. $(M:IRDATE,3,3) <'001' ;
            .OR. $(M:IRDATE,3,3) > '365';
            .OR. M:IRDATE < M:OPEN
              @ 23,30 SAY 'DATE OUT OF RANGE'
        ELSE
            STORE F TO U:IRDATET
        ENDIF
    ELSE
        STORE F TO U:IRDATET
    ENDIF
ENDDO <U:IRDATET>
@ 23,30 SAY '                                    '

STORE  T TO U:RIMDATT
DO WHILE U:RIMDATT

    @ 14,35 SAY  ' '   GET M:RIMDAT
    READ
    IF M:RIMDAT <> '      '

        IF $(M:RIMDAT,1,2) <U:LLIMIT ;
            .OR. $(M:RIMDAT,1,2) > U:ULIMIT;
            .OR. $(M:RIMDAT,3,3) <'001' ;
            .OR. $(M:RIMDAT,3,3) > '365'
              @ 23,30 SAY 'DATE OUT OF RANGE'
        ELSE
            IF M:RIMDAT < M:LDATE
                @ 23,30 SAY ' RTN DATE NOT ';
                  +'BEFORE TRANSMITTAL DATE'
            ELSE
                STORE F TO U:RIMDATT
            ENDIF
        ENDIF
    ELSE
        STORE F TO U:RIMDATT
    ENDIF
ENDDO <U:RIMDATT>
@ 23,30 SAY '                                    ';
          +'                    '
RELEASE U:IRDATET,U:RIMDATT

STORE  T TO U:REOPENT
DO WHILE U:REOPENT

    @ 16,35 SAY  ' '   GET M:REOPEN
    READ
    IF M:REOPEN <> '      '

        IF $(M:REOPEN,1,2) <U:LLIMIT ;
            .OR. $(M:REOPEN,1,2) > U:ULIMIT;
            .OR. $(M:REOPEN,3,3) <'001' ;
            .OR. $(M:REOPEN,3,3) > '365'
            @ 23,30 SAY 'DATE OUT OF RANGE'
```

```
                    ELSE
                        IF M:REOPEN < M:OPEN
                            @ 23,30 SAY 'REOPEN DATE MAY NOT';
                                    +' BE LESS THAN OPEN DATE !'
                        ELSE
                            STORE F TO U:REOPENT
                        ENDIF
                    ENDIF
                ELSE
                    STORE F TO U:REOPENT
                ENDIF
            ENDDO <U:REOPENT>
            @ 23,30 SAY '                                        ';
                    +'                 '
        STORE T TO U:END
    DO WHILE U:END
        @ 21,10 SAY '       *****   CHECK DATES ABOVE    *****     '
        @ 22,10 SAY '<CHOOSE> 1- CONTINUE    2- CHANGE    3-EXIT'
        @ 23,10 SAY '                      ' GET U:REPLY PICTURE '9'
        READ
        IF U:REPLY <> '1'.AND. U:REPLY <> '2'.AND.U:REPLY <> '3'
            @ 22,10 SAY ' ANSWER WITH A  1 - 2 - 3  ONLY'
          ELSE
            STORE F TO U:END
          ENDIF
        ENDDO <U:END>
        @ 21,10 SAY '                                                    '
        @ 22,10 SAY '                                                    '
        @ 23,10 SAY '                                                    '
        RELEASE U:REOPENT,U:END

        IF U:REPLY ='1'
            STORE F TO U:DATET
            STORE T TO U:CONT1
            IF M:DDATE <> T:DDATE .OR. M:RDATE <> T:RDATE ;
               .OR. M:OPEN <> T:OPEN .OR.M:LDATE <> T:LDATE ;
               .OR. M:SCRDATE <> T:SCRDATE ;
               .OR. M:IRDATE <> T:IRDATE.OR.M:RIMDAT<>T:RIMDAT ;
               .OR. M:CLOSE <> T:CLOSE .OR. M:REOPEN <>T:REOPEN
                    STORE '*' TO M:DATECI
            ELSE
               STORE ' ' TO M:DATECI
            ENDIF
            RELEASE ALL LIKE T:*
            STORE M:DDATE+M:RDATE+M:OPEN+M:LDATE+M:SCRDATE;
                  +M:IRDATE+M:RIMDAT+M:CLOSE+M:REOPEN+M:DATECI;
                  TO M:DATES
            RELEASE M:DDATE,M:RDATE,M:OPEN,M:LDATE,M:SCRDATE,;
                    M:IRDATE,M:RIMDAT,M:CLOSE,M:REOPEN,M:DATECI


        ELSE
             IF U:REPLY ='3'
                STORE F TO U:DATET
                STORE F TO U:CONT1
                STORE F TO U:CONT2
                STORE F TO U:CONT3
                IF U:FILE = 'OPEN'
                    STORE '1G' TO M:TYPE
                ELSE
                    STORE '3G' TO M:TYPE
                ENDIF
                DO C:XDBHNDLR
                RELEASE ALL EXCEPT C:*
                RETURN
             ENDIF

        ENDIF
```

```
ENDDO <U:DATET>
RELEASE U:DATET,U:END

ERASE

DO WHILE U:CONT1

***** DISPLAY OF CASE DATA FROM FIRST DATABASE

@  1,2 SAY '       NSN:'
@  1,17  SAY $(M:NSN,1,4)+'-'+$(M:NSN,5,2)+'-';
          +$(M:NSN,7,3)+'-'+$(M:NSN,10,4)
@  1,42 SAY 'CAT ' GET M:CAT
@  1,55 SAY 'CASE NUMBER:'
@  1,67 SAY  M:CASE
@  2,2 SAY '       COG                              ' GET M:COG ;
      PICTURE 'XX'
@  2,41 SAY 'SMIC ' GET M:SM PICTURE 'AX'
@  3,2 SAY '       UIC                              ' GET M:UIC
@  4,2 SAY '       REPORT CONTROL
            ';
      GET M:REPCON PICTURE 'XXXXXX999999'
@  5,2 SAY '       ACTION POINT                     ' GET M:ACTPT;
      PICTURE 'AXXXXX99999'
@  6,2 SAY '       NOMENCLATURE                     ';
      GET M:NOMEN PICTURE 'XXXXXXXXXXXXXXXXXXX'
@  7,2 SAY '       FSCM                             ';
      GET M:FSCM PICTURE 'XXXXXX'
@  8,2 SAY '       CONTRACT
            ';
      GET M:NUM PICTURE 'XXXXXX99AXXXXXXXX'
@  9,2 SAY '       DOCUMENT
            ';
      GET M:DOCNO PICTURE 'XXXXXX99999999'
@ 10,2 SAY '       QUANTITY DEFICIENT               ';
      GET M:QTYDEF PICTURE '999999'
@ 11,2 SAY '       UNIT OF ISSUE                    ';
      GET M:UI PICTURE 'XX'
@ 12,2 SAY '       UNIT PRICE                       ';
      GET M:UPRC PICTURE '999999.99'
@ 13,2 SAY '       ORIGIN                           ';
      GET M:ORG PICTURE 'XXX'
@ 14,2 SAY '       9Q REGION CODE                   ';
      GET M:09Q PICTURE 'X'
@ 15,2 SAY '       SCREEN QUANTITY                  ';
      GET M:SCRQTY PICTURE '999999'
@ 16,2 SAY '       SCREEN CODE                      ';
      GET M:SCR PICTURE 'XXX'
@ 17,2 SAY '       TYPE DOCUMENT                    ';
      GET M:DOC  PICTURE '9'
@ 18,2 SAY '       VENDOR LIABILITY CODE            ';
      GET M:VLC PICTURE 'A'
@ 19,2 SAY '       CREDIT CODE                      ';
      GET M:CR PICTURE 'A'
@ 20,2 SAY '       TYPE DEFECT                      ';
      GET M:DEF PICTURE '99'
CLEAR GETS
      STORE ' ' TO U:REPLY
      @ 22,10 SAY '              ENTER  <N> TO SKIP '
      @ 23,30 SAY ' 'GET U:REPLY
      READ

      IF !(U:REPLY) = 'N'
          STORE F TO U:FIRSTPG
          STORE F TO U:CONT1
          STORE T TO U:CONT2
          IF U:FILE ='OPEN'
```

```
            STORE '1C' TO M:TYPE
        ELSE
            STORE '3C' TO M:TYPE
        ENDIF
    ELSE
        STORE T TO U:FIRSTPG
    ENDIF
    @ 22,10 SAY '                                                    '
    @ 23,10 SAY '                                                    '

***** SKIP FIRST PAGE OF UPDATE IF REPLY WAS <N>

    DO WHILE U:FIRSTPG
        STORE T TO U:CAT
        DO WHILE U:CAT
            @ 1,42 SAY 'CAT ' GET M:CAT PICTURE '9'
            READ
            IF M:CAT ='1' .OR. M:CAT ='2'
                STORE F TO U:CAT
            ELSE
                @ 23,20 SAY ' 1 OR 2 ONLY'
            ENDIF
        ENDDO U:CAT
        @ 23,20 SAY '                          '
        RELEASE U:CAT


        STORE T TO U:COG1
        STORE T TO U:COG2
        DO WHILE U:COG1 .OR. U:COG2
            DO WHILE U:COG1

                @ 2,35 SAY ' ' GET M:COG PICTURE '9X'
                READ
                STORE !(M:COG) TO M:COG
                IF $(M:COG,2,1) = ' '
                    @ 23,20  SAY ' NO BLANKS IN 2D ';
                             +'POSITION'
                ELSE
                    STORE F TO U:COG1
                ENDIF
            ENDDO <U:COG1>
            @ 23,20 SAY '                                                ';
                    +'                    '

***** CHECKS THAT COG IS VALID IN CURRENT COG TABLE... MUST
***** BE VALID TO CONTINUE

                USE D:COG INDEX D:COGS
                FIND  &M:COG
                IF   # = 0
                    @ 23,20 SAY ' COG INVALID - ENTER ';
                            +'    CORRECTED ENTRY'
                ELSE
                    STORE F TO U:COG2
                ENDIF
        ENDDO <U:COG1 & U:COG2>
        RELEASE U:COG1, U:COG2
        @ 23,20 SAY '                                                ';
                +'                    '

        IF M:COG = '1H' .OR. M:COG = '2H' .OR. M:COG = '7H'
            STORE T TO U:SMIC1
            DO WHILE U:SMIC1
                @ 2,45 SAY ' ' GET M:SM PICTURE 'AX'
                READ
                STORE !(M:SM) TO M:SM
                IF $(M:SM,1,1) = 'X' .OR.$(M:SM,1,1) = 'L'
                    STORE F TO U:SMIC1
```

```
                ELSE
                    @ 23,30 SAY 'X OR L ONLY'
                ENDIF
            ENDDO <U:SMIC1>
        ENDIF
        RELEASE  U:SMIC1
        @ 23,30 SAY '                                    '

        STORE T TO U:UIC1
        DO WHILE U:UIC1
            @ 3,35 SAY ' ' GET M:UIC PICTURE 'AXXXXX'
            READ
            IF $(M:UIC,1,1) = ' '.OR. $(M:UIC,2,1) = ' ' .OR.;
               $(M:UIC,3,1) = ' '.OR. $(M:UIC,4,1) = ' ' .OR.;
               $(M:UIC,5,1) = ' '.OR. $(M:UIC,6,1) = ' '
                @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
            ELSE
                STORE F TO U:UIC1
            ENDIF
        ENDDO <U:UIC1>                                   '
        @ 23,20 SAY '
        RELEASE U:UIC1

        @ 4,35 SAY ' ' GET M:REPCON PICTURE 'XXXXX999999'
        READ

        STORE T TO U:ACTPTT
        DO WHILE U:ACTPTT
            @ 5,35 SAY ' 'GET M:ACTPT PICTURE 'AXXXXX99999'
            READ
            IF M:ACTPT= '                    '
                @ 23,30 SAY 'MAY NOT BE BLANK'
            ELSE
                STORE F TO U:ACTPTT
            ENDIF
        ENDDO <U:ACTPTT>                                 '
        @ 23,30 SAY '

        STORE T TO U:NOMEN
        DO WHILE U:NOMEN
            @ 6,35 SAY ' 'GET M:NOMEN PICTURE ;
                              'XXXXXXXXXXXXXXXXXXX'
            READ
            IF $(M:NOMEN,1,1) = ' ' ;
               .OR. $(M:NOMEN,2,1) = ' ' ;
               .OR. $(M:NOMEN,3,1) =' ' ;
                    @ 23,30 SAY ' NO BLANKS IN FIRST 3';
                               +'  POSITIONS'
            ELSE
                    STORE F TO U:NOMEN
            ENDIF
        ENDDO <U:NOMEN>                                  '
        @ 23,30 SAY '
        RELEASE U:NOMEN

***** INPUT FSCM

        @  7,35 SAY ' ' GET M:FSCM PICTURE  'XXXXX'

***** INPUT CONTRACT NUMBER

        @ 8,35 SAY ' 'GET M:NUM PICTURE 'XXXXXX99AXXXXXXXX'

***** INPUT DOCUMENT NUMBER

        STORE T TO U:UICT
        STORE T TO U:PREPT
        STORE T TO U:DCCT
        DO WHILE U:DOCT .OR. U:UICT
```

```
          @ 9,35 SAY ' 'GET M:DOCNO PICTURE 'XXXXXX99999999'
          READ
          IF M:DOCNO = '                '
              STORE F TO U:DOCT
              STORE F TO U:UICT
          ELSE
              IF $(M:DOCNO,1,1) =' '.OR.$(M:DOCNO,2,1)= ' ';
                 .OR. $(M:DOCNO,3,1) = ' ' ;
                 .OR. $(M:DOCNO,4,1) = ' ' ;
                 .OR. $(M:DOCNO,5,1) = ' '
                    @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
              ELSE
                    STORE F TO U:DOCT
              ENDIF
              IF $(M:DOCNO,12,3) >'366' ;
                 .OR. $(M:DOCNO,12,3) = '   ' ;
                 .OR. $(M:DOCNO,11,4) = '    ' ;
                    @  23,50 SAY 'PREP DATE OUT OF RANGE '
                ELSE
                    STORE F TO U:UICT
                ENDIF
              ENDIF <AIL BLANKS>
          ENDDO <U:DOCT .AND. U:UICT>
          RELEASE U:UICT,U:DOCT
          @ 23,20 SAY '                                    '

*****   DOCUMENT NUMBER END

          STORE T TO U:QTYDEF
          DO WHILE U:QTYDEF
              @ 10,35 SAY ' '  GET M:QTYDEF PICTURE '999999'
              READ
              IF M:QTYDEF < 1 .OR. M:QTYDEF > 999999
                 @ 23,20 SAY ' DEFICIENT # OUT OF RANGE'
              ELSE
                 STORE F TO U:QTYDEF
              ENDIF
          ENDDO U:QTYDEF
          RELEASE U:QTYDEF
          @ 23,25 SAY '                                    '

          STORE T TO U:UI
          DO WHILE U:UI
              @ 11,35 SAY ' ' GET M:UI PICTURE 'AA'
              READ
              IF $(M:UI,1,1) = ' ' .OR. $(M:UI,2,1) = ' '
                 @ 23,30 SAY ' NO BLANKS'
              ELSE
                 STORE F TO U:UI
              ENDIF
          ENDDO U:UI
          @ 23,30 SAY '                    '
          RELEASE U:UI

          STORE T TO U:EPRC
          STORE T TO U:UPRC
          DO WHILE U:UPRC .OR. U:EPRC
             DO WHILE U:UPRC
               @ 12,35 SAY ' 'GET M:UPRC PICTURE '999999.99'
               READ
               IF M:UPRC < .01 .OR. M:UPRC > 999999.99
                  @ 23,30 SAY ' AMOUNT OUT OF RANGE '
               ELSE
                  STORE F TO U:UPRC
               ENDIF
             ENDDO U:UPRC
             @ 23,30 SAY '                    '
             STORE (M:UPRC * M:QTYDEF) TO M:EPRC
             STORE T TO U:EPRC
```

```
    DO WHILE U:EPRC
       @ 12,50 SAY 'EXT PRICE $'
       @ 12,61 SAY M:EPRC  PICTURE '999999999.99'
       IF M:EPRC >= 100000000
         @ 23,30 SAY ' EXTENDED PRICE OUT OF RANGE'
       ELSE
         STORE F TO U:EPRC
       ENDIF
   ENDDO <U:EPRC>
ENDDO <U:UPRC & U:EPRC>
RELEASE U:UPRC,U:EPRC

 STORE T TO U:ORG
 DO WHILE U:ORG
     @ 13,35 SAY ' ' GET M:ORG PICTURE 'AAX'
     READ
     IF $(M:ORG,1,1) =' '.OR. $(M:ORG,2,1) = ' '
        @ 23,20 SAY ' FIRST 2 POSITIONS MAY NOT';
                  +'  CONTAIN BLANKS'
     ELSE
         STORE F TO U:ORG
     ENDIF
 ENDDO <U:ORG>
 @ 23,20 SAY '                                                '
 RELEASE U:ORG

 IF M:COG ='9Q'
     STORE T TO U:9Q
     DO WHILE U:9Q
         @ 14,35 SAY ' ' GET M:09Q PICTURE 'X'
         READ
         IF M:09Q ='2' .OR. M:09Q ='4' ;
            .OR. M:09Q ='5' .OR. M:09Q ='7';
            .OR. M:09Q ='9' .OR. M:09Q =' '
              STORE F TO U:9Q
         ELSE
              @ 23,30 SAY ' OUT OF RANGE'
         ENDIF
     ENDDO <U:9Q>
     @ 23,30 SAY '                                           '
     RELEASE U:9Q
 ENDIF <M:COG = 9Q>

 @ 15,35 SAY ' ' GET M:SCRQTY PICTURE '999999'
 READ


 @ 16,35 SAY ' ' GET M:SCR PICTURE 'XXX'
 READ

 STORE T TO U:DOC
 DO WHILE U:DOC

     @ 17,35 SAY ' ' GET M:DOC PICTURE '9'
     READ
     IF M:DOC < '1' .OR. M:DOC > '7'
        @ 23,30 SAY ' 1 THROUGH 7 ONLY'
     ELSE
        STORE F TO U:DOC
     ENDIF
 ENDDO <U:DOC>
 @ 23,30 SAY '                                              '
 RELEASE U:DOC

 @ 18,35 SAY ' ' GET M:VLC PICTURE 'A'

 @ 19,35 SAY ' ' GET M:CR PICTURE 'A'

 @ 20,35 SAY ' ' GET M:DEF PICTURE '99'
```

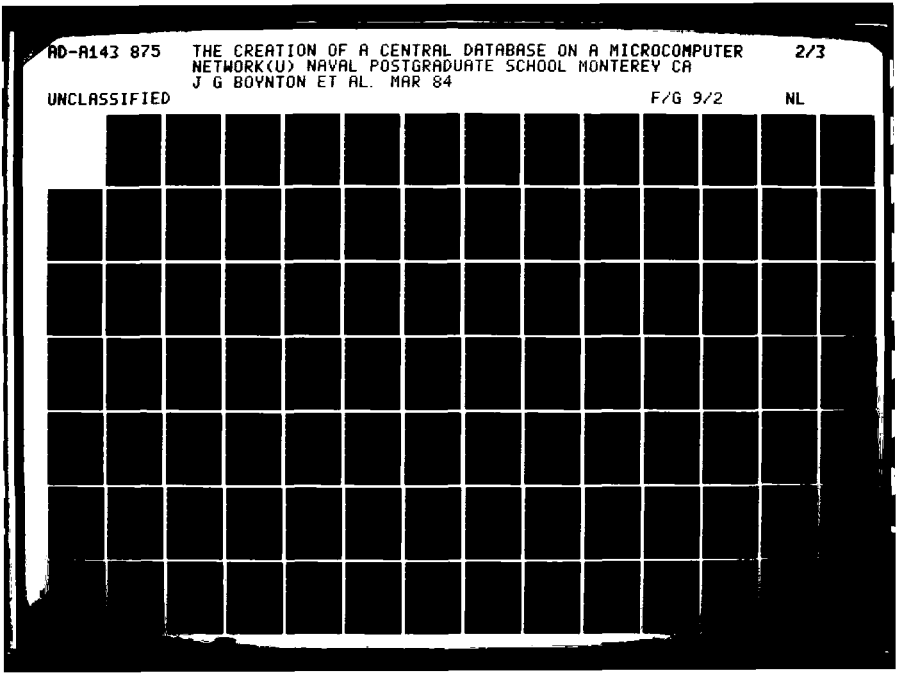
```
READ

STORE T TO U:END
DO WHILE U:END

    STORE ' ' TO U:REPLY
    @ 22,10 SAY '<CHOOSE> 1- CONTINUE   2- CHANGE';
                +'   3- EXIT'
    @ 23,30 SAY ' 'GET U:REPLY PICTURE '9'
    READ
    IF U:REPLY <> '1' .AND. U:REPLY <> '2' .AND.;
       U:REPLY <> '3'
        @ 23,10 SAY 'ANSWER WITH A 1 - 2 - 3  ONLY'
  ELSE
        STORE F TO U:END
    ENDIF
ENDDO <U:END>
@ 23,10 SAY '                                          '

IF U:REPLY = '2'
    STORE T TO U:FIRSTPG
    @ 22,10 SAY '                                          '
    @ 23,10 SAY '                                          '
ELSE
    IF U:REPLY ='3'

        STORE F TO U:FIRSTPG
        STORE F TO U:CONT1
        STORE F TO U:CONT2
        STORE F TO U:CONT3
        IF U:FILE = 'OPEN'
            STORE '1G' TO M:TYPE
        ELSE
            STORE '3G' TO M:TYPE
        ENDIF
        DO C:XDBHNDLR
        RELEASE ALL EXCEPT C:*
        RETURN
    ELSE

        STORE F TO U:FIRSTPG
        STORE T TO U:CONT2
        STORE F TO U:CONT1
        IF U:FILE = 'OPEN'
            STORE '1C' TO M:TYPE
        ELSE
            STORE '3C' TO M:TYPE
        ENDIF

    ENDIF
  ENDIF
ENDDO <U:FIRSTPG>
ERASE
RELEASE U:END,U:COUNT,U:FIRSTPG

***** CHOICE ABOVE ALLOWS ANALYST TO ABANDON OR TO POST
***** CHANGES MADE THUS FAR

ENDDO <U:CONT1>
RELEASE U:CONT1

IF U:REPLY <> '3'
    @ 10,20 SAY 'RECORD BEING PARTIALLY UPDATED'
    @ 13,20 SAY '       PLEASE STANDBY          '


***** WRITE DATA TO OPEN1/CLOSE1 AND RELEASE UNNECESSARY
***** VARIABLES BEFORE READING OPEN2/CLOSE2 FOR FURTHER
***** UPDATE INFORMATION
```

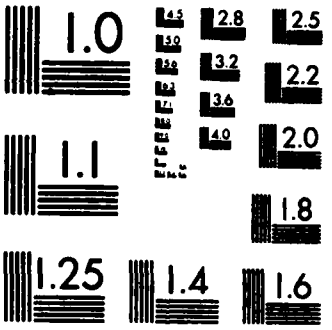
```
        DC C:XDEHNDLR
        RELEASE M:COG,M:CAT,M:NOMEN,M:UIC,M:UI,M:QTY[illegible]
                M:EPFC,M:CRG,M:DOC,M:DOCHD,M:DATES,M:[illegible]
                M:FSCM,M:NUM,M:CE,M:SCR,M:SM
        RELEASE M:OVQ,M:DEF,M:VLC,M:ACTPI,SCRQTY,M:[illegible]

        IF U:FILE = 'OPEN'
           STORE '2E' TO M:TYPE
        ELSE
           STORE '4E' TO M:TYPE
        ENDIF
        DO C:XDEHNDLR
ENDIF

DO WHILE U:CONT2

STORE $(M:DITEM,1,7) TO U:TYPE
STORE $(M:DITEM,8,6) TO U:SERNO
STORE $(M:DITEM,14,10) TO U:HASSY
STORE $(M:DITEM,24,12) TO U:SASSY
STORE '      ' TO M:OVER

***** DISPLAY FOR SECOND SCREEN OF UPDATE PROGRAM

ERASE

@  1,2 SAY '          NSN:'
@  1,16  SAY $(M:NSN,1,4)+'-'+$(M:NSN,5,2)+'-'+$(M:NSN,7,3);
            +'-'+$(M:NSN,10,4)
@  1,55 SAY 'CASE NUMBER:'
@  1,67 SAY M:CASE
@  2,2 SAY '        MFG. PART NUMBER                  ' GET M:MFG ;
       PICTURE 'XXXXXXXXXXXXXXX'
@  3,2 SAY '        SERIAL/LOT/BATCH                  ' GET M:LOT ;
       PICTURE 'XXXXXXXXX'
@  4,2 SAY '        ITEM         N OR O               ' GET M:ITEM;
       PICTURE 'A'
@  5,2 SAY '        DATE MFG/REP/OVHL                 ' GET M:OVER;
       PICTURE '99999'
@  6,2 SAY '        OPN TIME AT FAILURE               ' GET M:OTF ;
       PICTURE 'AXXXX'
@  7,2 SAY '        GOV FURNISHED MATL                ' GET M:GOV ;
       PICTURE 'A'
@  8,2 SAY '        QUANTITY: RECV/INSP/STK          'GET M:QTYREC;
       PICTURE '999999'
@ 8,43 SAY '/' GET M:QTYINS PICTURE '999999'
@ 8,50 SAY '/' GET M:QTYSTK PICTURE '999999'
@  9,2 SAY '        TYPE/MODEL/SERIES                 ' GET U:TYPE ;
       PICTURE 'XXXXXXX'
@ 10,2 SAY '        SERIAL NUMBER                     ' GET U:SERNO;
       PICTURE 'XXXXXX'
@ 11,2 SAY '        NEXT HIGHER ASSY                  ' GET U:HASSY;
       PICTURE 'XXXXXXXXXX'
@ 12,2 SAY '        SUB-ASSEMBLY                      ' GET U:SASSY;
       PICTURE 'XXXXXXXXXXXX'
@ 13,2 SAY '        ESTIMATED CORRECTION COST         ' GET M:CCOST;
       PICTURE '99999999.99'
@ 14,2 SAY '        WORK UNIT CODE                    ' GET M:WUC ;
       PICTURE 'XXXXXXX'
@ 15,2 SAY '        DEFECT VERIF   - N/O/U/Y          ' GET M:DEFV;
       PICTURE 'A'
@ 16,2 SAY '        DEFECT RESP    - C/N/S/U/X        ' GET M:DEFR ;
       PICTURE 'A'
@ 17,2 SAY '        STATUS CODE                       ' GET ;
       M:STATUSC PICTURE 'AA'
@ 18,2 SAY '        CAUSE CODE                        ' GET ;
       M:CAUSEC PICTURE 'A'
@ 19,2 SAY '        ACTION/DISP -H/I/D/R/O            ' GET ;
```

```
        M:ACTDISP PICTURE 'X'
@ 20,2 SAY '       WARRANTY ' GET M:WNTY PICTURE 'A'
@ 20,19 SAY 'COST CODE ' GET M:COSTC PICTURE 'A'
@ 20,30 SAY ' ACTION CODE' GET M:ACTTKN PICTURE 'AAA'
@ 21,2 SAY '       RETURN CODE                    ' GET M:RITC ;
        PICTURE '9'
CLEAR GETS

     @ 22,10 SAY '              ENTER  <N> TO SKIP '
     @ 23,30 SAY ' ' GET U:REPLY
     READ
     IF !(U:REPLY) = 'N'
        STORE F TO U:PAGE2
        STORE F TO U:CONT2
        STORE T TO U:CONT3
     ELSE
        STORE T TO U:PAGE2
     ENDIF
     @ 22,10 SAY '                                                  '
     @ 23,10 SAY '                                                  '
     DO WHILE U:PAGE2

***** INPUT MANUFACTURERS PART NUMBER

     @  2,35 SAY ' ' GET M:MFC PICTURE 'XXXXXXXXXXXXXXXXXX'
     @  3,35 SAY ' ' GET M:LOT PICTURE 'XXXXXXXXX'

        STORE T TO U:ITEM
        DO WHILE U:ITEM

           @  4,35 SAY ' ' GET M:ITEM PICTURE 'A'
           READ
           IF M:ITEM = 'N' .OR. M:ITEM = 'O' ;
              .OR. M:ITEM = ' '
                 STORE F TO U:ITEM
           ELSE
                 @ 23,30 SAY ' USE N OR O '
           ENDIF
        ENDDO  <U:ITEM>
        @ 23,30 SAY '                                                  '
        RELEASE U:ITEM
        IF M:ITEM <> ' '


***** THE NEXT FIVE LINES CALCULATE EARLIEST YEAR TO ALLOW
***** FOR OVERHAUL ENTRY

           STORE $(C:JULIAN,1,2) TO TEMP1
           STORE VAL(TEMP1) TO TEMP1A
           STORE VAL('10') TO LOW
           STORE TEMP1A-LOW TO TEMP2
           STORE STR(TEMP2,2) TO U:TENYRS
           RELEASE TEMP1,TEMP1A,TEMP2,LOW

           STORE T TO U:OVER
           DO WHILE U:OVER
              @  5,35 SAY ' ' GET M:OVER PICTURE '99999'
              READ
              IF $(M:OVER,3,3) > '365' ;
                 .OR. $(M:OVER,1,2) < U:TENYRS ;
                 .OR. $(M:OVER,1,2) > U:ULIMIT
                    @ 23,30 SAY 'DATE OUT OF RANGE'
              ELSE
                    STORE F TO U:OVER
              ENDIF
           ENDDO <U:OVER>
           ENDIF
           RELEASE U:OVER,U:TENYRS
```

AD-A143 875 THE CREATION OF A CENTRAL DATABASE ON A MICROCOMPUTER NETWORK(U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA J G BOYNTON ET AL. MAR 84 2/3

UNCLASSIFIED F/G 9/2 NL





```
STCRE T TO U:OTF
DO WHILE U:CTF
    @  6,35 SAY ' ' GET M:OTF PICTURE 'A9999'
    READ
    IF M:OTF = '      '
        STORE F TO U:OTF
    ELSE
        IF $(M:OTF,1,1) = 'N'.OR.$(M:OTF,1,1) ='C';
        .AND. $(M:OTF,2,4) > '0000'
            STORE F TO U:OTF
        ELSE
            @ 23,30 SAY ' USE  N OR O AND THEN
                        TIME  (A9999)'
        ENDIF
   ENDIF
ENDDO  <U:OTF>
@ 23,30 SAY '                                                    '
RELEASE U:OTF

STORE T TO U:GOV
DO WHILE U:GCV
    @  7,35 SAY ' ' GET M:GOV PICTURE 'A'
    READ
    IF M:GOV = ' ' .OR.  M:GOV = 'Y'.OR. M:GOV ='N'
        STORE  F TO U:GOV
    ELSE
        @ 23,30 SAY 'USE EITHER Y OR N'
    ENDIF
ENDDO <U:GOV>
@ 23,30 SAY '                                                    '
RELEASE U:GCV

STORE T TO U:QTYRECT
DO WHILE U:QTYRECT

    @  8,35 SAY ' ' GET M:QTYREC  PICTURE '999999'
    READ
    IF M:QTYREC < 0 .OR. M:QTYREC > 999999
        @ 23,30 SAY 'OUT OF RANGE'
    ELSE
        STORE F TO U:QTYRECT
    ENDIF
ENDDO
@ 23,30 SAY '                                                    '
RELEASE U:QTYRECT
STORE T TO U:QTYINS
DO WHILE U:QTYINS
    @  8,43 SAY '/' GET M:QTYINS  PICTURE '999999'
    READ
    IF M:QTYINS < 0 .OR. M:QTYINS > 999999
        @ 23,30 SAY ' OUT OF RANGE'
    ELSE
        STORE F TO U:QTYINS
    ENDIF
ENDDO <U:QTYINS>
@ 23,30 SAY '                                                    '
RELEASE U:QTYINS

STCRE T TO U:QTYSTK
DO WHILE U:QTYSTK
    @  8,50 SAY  '/' GET M:QTYSTK  PICTURE '999999'
    READ
    IF M:QTYSTK < 0 .OR. M:QTYSTK  > 999999
        @ 23,30 SAY 'IN STOCK # OUT OF RANGE'
    ELSE
        STORE F TO U:QTYSTK
    ENDIF
```

```
ENDDO U:<QTYSTK>
@ 23,30 SAY '                                        '
RELEASE U:QTYSTK

@ 9,35 SAY ' ' GET U:TYPE PICTURE 'XXXXXXX'

@ 10,35 SAY ' ' GET U:SERNO PICTURE 'XXXXXX'

@ 11,35 SAY ' ' GET U:HASSY PICTURE 'XXXXXXXXXX'

@ 12,35 SAY ' ' GET U:SASSY PICTURE 'XXXXXXXXXXX'
READ

STORE U:TYPE+U:SERNO+U:HASSY+U:SASSY TO M:DITEM

@ 13,35 SAY ' ' GET M:CCOST PICTURE '999999999.99'
READ

@ 14,35 SAY ' ' GET M:WUC PICTURE 'XXXXXX'
READ

@ 15,35 SAY ' ' GET M:DEFV PICTURE 'A'

STORE T TO U:DEFV
DO WHILE U:DEFV
    @ 15,35 SAY ' ' GET M:DEFV PICTURE 'A'
    READ
    IF M:DEFV = 'N' .OR. M:DEFV = 'O' ;
       .OR. M:DEFV = 'U' .OR. M:DEFV= 'Y' ;
       .OR. M:DEFV = ' '
        STORE F TO U:DEFV
    ELSE
        @ 23,30 SAY ' CORRECT CODE MUST BE ENTERED'
    ENDIF
ENDDO <U:DEFV>
@ 23,30 SAY '                                        '
RELEASE U:DEFV

STORE T TO U:DEFR
DO WHILE U:DEFR
    @ 16,35 SAY ' ' GET M:DEFR PICTURE 'A'
    READ
    IF M:DEFR = 'C' .OR. M:DEFR = 'N' ;
       .OR. M:DEFR = 'S' .OR. M:DEFR = 'U' ;
       .OR. M:DEFR = 'X' .OR. M:DEFR = ' '
        STORE F TO U:DEFR
    ELSE
        @ 23,30 SAY 'CORRECT CODE MUST BE ENTERED'
    ENDIF
ENDDO <U:DEFR>
@ 23,30 SAY '                                        '
RELEASE U:DEFR

@ 17,35 SAY ' ' GET M:STATUSC PICTURE 'AA'
READ

@ 18,35 SAY ' ' GET M:CAUSEC PICTURE 'A'
READ

@ 19,35 SAY ' ' GET M:ACTDISP PICTURE 'X'
READ

STORE T TO U:WNTY
DO WHILE U:WNTY
    @ 20,2 SAY '       WARRANTY 'GET M:WNTY
    READ
    IF M:WNTY = 'Y' .OR. M:WNTY ='N' ;
       OR. M:WNTY = 'U'
         STORE F TO U:WNTY
```

```
            ELSE
                @ 23,30 SAY 'Y, U OR N ONLY'
            ENDIF
         ENDDO
         @ 23,30 SAY '                                    '
         RELEASE U:WNTY

         @ 20,19 SAY 'COST CODE ' GET M:COSTC PICTURE 'A'

         @ 20,30 SAY 'ACTION CODE'GET M:ACTTKN PICTURE 'AAA'
         @ 21,35 SAY ' ' GET M:RETC PICTURE '9'
         READ

         STORE T TO U:END
         DO WHILE U:END

            STORE ' ' TO U:REPLY
            @ 22,10 SAY '    <CHOOSE> 1- CONTINUE  2- CHANGE'
            @ 23,35 SAY ' ' GET U:REPLY PICTURE '9'
            READ
            IF U:REPLY <> '1' .AND. U:REPLY <> '2'
                @ 23,05 SAY 'ANSWER WITH A 1 OR 2 ONLY '
            ELSE
                STORE F TO U:END
            ENDIF
        ENDDO <U:END>
        @ 23,05 SAY '                                                '

         IF U:REPLY = '2'
             STORE T TO U:PAGE2
             @ 22,10 SAY '                                          '
             @ 23,10 SAY '                                          '
         ELSE
             STORE F TO U:CONT2
             STORE T TO U:CONT3
             STORE F TO U:PAGE2
         ENDIF
      ENDDO <U:PAGE2>
      ERASE
      RELEASE U:TYPE,U:SERNO, U:SASSY, U:HASSY,U:END,U:PAGE2
ENDDO <U:CONT2>

***** START OF THE THIRD SCREEN FOR THE UPDATE PROGRAM

ERASE
 DO WHILE U:CONT3

***** DISPLAY OF CASE DATA FROM OPEN2 DETAILS & REPLY

     @  1,2 SAY '       NSN:'
     @  1,17  SAY $(M:NSN,1,4)+'-'+$(M:NSN,5,2)+'-';
                 +$(M:NSN,7,3)+'-'+$(M:NSN,10,4)
     @  1,55 SAY 'CASE NUMBER: '
     @  1,68 SAY M:CASE
     @  5,2  SAY 'DETAILS OF DISCREPANCY - FIRST 2 LETTERS'
     @  6,10 SAY '    - MUST BE WHERE DISCOVERED CODE'
     @  8,10 SAY ' ' GET M:DETAILS
     @ 13,2  SAY 'REPLY FROM ITEM MANAGER'
     @ 14,10 SAY ' ' GET M:REPLY
     CLEAR GETS


       STORE ' ' TO U:REPLY
       @ 22,10 SAY '     ENTER  <N> TO SKIP  & UPDATE RECORD'
       @ 23,30 SAY ' 'GET U:REPLY
```

```
      READ
         IF !(U:REPLY) = 'N'
              STORE F TO U:PAGE3
              STORE F TO U:CONT3
         ELSE
              STORE T TO U:PAGE3
         ENDIF
         @ 22,10 SAY '                                          ';
                 +'                    '

***** SKIP THIRD PAGE OF UPDATE IF REPLY WAS <N>

    DO WHILE U:PAGE3

        STORE T TO U:DISCODE
        DO WHILE U:DISCODE

            @ 8,10 SAY ' ' GET M:DETAILS
            READ
            STORE  $(M:DETAILS,1,2) TO M:DIS
            USE  D:WHEREDIS INDEX D:DISCODE
            FIND &M:DIS
            IF   # = 0
                 @ 23,30 SAY 'WHERE DISCOVERED CODE INCORRECT'
            ELSE
                 STORE F TO U:DISCODE
            ENDIF
        ENDDO <U:DISCODE>
        @ 23,30 SAY '                                          '
        RELEASE U:DISCODE

        @ 14,10 SAY ' ' GET M:REPLY
        READ
        STORE T TO U:END
        DO WHILE U:END
           STORE ' ' TO U:REPLY
           @ 21,10 SAY '   *******   CHECK PREVIOUS';
                   +' ENTRIES  ******* '
           @ 22,10 SAY '        <CHOOSE> 1- CONTINUE ';
                   +'   2- CHANGE '
           @ 23,35 SAY ' ' GET U:REPLY
           READ
           IF U:REPLY <> '1' .AND. U:REPLY <> '2'
                @ 23,10 SAY ' ANSWER WITH A 1 OR 2 ONLY'
           ELSE
                STORE F TO U:END
           ENDIF
       ENDDO <U:END>
         @ 23,10 SAY '                                          '
         IF U:REPLY = '2'
              STORE T TO U:PAGE3
              @ 22,10 SAY '                                     '
              @ 23,10 SAY '                                     '
         ELSE
              STORE F TO U:PAGE3
              STORE F TO U:CONT3
         ENDIF
      ENDDO <U:PAGE3>
      RELEASE U:PAGE3,U:COUNT
      ERASE

ENDDO <U:CONT3>
      IF U:REPLY <> '3'
           @  10,20  SAY 'YOUR CASE IS BEING UPDATED NOW'
           @ $+2,20 SAY '      PLEASE STANDBY            '
      ENDIF
      IF U:REPLY <> '3'
           IF U:FILE = 'OPEN'
                STORE '2C' TO M:TYPE
```

```
            ELSE
                STORE '4C' TO M:TYPE
            ENDIF
            DO C:XDBHNDLR
        ENDIF

    RELEASE U:CONT3,U:REPLY,U:END
    RELEASE ALL EXCEPT C:*
    STORE T TO U:UPDATE
ENDDO <U:UPDATE>
RETURN

*****   END OF PROGRAM
```

VI. CASE CLOSING MODULE

```
**********************************************************
**                                                      **
**   Date: 18 December  1984                            **
**   Version: 1.0                                       **
**   Module Name: CLOSREC                               **
**   Module Purpose: Close Current Case                 **
**   Module Interface Definition                        **
**      Inputs: C:WHO, C:JULIAN                         **
**      Outputs: None                                   **
**   Module Processing Narrative Description:           **
**                                                      **
**       Prompts the Analyst for the desired closing date **
**       to assign to the case and then for the case    **
**       number.  The database is searched and          **
**       reads current values.  Insures that there are  **
**       transmittal and return dates assigned. If not  **
**       then the case must be updated before closing.  **
**       If dates are present, the credit code and vendor **
**       liability codes must be entered in response to **
**       the prompts.  The case is then written to the  **
**       CLOSE1 and CLCSE2 Databases and is marked for  **
**       deletion in the OPEN1 and OPEN2.               **
**                                                      **
**   Superordinate Modules: MENU1                       **
**   Subordinate Modules: XDBHNDLR                      **
**   Author: J.G. BOYNTON                               **
**                                                      **
**********************************************************
ERASE
STORE T TO CL:CLOSE
DO WHILE CL:CLOSE
TEXT
                          *****  CLOSE CASE  *****


                        This program enables you to

                             CLOSE A QDR CASE


                              1 - Continue
                              2 - Return to Menu
ENDTEXT

    STORE ' ' TO CL:REPLY
    @ 20,38 SAY ' ' GET CL:REPLY
    READ
    DO WHILE CL:REPLY <> '1' .AND. CL:REPLY <> '2'
            @ 23,20 SAY '       ANSWER WITH A 1 OR 2 ONLY'
            @ 20,38 SAY ' ' GET CL:REPLY
            READ
    ENDDO <CL:REPLY>

    ERASE
    IF CL:REPLY = '2'
         RELEASE ALL EXCEPT C:*
```

```
     RETURN
ENDIF

STORE '       ' TO LC:CLDATE
STORE '       ' TO M:CASE
STORE ' ' TO CL:VIC
STORE ' ' TO CL:CH

    @ 10,25 SAY '*****  CLOSE CASE  *****'
    STORE T TO CL:DATET
    DO WHILE CL:DATET


        @ 14,26 SAY 'CLOSING DATE   MMDDYY  ';
                    GET LC:CLDATE
        READ
        IF LC:CLDATE = '       '
             RELEASE ALL EXCEPT C:*
             RETURN
        ENDIF

        STORE $(LC:CLDATE,5,2) TO CL:TEMP1
        STORE VAL(CL:TEMP1)-1 TO CL:LOWDATE
        STORE STR(CL:LOWDATE,2) TO CL:LDATE

        IF $(LC:CLDATE,1,2) <'01';
           .OR. $(LC:CLDATE,1,2) > '12';
           .OR. $(LC:CLDATE,3,2) <'01' ;
           .OR. $(LC:CLDATE,3,2) > '31';
           .OR. $(LC:CLDATE,5,2)>$(C:JULIAN,1,2)

              @ 23,30 SAY ' DATE OUT OF RANGE'
        ELSE
           STORE F TO CL:DATET
        ENDIF
    ENDDO <CL:DATET>
    @ 23,30 SAY '                                    '
    RELEASE CL:DATET,CL:LDATE,CL:LOWDATE,CL:TEMP1

 STORE T TO CL:MORE
 DO WHILE CL:MORE

           @ 10,25 SAY ' *****  CLOSE CASE  *****   '
           @ 14,26 SAY 'CLOSING DATE   MMDDYY  ';
                   GET LC:CLDATE
           CLEAR GETS

    STORE T TO CL:REPLY
    DO WHILE CL:REPLY
        @ 15,26 SAY 'CASE NUMBER            ';
                GET M:CASE PICTURE '999999X!'
        READ
        USE D:OPEN1 INDEX  D:OCASE1
        FIND &M:CASE
        IF # = 0
             STORE ' ' TO CL:AGAIN
             @ 20,22 SAY '    That Case Not In Open File'
             @ 22,18 SAY ' 1-To Try Again  2-To Return';
                     +' To Menu'
             @ 23,33 SAY ' ' GET CL:AGAIN
             READ
             IF CL:AGAIN <> '1'
                RELEASE ALL EXCEPT C:*
                RETURN
             ENDIF
        ELSE

             IF .NOT. *
                  STORE F TO CL:REPLY
```

```
                    STORE T TO CL:FILLED
                ENDIF
                IF *
                    STORE ' ' TO CL:AGAIN
                    @ 20,22 SAY '       That CASE Already';
                            +' CLOSED'
                    @ 22,22 SAY '  1-To Try Again  2-To ';
                            +'Return To Menu'
                    @ 23,33 SAY ' ' GET CL:AGAIN
                    READ
                    IF CL:AGAIN<>'1'
                        RELEASE ALL EXCEPT C:*
                        RETURN
                    ENDIF
                ENDIF

            ENDIF
        ENDDO <CL:REPLY>
        @ 20,22 SAY '                                    ';
                +'
        @ 22,18 SAY '                                    ';
                +'
        @ 23,33 SAY '                                    ';
                +'

***** GO TO THE OPEN CASE FILE  AND READ THE CURRENT VLC
***** AND CREDIT CODE

        STORE M:CASE TO M:KEY
        STORE '1E' TO M:TYPE
        DO C:XDBHNDLR

        STORE $(M:DATES,1,5)  TO M:DDATE
        STORE $(M:DATES,6,5)  TO M:RDATE
        STORE $(M:DATES,11,5)  TO M:OPEN
        STORE $(M:DATES,16,5)  TO M:LDATE
        STORE $(M:DATES,21,5)  TO M:SCRDATE
        STORE $(M:DATES,26,5)  TO M:IRDATE
        STORE $(M:DATES,31,5)  TO M:RIMDAT
        STORE $(M:DATES,36,5)  TO M:CLOSE
        STORE $(M:DATES,41,5)  TO M:REOPEN

        IF M:RDATE ='     '.OR. M:OPEN='     '.OR. ;
                M:LDATE='     '.OR. M:RIMDAT ='     '
            @ 20,20 SAY 'Key Date/Dates Are Missing.';
                    +' CASE may NOT'
            @ 21,20 SAY 'Be Closed Until Update Is ';
                    +'Accomplished'
            @ 23,20 SAY ' Press Any Key To Continue'
            WAIT
            ERASE
            @ 10,25 SAY '***** Please Standby *****'

            STORE '1G' TO M:TYPE
            DO C:XDBHNDLR
            STORE F TO CL:FILLED
        ENDIF

*****  IF THE CASE IS COMPLETE AND READY TO BE CLOSED
         IF CL:FILLED

             STORE T TO CL:VLCT
             DO WHILE CL:VLCT

                 @ 16,26 SAY 'VENDOR LIABILITY CODE  ';
                         GET CL:VLC PICTURE 'A'
                 READ
                 IF CL:VLC = ' '
```

```
                @ 23,30 SAY 'VENDOR CODE MAY NOT ';
                        +'BE BLANK'
            ELSE
                STORE F TO CL:VLCT
            ENDIF
        ENDDO <CL:VLCT>
        @ 23,30 SAY '                                    ';
                +'      '
        RELEASE CL:VLCT

        STORE T TO CL:CRT
        DO WHILE CL:CRT
            @ 17,26 SAY 'CREDIT CODE              ' ;
                    GET CL:CR
            READ
            IF CL:CR = ' '
                @ 23,30 SAY ' CREDIT CODE MAY NOT ';
                        +'BE BLANK'
            ELSE
                STORE F TO CL:CRT
            ENDIF
          DDO <CL:CRT>
          23,30 SAY '                                    ';
                +'      '
        RELEASE CL:CRT

        STORE ' ' TO CL:REPLY

        @ 20,22 SAY '1 - CLOSE CASE  2 - CHANGE  ';
                +'3 - EXIT'
        @ 22,40 GET CL:REPLY
        READ
        IF CL:REPLY = '3'
            RELEASE ALL EXCEPT C:*
            RETURN
        ENDIF
        IF CL:REPLY = '1'
              ERASE
              @ 12,30 SAY 'CASE NUMBER'
              @ 12,44 SAY M:CASE
              @ 14,31 SAY 'IS BEING CLOSED'
              @ 16,30 SAY '  PLEASE STANDBY'

***** TRANSLATE LC:CLDATE FROM MMDDYY TO JULIAN FORM

              STORE VAL($(LC:CLDATE,1,2)) TO V:MM
              STORE VAL($(LC:CLDATE,3,2)) TO V:DD
              STORE VAL($(LC:CLDATE,5,2)) TO V:YY
              DO C:OJULIAN
              STORE V:JULDATE TO M:CLOSE
              RELEASE ALL LIKE V:*
              STORE M:CASE TO M:KEY

***** PUT CLOSING DATE INTO PROPER FORMAT FOR STORAGE

              STORE $(M:DATES,41,5) TO M:REOPEN
              STORE $(M:DATES,1,35) + M:CLOSE +;
                    M:REOPEN TO CL:DATES
              STORE CL:DATES TO M:DATES
              STORE CL:VLC TO M:VLC
              STORE CL:CR TO M:CR
              STORE '1C' TO M:TYPE
              STORE M:REC1 TO T:REC1

              DO C:XDBHNDLR

***** CREATE RECORD IN CLOSE1

              STORE '3F' TO M:TYPE
```

```
                    DO C:XDBHNDLR
                    STORE M:CASE TO T:CASE
                    RELEASE ALL LIKE M:*
                    STORE T:CASE TO M:CASE
                    USE D:OPEN1 INDEX D:OCASE1,D:ONSN
                    GOTO T:REC1
                    DELETE
                    STORE '2B' TO M:TYPE

                    STORE T:CASE TO M:KEY
                    DO C:XDBHNDLR

                    STORE # TO T:REC2
                    STORE '4F' TO M:TYPE

                    DO C:XDBHNDLR

                    STORE M:CASE TO T:CASE
                    RELEASE ALL LIKE M:*
                    STORE T:CASE TO M:CASE
                    USE D:OPEN2 INDEX D:OCASE2
                    GOTO T:REC2
                    DELETE

                   STORE F TO CL:ENTER
                   ERASE
               ENDIF
               @ 20,22 SAY '                                    ';
                       +'          '
               @ 22,22 SAY '                                    ';
                       +'          '

               ERASE
          ENDIF <CL:FILLED>
     ENDDO <CL:MORE>
     RELEASE ALL LIKE CL:*
     RELEASE ALL LIKE M:*
     RELEASE ALL LIKE T:*
     STORE T TO CL:CLOSE
ENDDO <CL:CLOSE>

***** END OF PROGRAM
```

VII. DATA BASE HANDLER MODULE

```
**********************************************************
**                                                      **
**   DATE: 29 NOV 1983                                  **
**   VERSION: 1.0                                       **
**   MODULE NAME: XDBHNDLR                              **
**   MODULE PURPOSE: TO PROVIDE ACCESS TO THE DATA BASE **
**                   RECORDS FOR READ AND UPDATE        **
**                                                      **
**   MODULE INTERFACE DEFINITION                        **
**                                                      **
**      INPUTS: M:CASE, M:COG, M:NSN, M:CAT, M:NOMEN,   **
**              M:UIC, M:UI, M:QTYDEF, M:UPRC, M:EPRC,  **
**              M:ORG, M:DOC, M:DOCNO, M:DATES, M:REPCON,**
**              M:FSCM, M:TIME, M:WHO, M:NUM, M:CR, M:SCR,**
**              M:SM, M:09Q, M:DEF, M:VLC, M:ACTPT,     **
**              M:SCRQTY, M:REC1, M:QTYINS, M:QTYREC,   **
**              M:QTYSTK, M:DEFV, M:DEFR, M:ITEM, M:OVER,**
**              M:OTF, M:GOV, M:DITEM, M:CCOST, M:WNTY, **
**              M:WUC, M:DIS, M:DETAILS, M:REPLY,       **
**              M:ACTTKN, M:COSTC, M:STATUSC, M:CAUSEC, **
**              M:RETC, M:ACTDISP, M:MFG, M:LOT, M:TYPE **
**                                                      **
**      OUTPUTS: M:CASE, M:COG, M:NSN, M:CAT, M:NOMEN,  **
**               M:UIC, M:UI, M:QTYDEF, M:UPRC, M:EPRC, **
**               M:ORG, M:DOC, M:DOCNO, M:DATES,        **
**               M:REPCON, M:FSCM, M:TIME, M:WHO, M:NUM,**
**               M:CR, M:SCR, M:SM, M:09Q, M:DEF, M:VLC,**
**               M:ACTPT, M:SCRQTY, M:REC1, M:QTYINS,   **
**               M:QTYREC, M:QTYSTK, M:DEFV, M:DEFR,    **
**               M:ITEM, M:OVER, M:OTF, M:GOV, M:DITEM, **
**               M:CCCST, M:WNTY, M:WUC, M:DIS, M:DETAILS,**
**               M:REPLY, M:ACTTKN, M:COSTC, M:STATUSC, **
**               M:CAUSEC, M:RETC, M:ACTDISP, M:MFG,    **
**               M:LOT, M:TYPE                          **
**                                                      **
**                                                      **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:           **
**        ACCEPTS THE TRANSACTION TYPE CODE AND ACCESSES **
**        THE DATA BASE (I.E. OPEN1, OPEN2, CLOSE1,     **
**        OR CLOSE2) WITH THE DESIRED OPERATION (I.E.   **
**        READ, READ/LOCK, WRITE/UNLOCK, UNLOCK).  THE  **
**        OPERATION PERFORMED DEPENDS ON THE TYPE CODE  **
**        RECEIVED.  THE MODULE WILL RETURN A TYPE CODE **
**        TO INDICATE THE SUCCESS OR FAILURE OF THE     **
**        OPERATION.                                    **
**                                                      **
**   SUPERORDINATE MODULES: XOPEN2, XUPDAT, CLOSREC     **
**   SUBORDINATE MODULES: NONE                          **
**   AUTHOR: R. G. NICHOLS                              **
**                                                      **
**********************************************************

*****   THE GENERAL OPERATION OF THE DATA BASE HANDLER
*****   IS BASED ON A CASE CONSTRUCT

*****   M:TYPE IS THE SELECTION KEY THAT DETERMINES THE
*****   TRANSACTION TO PERFORM - THE FIRST DIGIT REPRESENTS
*****   THE FILE THAT IS TO BE USED AND THE SECOND DIGIT
*****   REPRESENTS THE TYPE OF ACTIVITY (I.E. READ ACCESS
*****   WITH NSN KEY, READ ACCESS WITH CASE KEY, READ/LOCK
*****   WRITE NEW RECORD, WRITE UPDATE UNLOCK, RECORD UNLOCK
```

```
*****  ETC.)

DO CASE

*****  USE OPEN1 DATA BASE FILE

   CASE $(M:TYPE,1,1) = '1'
      IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'

*****  IF 'A' THEN ACCESS BY NSN

         IF $(M:TYPE,2,1) = 'A'
            STORE 'USE D:OPEN1 INDEX D:ONSN' TO H:USEFILE
         ELSE

*****  IF 'B' THEN ACCESS BY CASE

            STORE 'USE D:OPEN1 INDEX D:OCASE1' TO H:USEFILE
         ENDIF

*****  USE INDIRECT FILE IDENTIFICATION TO SELECT USE FILE

         &H:USEFILE
         FIND &M:KEY

*****  SEARCH FOR DESIRED RECORD.  IF FOUND RETURN DATA
*****  ELEMENTS AND SET M:TYPE TO 0 OTHERWISE SET M:TYPE
*****  TO 9

         IF # = 0
            STORE '9' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
         ELSE
            STORE # TO M:REC1
            STORE CASE TO M:CASE
            STORE COG TO M:COG
            STORE NSN TO M:NSN
            STORE CAT TO M:CAT
            STORE NOMEN TO M:NOMEN
            STORE UIC TO M:UIC
            STORE UI TO M:UI
            STORE QTYDEF TO M:QTYDEF
            STORE UPRC TO M:UPRC
            STORE EPRC TO M:EPRC
            STORE ORG TO M:ORG
            STORE DOC TO M:DOC
            STORE DOCNO TO M:DOCNO
            STORE DATES TO M:DATES
            STORE REPCON TO M:REPCON
            STORE FSCM TO M:FSCM
            STORE TIME TO M:TIME
            STORE WHO TO M:WHO
            STORE NUM TO M:NUM
            STORE CR TO M:CR
            STORE SCR TO M:SCR
            STORE SM TO M:SM
            STORE O9Q TO M:O9Q
            STORE DEF TO M:DEF
            STORE VLC TO M:VLC
            STORE ACTPT TO M:ACTPT
            STORE SCRQTY TO M:SCRQTY
            STORE '0' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
         ENDIF
      ELSE

         IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
```

```
*****   READ RECORD SPECIFIED BY M:REC1 (RECORD NUMBER)
*****   IF RECORD NOT FOUND RETURN M:TYPE = 9 OTHERWISE
*****   RETURN THE RECORD ELEMENTS

            USE D:OPEN1 INDEX D:ONSN
            GOTO M:REC1
            IF # <> M:REC1
               STORE '9' TO M:TYPE
               RELEASE ALL LIKE H:*
               RETURN
            ELSE

*****   IF M:TYPE = I THEN SKIP TO NEXT RECORD AND READ

               IF $(M:TYPE,2,1) = 'I'
                  SKIP
               ENDIF
               STORE # TO M:REC1
               STORE CASE TO M:CASE
               STORE CCG TO M:COG
               STORE NSN TO M:NSN
               STORE CAT TO M:CAT
               STORE NOMEN TO M:NOMEN
               STORE UIC TO M:UIC
               STORE UI TO M:UI
               STORE QTYDEF TO M:QTYDEF
               STORE UPRC TO M:UPRC
               STORE EPRC TO M:EPRC
               STORE ORG TO M:ORG
               STORE DOC TO M:DOC
               STORE DOCNO TO M:DOCNO
               STORE DATES TO M:DATES
               STORE REPCON TO M:REPCON
               STORE FSCM TO M:FSCM
               STORE TIME TO M:TIME
               STORE WHO TO M:WHO
               STORE NUM TO M:NUM
               STORE CR TO M:CR
               STORE SCR TO M:SCR
               STORE SM TO M:SM
               STORE C9Q TO M:C9Q
               STORE DEF TO M:DEF
               STORE VIC TO M:VLC
               STORE ACTPT TO M:ACTPT
               STORE SCRQTY TO M:SCRQTY
               STORE '0' TO M:TYPE
               RELEASE ALL LIKE H:*
               RETURN
            ENDIF
         ELSE

*****   THE FOLLOWING SECTION OF CODE UTILIZES A DELAY LOOP
*****   AND A LOCKING MECHANISM TO ENSURE THAT ONLY ONE USER
*****   IS WRITING TO A FILE AT ANY GIVEN TIME

            STORE T TO H:FAIL
            DO WHILE H:FAIL
               STORE 0 TO H:LOOPCNTR
               STORE 2 TO H:CNTR
               USE D:FILESTAT

*****   WHILE OPEN1 IS BEING USED, ENTER DELAY LOOP

               DO WHILE OPEN1<>'     '
                  STORE H:CNTR-1 TO H:CNTR
                  IF H:CNTR=0
                     STORE 2 TO H:CNTR
                     STORE H:LOOPCNTR+1 TO H:LOOPCNTR
```

```
            ENDIF

*****   IF IN DELAY LOOP A SHORT PERIOD OF TIME DISPLAY THE
*****   FACT THAT THE FILE IS CURRENTLY IN USE

            IF H:LOOPCNTR=2
            @ 23,16 SAY 'OPEN CASE FILE CURRENTLY IN USE';
                     +' - PLEASE STANDBY'
            ENDIF

*****   CLOSE OUT THE USE FILE THEN REOPEN IT TO CHECK LATEST
*****   STATUS - THE FILE MUST FIRST BE CLOSED AND THEN
*****   REOPENED TO CHECK LATEST STATUS

            USE
            USE D:FILESTAT

*****   DELAY BEFORE TRYING AGAIN

            STORE 1 TO H:DELAY
            DO WHILE H:DELAY < 5
              STORE H:DELAY + 1 TO H:DELAY
            ENDDO
         ENDDO

*****   IF FILE NOT IN USE, WRITE OUT YOUR LOCK INFORMATION

         @ 23,16 SAY '                                    ';
                    + '                '
         @ 23,16 SAY '              FILE LOCKED           ';
                    + '                '
         REPL OPEN1 WITH C:WHO
         USE

*****   IF TYPE C TRANSACTION - PERFORM A WRITE/UNLOCK

         IF $(M:TYPE,2,1) = 'C'
            USE D:FILESTAT

*****   VERIFY THAT YOU HAVE WRITE ACCESS TO THE DATA BASE
*****   RESET THE LOCK ON THE RECORD AND WRITE OUT THE
*****   UPDATED INFORMATION

            IF OPEN1 = C:WHO
               STORE '          ' TO M:TIME
               USE D:OPEN1 INDEX D:ONSN, D:OCASE1
               GOTO M:REC1
REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH;
 !(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC ;
WITH !(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC ;
WITH M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH ;
!(M:DOC)
REPL DOCNO WITH !(M:DOCNO),DATES WITH !(M:DATES),REPCON ;
WITH !(M:REPCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(M:WHO),NUM WITH !(M:NUM),CR WITH !(M:CR),SCR ;
WITH !(M:SCR),SM WITH !(M:SM),O9Q WITH !(M:O9Q)
REPL DEF WITH M:DEF,VLC WITH !(M:VLC),ACTPT WITH;
 !(M:ACTPT),SCRQTY WITH M:SCRQTY
               STORE 'O' TO M:TYPE
               USE

*****   UNLOCK THE DATA FILE FOR OTHERS TO WRITE

               USE D:FILESTAT
               REPL OPEN1 WITH '     '
               USE
               RELEASE ALL LIKE H:*
               RETURN
            ENDIF
```

```
                ELSE

*****   IF TYPE D THEN PERFORM READ/LOCK WITH NSN ACCESS KEY

                    IF $(M:TYPE,2,1)='D' .OR. $(M:TYPE,2,1)='E'
                    IF $(M:TYPE,2,1) = 'D'
                        STORE 'USE D:OPEN1 INDEX D:ONSN, ';
                              + 'D:OCASE1' TO H:USEFILE

*****   IF TYPE C THEN PERFORM READ/LOCK WITH CASE ACCESS KEY

                    ELSE
                        STORE 'USE D:OPEN1 INDEX D:OCASE1,';
                              +' D:ONSN' TO H:USEFILE
                    ENDIF
                    USE D:FILESTAT

*****   CHECK TO SEE IF THE USER HAS THE FILE LOCKED FOR
*****   WRITING

                    IF OPEN1 = C:WHO
                       &H:USEFILE
                       FIND &M:KEY

*****   CHECK TO SEE IF DESIRED RECORD EXISTS.  IF SO LOCK
*****   THE RECORD BY FILLING THE TIME STAMP AND RETURN THE
*****   RECORDS CONTENTS

                        IF # = 0
                           STORE '9' TO M:TYPE
                           USE D:FILESTAT
                           REPLACE OPEN1 WITH '    '
                           USE
                           RELEASE ALL LIKE H:*
                           RETURN
                        ELSE

*****   CHECK TO SEE IF THE RECORD HAS PREVIOUSLY BEEN
*****   LOCKED FOR UPDATE - RETURN TYPE = 1 IF PREVIOUSLY
*****   LOCKED OTHERWISE LOCK THE RECORD BY FILLING IN THE
*****   TIMESTAMP AND READ THE RECORD

                           IF  TIME <> '          '
                              STORE '1' TO M:TYPE
                              RELEASE ALL LIKE H:*
                              USE D:FILESTAT
                              REPLACE OPEN1 WITH '    '
                              USE
                              RETURN
                           ELSE

*****   READ DATE/TIME FOR TIMESTAMP

                              STORE   TO H:DUMMY
                              POKE 61440, 180, 44, 205, 33,;
                                137, 22, 13, 240, 137, 14, ;
                                15, 240, 195
                              SET CALL TO 61440
                              CALL H:DUMMY
                              STORE STR(PEEK(61456),2) TO ;
                                    H:HOUR
                              STORE STR(PEEK(61455),2) TO ;
                                    H:MIN
                              STORE STR(PEEK(61454),2) TO ;
                                    H:SEC
                              IF $(H:HOUR,1,1) =
                                 STORE 0 +$(H:HOUR,2,1) ;
                                    TO H:HOUR
                              ENDIF
```

```
                                    IF $(H:MIN,1,1)=
                                       STORE 0+$(H:MIN,2,1) TO :
                                          H:MIN
                                    ENDIF
                                    IF $(H:SEC,1,1)=
                                       STORE 0+$(H:SEC,2,1) TO :
                                          H:SEC
                                    ENDIF
                                    STORE C:JULIAN+H:HOUR +H:MIN+;
                                          H:SEC TO M:TIME
                                    REPL TIME WITH M:TIME
                                    STORE # TO M:REC1
                                    STORE CASE TO M:CASE
                                    STORE COG TO M:COG
                                    STORE NSN TO M:NSN
                                    STORE CAT TO M:CAT
                                    STORE NOMEN TO M:NOMEN
                                    STORE UIC TO M:UIC
                                    STORE UI TO M:UI
                                    STORE QTYDEF TO M:QTYDEF
                                    STORE UPRC TO M:UPRC
                                    STORE EPRC TO M:EPRC
                                    STORE ORG TO M:ORG
                                    STORE DOC TO M:DOC
                                    STORE DOCNO TO M:DOCNO
                                    STORE DATES TO M:DATES
                                    STORE REPCON TO M:REPCON
                                    STORE FSCM TO M:FSCM
                                    STORE TIME TO M:TIME
                                    STORE WHO TO M:WHO
                                    STORE NUM TO M:NUM
                                    STORE CR TO M:CR
                                    STORE SCR TO M:SCR
                                    STORE SM TO M:SM
                                    STORE 09Q TO M:09Q
                                    STORE DEF TO M:DEF
                                    STORE VLC TO M:VLC
                                    STORE ACTPT TO M:ACTPT
                                    STORE SCRQTY TO M:SCRQTY
                                    STORE '0' TO M:TYPE
                                    USE D:FILESTAT
                                    REPL OPEN1 WITH '     '
                                    USE
                                    RELEASE ALL LIKE H:*
                                    RETURN
                                 ENDIF
                              ENDIF
                           ENDIF
                        ELSE

***** TYPE F WILL BE USED TO CREATE NEW RECORDS

                           IF $(M:TYPE,2,1) = 'F'
                              USE D:FILESTAT

*****  CHECK TO SEE IF THE USER HAS THE FILE LOCKED FOR
*****  WRITING

                              IF OPEN1 = C:WHO
*                                @ 23,25 SAY '     UPDATING CASE ';
                                        + 'FILE     '
                                 USE D:OPEN1 INDEX D:OCASE1,;
                                       D:ONSN

*****  IF NC CASE NUMBER HAS BEEN ASSIGNED BECAUSE OF A
*****  PREVIOUS CASE, ASSIGN A NEW CASE NUMBER

                                 IF M:CASE = '       '
```

```
*****  CHECK FOR LAST CASE IN THE DATA BASE AND ASSIGN
*****  NEXT AVAILABLE NUMBER

                                GOTO BOTTOM
                                STORE $(CASE,1,1) TO H:YR
                                STORE VAL($(CASE,2,5))+1 TO ;
                                      H:SERIAL
                                IF H:SERIAL > 9999
                                   STORE H:YR + ;
                                   STR(H:SERIAL,5,0) TO M:CASE
                                ELSE
                                   IF H:SERIAL > 999
                                      STORE H:YR + '0' + ;
                                      STR(H:SERIAL,4,0) TO ;
                                      M:CASE
                                   ELSE
                                      IF H:SERIAL > 99
                                         STORE H:YR + '00' +;
                                         STR(H:SERIAL,3,0) TO;
                                             M:CASE
                                      ELSE
                                         IF H:SERIAL > 9
                                            STORE H:YR+'000'+;
                                            STR(H:SERIAL,2,0);
                                                TO M:CASE
                                         ELSE
                                            STORE H:YR+'0000';
                                           +STR(H:SERIAL,1,0);
                                                TO M:CASE
                                         ENDIF
                                      ENDIF
                                   ENDIF
                                ENDIF
                             ENDIF
                             @ 23,26 SAY 'CREATING NEW RECCRD';
                                    +' - OPEN1'

*****  CREATE NEW RECCRD AND FILL WITH DATA

                             APPEND BLANK
REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH ;
!(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC WITH;
 !(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC WITH ;
M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH !(M:DOC)
REPL DOCNO WITH !(M:DCCNO),DATES WITH !(M:DATES),REPCON ;
WITH !(M:REPCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(C:WHO),NUM WITH !(M:NUM),SM WITH !(M:SM),09Q ;
WITH !(M:09Q),DEF WITH M:DEF,ACTPT WITH !(M:ACTPT)
@ 23,26 SAY '                                    '
@ 23,25 SAY '                                     '
                             STORE '0' TO M:TYPE
                             USE D:FILESTAT
                             REPL OPEN1 WITH  '    '
                             USE
                             RELEASE ALL LIKE H:*
                             RETURN
                          ENDIF
                       ELSE

*****  IF TYPE G THEN UNLOCK A PREVIOUSLY LOCKED RECORD
*****  (NO UPDATE WILL TAKE PLACE)

                          IF $(M:TYPE,2,1) = 'G'
                             USE D:FILESTAT

*****  CHECK TO SEE IF THE USER HAS THE FILE LOCKED FOR
*****  WRITING

                             IF OPEN1 = C:WHO
```

```
                                    USE D:OPEN1
                                    GOTO M:REC1

*****  CLEAR THE TIMESTAMP TO UNLOCK

                                    IF TIME = M:TIME
                                       REPL TIME WITH '           '
                                    ENDIF
                                    USE D:FILESTAT
                                    REPL OPEN1 WITH '    '
                                    USE
                                 ENDIF
                                 RELEASE ALL LIKE H:*
                                 RETURN
                              ENDIF
                           ENDIF
                        ENDIF
                     ENDIF
                  ENDDO
               ENDIF
            ENDIF

*****  USE OPEN2 DATA BASE FILE

   CASE $(M:TYPE,1,1) = '2'

*****  SINCE OPEN2 HAS A SINGLE KEY, BOTH TYPE A AND B
*****  MAY BE USED FOR ACCESS

      IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'
         USE D:OPEN2 INDEX D:OCASE2
         FIND &M:KEY


*****  FIND REQUESTED RECORD IF FOUND RETURN THE DATA
*****  ELEMENTS AND TYPE = 0, OTHERWISE RETURN TYPE = 9

         IF # = 0
            STORE '9' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
         ELSE
            STORE # TO M:REC1
            STORE CASE TO M:CASE
            STORE QTYINS TO M:QTYINS
            STORE QTYREC TO M:QTYREC
            STORE QTYSTK TO M:QTYSTK
            STORE DEFV TO M:DEFV
            STORE DEFR TO M:DEFR
            STORE ITEM TO M:ITEM
            STORE OVER TO M:OVER
            STORE OTF TO M:OTF
            STORE GOV TO M:GOV
            STORE TIME TO M:TIME
            STORE WHO TO M:WHO
            STORE DITEM TO M:DITEM
            STORE CCOST TO M:CCOST
            STORE WNTY TO M:WNTY
            STORE WUC TO M:WUC
            STORE DIS TO M:DIS
            STORE DETAILS TO M:DETAILS
            STORE REPLY TO M:REPLY
            STORE ACTTKN TO M:ACTTKN
            STORE COSTC TO M:COSTC
            STORE STATUSC TO M:STATUSC
            STORE CAUSEC TO M:CAUSEC
            STORE RETC TO M:RETC
            STORE ACTDISP TO M:ACTDISP
```

```
            STORE MFG TO M:MFG
            STORE LOT TO M:LOT
            STORE '0' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
         ENDIF
      ELSE

*****    IF TYPE H OR I ACCESS BY RECORD NUMBER (M:REC1)

          IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
             USE D:OPEN2
             GOTO M:REC1
             IF # <> M:REC1
                STORE '9' TO M:TYPE
                RELEASE ALL LIKE H:*
                RETURN
             ELSE

*****    IF TYPE I, SKIP TO NEXT RECORD AND READ DATA

                IF $(M:TYPE,2,1) = 'I'
                   SKIP
                ENDIF
                STORE # TO M:REC1
                STORE CASE TO M:CASE
                STORE QTYINS TO M:QTYINS
                STORE QTYREC TO M:QTYREC
                STORE QTYSTK TO M:QTYSTK
                STORE DEFV TO M:DEFV
                STORE DEFR TO M:DEFR
                STORE ITEM TO M:ITEM
                STORE OVER TO M:OVER
                STORE OTF TO M:OTF
                STORE GOV TO M:GOV
                STORE TIME TO M:TIME
                STORE WHO TO M:WHO
                STORE DITEM TO M:DITEM
                STORE CCOST TO M:CCOST
                STORE WNTY TO M:WNTY
                STORE WUC TO M:WUC
                STORE DIS TO M:DIS
                STORE DETAILS TO M:DETAILS
                STORE REPLY TO M:REPLY
                STORE ACTTKN TO M:ACTTKN
                STORE COSTC TO M:COSTC
                STORE STATUSC TO M:STATUSC
                STORE CAUSEC TO M:CAUSEC
                STORE RETC TO M:RETC
                STORE ACTDISP TO M:ACTDISP
                STORE MFG TO M:MFG
                STORE LOT TO M:LOT
                STORE '0' TO M:TYPE
                RELEASE ALL LIKE H:*
                RETURN
             ENDIF
          ELSE

*****    THE FOLLOWING SECTION REQUIRES THAT THE DATA BASE
*****    BE LOCKED TO ENSURE ONLY A SINGLE UPDATE IS
*****    PERFORMED AT A TIME

             STORE T TO H:FAIL
             DO WHILE H:FAIL
                STORE 0 TO H:LOOPCNTR
                STORE 2 TO H:CNTR
                USE D:FILESTAT

*****    LOOP WHILE OPEN2 IS LOCKED BY ANOTHER USER
```

```
                DO WHILE OPEN2<>'     '
                   STORE H:CNTR-1 TO H:CNTR
                   IF H:CNTR=0
                      STORE 2 TO H:CNTR
                      STORE H:LOOPCNTR+1 TO H:LOOPCNTR
                   ENDIF
                   IF H:LOOPCNTR=2
                   @ 23,16 SAY 'OPEN CASE FILE CURRENTLY IN';
                              + ' USE - PLEASE STANDBY'
                   ENDIF

*****   CLOSE AND REOPEN THE FILE STATS TO DETERMINE ANY
*****   CHANGE IN FILE LOCKING STATUS

                   USE
                   USE D:FILESTAT

*****   DELAY BEFORE NEXT ATTEMPT TO ACCESS THE DATA BASE

                   STORE 1 TO H:DELAY
                   DO WHILE H:DELAY < 5
                     STORE H:DELAY + 1 TO H:DELAY
                   ENDDO
                ENDDO
                @ 23,16 SAY '                                    ';
                          + '                    '
*               @ 23,16 SAY '                                    ';
                          + '                    '

*****   WRITE LOCK TO FILESTAT

                REPL OPEN2 WITH C:WHO
                USE

*****   IF TYPE C PERFORM WRITE/UNLOCK

                IF $(M:TYPE,2,1) = 'C'
                   USE D:FILESTAT

*****   CHECK TO SEE IF USER HAS WRITE ACCESS TO THE DATA
*****   BASE

                   IF OPEN2 = C:WHO
                      STORE '                ' TO M:TIME
                      USE D:OPEN2 INDEX D:OCASE2

*****   WRITE UPDATE INFORMATION TO THE FILE

                      GOTO M:REC1
REPL CASE WITH !(M:CASE),QTYINS WITH M:QTYINS,QTYREC WITH :
M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),DEFR :
WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH !(M:OVER),:
OTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH !(M:TIME)
REPL WHO WITH !(M:WHO),DITEM WITH !(M:DITEM),CCOST WITH :
M:CCCST,WNTY WITH !(M:WNTY),WUC WITH !(M:WUC),DIS WITH :
!(M:DIS),DETAILS WITH !(M:DETAILS),REPLY WITH !(M:REPLY),:
ACTTKN WITH !(M:ACTTKN),COSTC WITH !(M:COSTC)
REPL STATUSC WITH !(M:STATUSC),CAUSEC WITH !(M:CAUSEC),:
RETC WITH !(M:RETC),ACTDISP WITH !(M:ACTDISP),MFG WITH :
!(M:MFG),LOT WITH !(M:LOT)
                      STORE '0' TO M:TYPE
                      USE

***** UNLOCK FILE FOR OTHERS USE

                      USE D:FILESTAT
                      REPL OPEN2 WITH '     '
                      USE
```

```
                    RELEASE ALL LIKE H:*
                    RETURN
                ENDIF
            ELSE

*****   IF TYPE D OR E PERFORM READ/LOCK

                IF $(M:TYPE,2,1) = 'D' .OR. $(M:TYPE,2,1) = 'E'
                USE D:FILESTAT

*****   CHECK TO SEE IF USER HAS WRITE ACCESS TO THE DATA
*****   BASE

                    IF OPEN2 = C:WHO
                       USE D:OPEN2 INDEX D:OCASE2
                       FIND &M:KEY

*****   IF DESIRED RECCRD FOUND VERIFY THAT RECORD IS NOT
*****   CURRENTLY IN USE - IF NOT FOUND RETURN TYPE = 9

                        IF # = 0
                           STORE '9' TO M:TYPE
                           USE D:FILESTAT
                           REPLACE OPEN2 WITH '    '
                           USE
                           RELEASE ALL LIKE H:*
                           RETURN
                        ELSE

*****   IF TIMESTAMP FILLED, RECORD IN USE - RETURN
*****   TYPE = 1

                            IF  TIME <> '          '
                               STORE '1' TO M:TYPE
                               RELEASE ALL LIKE H:*
                               USE D:FILESTAT
                               REPLACE OPEN2 WITH '    '
                               USE
                               RETURN
                            ELSE

*****   LOAD TIME/DATE INTO TIMESTAMP AND READ THE RECORD

                                STORE   TO H:DUMMY
                                POKE 61440, 180, 44, 205, 33,;
                                   137, 22, 13, 240, 137, 14,;
                                   15, 240, 195
                                SET CALL TO 61440
                                CALL H:DUMMY
                                STORE STR(PEEK(61456),2) TO ;
                                      H:HOUR
                                STORE STR(PEEK(61455),2) TO ;
                                      H:MIN
                                STORE STR(PEEK(61454),2) TO ;
                                      H:SEC
                                IF $(H:HOUR,1,1)=
                                   STORE 0 +$(H:HOUR,2,1)  ;
                                      TO H:HOUR
                                ENDIF
                                IF $(H:MIN,1,1)=
                                   STORE 0+$(H:MIN,2,1) TO ;
                                      H:MIN
                                ENDIF
                                IF $(H:SEC,1,1)=
                                   STORE 0+$(H:SEC,2,1) TO ;
                                      H:SEC
                                ENDIF
                                STORE C:JULIAN+H:HOUR +H:MIN+;
                                      H:SEC TO M:TIME
```

```
                                REPL TIME WITH M:TIME
                                STORE # TO M:REC1
                                STORE CASE TO M:CASE
                                STORE QTYINS TO M:QTYINS
                                STORE QTYREC TO M:QTYREC
                                STORE QTYSTK TO M:QTYSTK
                                STORE DEFV TO M:DEFV
                                STORE DEFR TO M:DEFR
                                STORE ITEM TO M:ITEM
                                STORE OVER TO M:OVER
                                STORE OTF TO M:OTF
                                STORE GOV TO M:GOV
                                STORE TIME TO M:TIME
                                STORE WHO TO M:WHO
                                STORE DITEM TO M:DITEM
                                STORE CCOST TO M:CCOST
                                STORE WNTY TO M:WNTY
                                STORE WUC TO M:WUC
                                STORE DIS TO M:DIS
                                STORE DETAILS TO M:DETAILS
                                STORE REPLY TO M:REPLY
                                STORE ACTTKN TO M:ACTTKN
                                STORE COSTC TO M:COSTC
                                STORE STATUSC TO M:STATUSC
                                STORE CAUSEC TO M:CAUSEC
                                STORE RETC TO M:RETC
                                STORE ACTDISP TO M:ACTDISP
                                STORE MFG TO M:MFG
                                STORE LOT TO M:LOT
                                STORE '0' TO M:TYPE

*****   UNLOCK DATA BASE FOR OTHER USERS

                                USE D:FILESTAT
                                REPL OPEN2 WITH '    '
                                USE
                                RELEASE ALL LIKE H:*
                                RETURN
                            ENDIF
                        ENDIF
                    ENDIF
                ELSE

*****   TYPE F CREATES NEW RECORDS

                    IF $(M:TYPE,2,1) = 'F'
                        USE D:FILESTAT


*****   CHECK TO SEE IF USER HAS WRITE ACCESS TO THE DATA
*****   BASE

                        IF OPEN2 = C:WHO
*                           @ 23,25 SAY '     UPDATING CASE';
                                    + ' FILE '
                            USE D:OPEN2 INDEX D:OCASE2

*****   ADD THE NEW RECORD AND ENTER DATA

                            APPEND BLANK
REPL CASE WITH !(M:CASE),QTYINS WITH M:QTYINS,QTYREC WITH;
 M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),DEFR ;
WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH !(M:OVER),;
OTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH !(M:TIME)
REPL WHO WITH !(C:WHO),DITEM WITH !(M:DITEM),WNTY WITH ;
!(M:WNTY),WUC WITH !(M:WUC),DIS WITH !(M:DIS),DETAILS ;
WITH !(M:DETAILS),ACTDISP WITH !(M:ACTDISP),MFG WITH ;
!(M:MFG),LOT WITH !(M:LOT)
                            STORE '0' TO M:TYPE
```

```
***** UNLOCK DATA BASE FOR CTHERS

                              USE D:FILESTAT
                              REPL OPEN2 WITH '    '
                              USE
                              @ 23,25 SAY '                    ';
                                        + '                    '
                              RELEASE ALL LIKE H:*
                              RETURN
                           ENDIF
                        ELSE

*****   IF TYPE G PERFCRM UNLOCK (NO UPDATE)

                           IF $(M:TYPE,2,1) = 'G'
                              USE D:FILESTAT
                              IF OPEN2 = C:WHO
                                 USE D:OPEN2
                                 GOTO M:REC1
                                 IF TIME = M:TIME
                                    REPL TIME WITH '            '
                                 ENDIF

*****   UNLOCK DATA BASE FOR OTHERS

                                 USE D:FILESTAT
                                 REPL OPEN2 WITH '    '
                                 USE
                              ENDIF
                              RELEASE ALL LIKE H:*
                              RETURN
                           ENDIF
                        ENDIF
                     ENDIF
                  ENDDO
               ENDIF
            ENDIF

*****   TYPES 3 AND 4 DEAL WITH CLOSE1 AND CLOSE2
*****   THE METHODOLOGY USED FOR THESE TYPES IS THE SAME
*****   AS FOR THE OPEN1 AND OPEN2 DATA BASE FILES
*****   ONLY DIFFERENCES WILL BE NOTED BELOW SINCE THE
*****   BASIC COMMENTS ARE THE SAME AS ABOVE


***** TYPE 3 USES CLOSE1

      CASE $(M:TYPE,1,1) = '3'
         IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'
            IF $(M:TYPE,2,1) = 'A'
               STORE 'USE D:CLOSE1 INDEX D:CNSN' TO H:USEFILE
            ELSE
               STORE 'USE D:CLOSE1 INDEX D:CCASE1' TO H:USEFILE
            ENDIF
            &H:USEFILE
            FIND &M:KEY
            IF # = 0
               STORE '9' TO M:TYPE
               RELEASE ALL LIKE H:*
               RETURN
            ELSE
               STORE # TO M:REC1
               STORE CASE TO M:CASE
               STORE COG TO M:COG
               STORE NSN TO M:NSN
               STORE CAT TO M:CAT
               STORE NOMEN TO M:NOMEN
```

```
        STORE UIC TO M:UIC
        STORE UI TO M:UI
        STORE QTYDEF TO M:QTYDEF
        STORE UPRC TO M:UPRC
        STORE EPRC TO M:EPRC
        STORE ORG TO M:ORG
        STORE DOC TO M:DOC
        STORE DOCNO TO M:DOCNO
        STORE DATES TO M:DATES
        STORE REPCON TO M:REPCON
        STORE FSCM TO M:FSCM
        STORE TIME TO M:TIME
        STORE WHO TO M:WHO
        STORE NUM TO M:NUM
        STORE CR TO M:CR
        STORE SCR TO M:SCR
        STORE SM TO M:SM
        STORE O9Q TO M:O9Q
        STORE DEF TO M:DEF
        STORE VLC TO M:VIC
        STORE ACTPT TO M:ACTPT
        STORE SCRQTY TO M:SCRQTY
        STORE '0' TO M:TYPE
        RELEASE ALL LIKE H:*
        RETURN
    ENDIF
ELSE
    IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
        USE D:CLCSE1
        GOTO M:REC1
        IF # <> M:REC1
            STORE '9' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
        ELSE
            IF $(M:TYPE,2,1) = 'I'
                SKIP
            ENDIF
            STORE # TO M:REC1
            STORE CASE TO M:CASE
            STORE CCG TO M:COG
            STORE NSN TO M:NSN
            STORE CAT TO M:CAT
            STORE NOMEN TO M:NOMEN
            STORE UIC TO M:UIC
            STORE UI TO M:UI
            STORE QTYDEF TO M:QTYDEF
            STORE UPRC TO M:UPRC
            STORE EPRC TO M:EPRC
            STORE ORG TO M:ORG
            STORE DOC TO M:DOC
            STORE DOCNO TO M:DOCNO
            STORE DATES TO M:DATES
            STORE REPCON TO M:REPCON
            STORE FSCM TO M:FSCM
            STORE TIME TO M:TIME
            STORE WHO TO M:WHO
            STORE NUM TO M:NUM
            STORE CR TO M:CR
            STORE SCR TO M:SCR
            STORE SM TO M:SM
            STORE O9Q TO M:O9Q
            STORE DEF TO M:DEF
            STORE VIC TO M:VIC
            STORE ACTPT TO M:ACTPT
            STORE SCRQTY TO M:SCRQTY
            STORE '0' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
```

```
            ENDIF
        ELSE
            STORE T TO H:FAIL
            DO WHILE H:FAIL
                STORE 0 TO H:LOOPCNTR
                STORE 2 TO H:CNTR
                USE D:FILESTAT
                DO WHILE CLOSE1<>'     '
                    STORE H:CNTR-1 TO H:CNTR
                    IF H:CNTR=0
                        STORE 2 TO H:CNTR
                        STORE H:LOOPCNTR+1 TO H:LOOPCNTR
                    ENDIF
                    IF H:LOOPCNTR=2
                    @ 23,16 SAY 'CLOSE CASE FILE CURRENTLY IN';
                              + ' USE - PLEASE STANDBY'
                    ENDIF
                    USE
                    USE D:FILESTAT
                    STORE 1 TO H:DELAY
                    DO WHILE H:DELAY < 5
                      STORE H:DELAY + 1 TO H:DELAY
                    ENDDO
                ENDDO
                @ 23,16 SAY '                                    ';
                          + '                    '
*               @ 23,16 SAY '                FILE LOCKED  BY ';
                          + 'CLOSE1                '
                REPL CLOSE1 WITH C:WHO
                USE
                IF $(M:TYPE,2,1) = 'C'
                    USE D:FILESTAT
                    IF CLOSE1 = C:WHO
                        STORE '                ' TO M:TIME
                        USE D:CLOSE1 INDEX D:CNSN, D:CCASE1
                        GOTO M:REC1
REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH ;
!(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC WITH ;
!(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC WITH ;
M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH !(M:DOC)
REPL DOCNO WITH !(M:DOCNO),DATES WITH !(M:DATES),REPCON ;
WITH !(M:REPCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(M:WHO),NUM WITH !(M:NUM),CR WITH !(M:CR),SCR ;
WITH !(M:SCR),SM WITH !(M:SM),O9Q WITH !(M:O9Q)
REPL DEF WITH M:DEF,VLC WITH !(M:VLC),ACTPT WITH ;
!(M:ACTPT),SCRQTY WITH M:SCRQTY
                        STORE '0' TO M:TYPE
                        USE
                        USE D:FILESTAT
                        REPL CLOSE1 WITH '     '
                        USE
                        RELEASE ALL LIKE H:*
                        RETURN
                    ENDIF
                ELSE
                    IF $(M:TYPE,2,1)='D' .OR. $(M:TYPE,2,1)='E'
                    IF $(M:TYPE,2,1) = 'D'
                        STORE 'USE D:CLOSE1 INDEX D:CNSN, ';
                              + 'D:CCASE1' TO H:USEFILE
                    ELSE
                        STORE 'USE D:CLOSE1 INDEX D:CCASE1,';
                              + ' D:CNSN' TO H:USEFILE
                    ENDIF
                    USE D:FILESTAT
                    IF CLOSE1 = C:WHO
                        &H:USEFILE
                        FIND &M:KEY
                        IF # = 0
                            STORE '9' TO M:TYPE
```

```
      USE D:FILESTAT
      REPLACE CLOSE1 WITH '     '
      USE
      RELEASE ALL LIKE H:*
      RETURN
   ELSE
      IF  TIME <> '              '
         STORE '1' TO M:TYPE
         RELEASE ALL LIKE H:*
         USE D:FILESTAT
         REPLACE CLOSE1 WITH '     '
         USE
         RETURN
      ELSE
         STORE   TO H:DUMMY
         POKE 61440, 180, 44, 205, 33,;
            137, 22, 13, 240, 137, 14,;
            15, 240, 195
         SET CALL TO 61440
         CALL H:DUMMY
         STORE STR(PEEK(61456),2) TO ;
               H:HOUR
         STORE STR(PEEK(61455),2) TO ;
               H:MIN
         STORE STR(PEEK(61454),2) TO ;
               H:SEC
         IF $(H:HOUR,1,1)=
            STORE 0 +$(H:HOUR,2,1)  ;
                  TO H:HOUR
         ENDIF
         IF $(H:MIN,1,1)=
            STORE 0+$(H:MIN,2,1) TO ;
               H:MIN
         ENDIF
         IF $(H:SEC,1,1)=
            STORE 0+$(H:SEC,2,1) TO ;
               H:SEC
         ENDIF
         STORE C:JULIAN+H:HOUR +H:MIN+;
               H:SEC TO M:TIME
         REPL TIME WITH M:TIME
         STORE # TO M:REC1
         STORE CASE TO M:CASE
         STORE COG TO M:COG
         STORE NSN TO M:NSN
         STORE CAT TO M:CAT
         STORE NOMEN TO M:NOMEN
         STORE UIC TO M:UIC
         STORE UI TO M:UI
         STORE QTYDEF TO M:QTYDEF
         STORE UPRC TO M:UPRC
         STORE EPRC TO M:EPRC
         STORE ORG TO M:ORG
         STORE DOC TO M:DOC
         STORE DOCNO TO M:DOCNO
         STORE DATES TO M:DATES
         STORE REPCON TO M:REPCON
         STORE FSCM TO M:FSCM
         STORE TIME TO M:TIME
         STORE WHO TO M:WHO
         STORE NUM TO M:NUM
         STORE CR TO M:CR
         STORE SCR TO M:SCR
         STORE SM TO M:SM
         STORE 090 TO M:090
         STORE DEF TO M:DEF
         STORE VLC TO M:VLC
         STORE ACTPT TO M:ACTPT
         STORE SCRQTY TO M:SCRQTY
```

```
                                    STORE '0' TO M:TYPE
                                    USE D:FILESTAT
                                    REPL CLOSE1 WITH '     '
                                    USE
                                    RELEASE ALL LIKE H:*
                                    RETURN
                                ENDIF
                            ENDIF
                        ENDIF
                    ELSE

*****   FOR TYPE F, A NEW RECORD IS CREATED BY TRANSFERRING
*****   DATA FROM THE OPEN FILE TO THE CLOSE FILE

                        IF $(M:TYPE,2,1) = 'F'
                            USE D:FILESTAT
                            IF CLOSE1 = C:WHO
                                @ 23,25 SAY '      UPDATING CASE';
                                        + ' FILE          '
                                USE D:CLOSE1 INDEX D:CCASE1, ;
                                    D:CNSN
                                APPEND BLANK

REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH ;
!(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC WITH;
 !(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC WITH ;
M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH !(M:DOC)
REPL DOCNO WITH !(M:DOCNO),DATES WITH !(M:DATES),REPCON ;
WITH !(M:REPCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(C:WHO),NUM WITH !(M:NUM),SM WITH !(M:SM),09Q ;
WITH !(M:09Q),DEF WITH M:DEF,ACTPT WITH !(M:ACTPT)

                                STORE '0' TO M:TYPE
                                USE D:FILESTAT
                                REPL CLOSE1 WITH  '     '
                                USE
                                @ 23,25 SAY '                  ';
                                        + '                '
                                RELEASE ALL LIKE H:*
                                RETURN
                            ENDIF
                        ELSE
                            IF $(M:TYPE,2,1) = 'G'
                                USE D:FILESTAT
                                IF CLOSE1 = C:WHO
                                    USE D:CLOSE1
                                    GOTO M:REC1
                                    IF TIME = M:TIME
                                        REPL TIME WITH '            '
                                    ENDIF
                                    USE D:FILESTAT
                                    REPL CLOSE1 WITH '     '
                                    USE
                                ENDIF
                                RELEASE ALL LIKE H:*
                                RETURN
                            ENDIF
                        ENDIF
                    ENDIF
                ENDIF
            ENDDO
        ENDIF
    ENDIF

*****  TYPE 4 USES CLOSE2 DATA BASE FILE

    CASE $(M:TYPE,1,1) = '4'
        IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'
            USE D:CLOSE2 INDEX  D:CCASE2
```

```
      FIND &M:KEY
      IF # = 0
         STORE '9' TO M:TYPE
         RELEASE ALL LIKE H:*
         RETURN
      ELSE
         STORE # TO M:REC1
         STORE CASE TO M:CASE
         STORE QTYINS TO M:QTYINS
         STORE QTYREC TO M:QTYREC
         STORE QTYSTK TO M:QTYSTK
         STORE DEFV TO M:DEFV
         STORE DEFR TO M:DEFR
         STORE ITEM TO M:ITEM
         STORE OVER TO M:OVER
         STORE OTF TO M:OTF
         STORE GOV TO M:GOV
         STORE TIME TO M:TIME
         STORE WHO TO M:WHO
         STORE DITEM TO M:DITEM
         STORE CCOST TO M:CCOST
         STORE WNTY TO M:WNTY
         STORE WUC TO M:WUC
         STORE DIS TO M:DIS
         STORE DETAILS TO M:DETAILS
         STORE REPLY TO M:REPLY
         STORE ACTTKN TO M:ACTTKN
         STORE COSTC TO M:COSTC
         STORE STATUSC TO M:STATUSC
         STORE CAUSEC TO M:CAUSEC
         STORE RETC TO M:RETC
         STORE ACTDISP TO M:ACTDISP
         STORE MFG TO M:MFG
         STORE LOT TO M:LOT
         STORE '0' TO M:TYPE
         RELEASE ALL LIKE H:*
         RETURN
      ENDIF
   ELSE
      IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
         USE D:CLOSE2
         GOTO M:REC1
         IF # <> M:REC1
            STORE '9' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
         ELSE
            IF $(M:TYPE,2,1) = 'I'
               SKIP
            ENDIF
            STORE # TO M:REC1
            STORE CASE TO M:CASE
            STORE QTYINS TO M:QTYINS
            STORE QTYREC TO M:QTYREC
            STORE QTYSTK TO M:QTYSTK
            STORE DEFV TO M:DEFV
            STORE DEFR TO M:DEFR
            STORE ITEM TO M:ITEM
            STORE OVER TO M:OVER
            STORE OTF TO M:OTF
            STORE GOV TO M:GOV
            STORE TIME TO M:TIME
            STORE WHO TO M:WHO
            STORE DITEM TO M:DITEM
            STORE CCOST TO M:CCOST
            STORE WNTY TO M:WNTY
            STORE WUC TO M:WUC
            STORE DIS TO M:DIS
            STORE DETAILS TO M:DETAILS
```

```
                STORE REPLY TO M:REPLY
                STORE ACTTKN TO M:ACTTKN
                STORE COSTC TO M:COSTC
                STORE STATUSC TO M:STATUSC
                STORE CAUSEC TO M:CAUSEC
                STORE RETC TO M:RETC
                STORE ACTDISP TO M:ACTDISP
                STORE MFG TO M:MFG
                STORE LOT TO M:LOT
                STORE '0' TO M:TYPE
                RELEASE ALL LIKE H:*
                RETURN
            ENDIF
        ELSE
            STORE T TO H:FAIL
            DO WHILE H:FAIL
                STORE 0 TO H:LOOPCNTR
                STORE 2 TO H:CNTR
                USE D:FILESTAT
                DO WHILE CLOSE2<>'     '
                    STORE H:CNTR-1 TO H:CNTR
                    IF H:CNTR=0
                        STORE 2 TO H:CNTR
                        STORE H:LOOPCNTR+1 TO H:LOOPCNTR
                    ENDIF
                    IF H:LOOPCNTR=2
                    @ 23,16 SAY 'CLOSE CASE FILE CURRENTLY IN USE ';
                        + '- PLEASE STANDBY'
                    ENDIF
                    USE
                    USE D:FILESTAT
                    STORE 1 TO H:DELAY
                    DO WHILE H:DELAY < 5
                       STORE H:DELAY + 1 TO H:DELAY
                    ENDDO
                ENDDO
                @ 23,16 SAY '
                REPL CLOSE2 WITH C:WHO
                USE
                IF $(M:TYPE,2,1) = 'C'
                    USE D:FILESTAT
                    IF CLOSE2 = C:WHO
                        STORE '                ' TO M:TIME
                        USE D:CLOSE2 INDEX D:CCASE2
                        GOTO M:REC1
REPL CASE WITH !(M:CASE),QTYINS WITH M:QTYINS,QTYREC ;
WITH M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),;
DEFR WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH ;
!(M:OVER),OTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH ;
!(M:TIME)
REPL WHO WITH !(M:WHO),DITEM WITH !(M:DITEM),CCOST WITH ;
M:CCOST,WNTY WITH !(M:WNTY),WUC WITH !(M:WUC),DIS WITH ;
!(M:DIS),DETAILS WITH !(M:DETAILS), REPLY WITH !(M:REPLY),;
ACTTKN WITH !(M:ACTTKN),COSTC WITH !(M:COSTC)
REPL STATUSC WITH !(M:STATUSC),CAUSEC WITH !(M:CAUSEC),;
RETC WITH !(M:RETC),ACTDISP WITH !(M:ACTDISP),MFG WITH ;
!(M:MFG),LOT WITH !(M:LOT)
                        STORE '0' TO M:TYPE
                        USE
                        USE D:FILESTAT
                        REPL CLOSE2 WITH '     '
                        USE
                        RELEASE ALL LIKE H:*
                        RETURN
                    ENDIF
                ELSE
                    IF $(M:TYPE,2,1) = 'D' .OR. $(M:TYPE,2,1) = 'E'
                        USE D:FILESTAT
                        IF CLOSE2 = C:WHO
```

```
USE D:CLOSE2 INDEX D:CCASE2
FIND &M:KEY
IF # = 0
   STORE '9' TO M:TYPE
   USE D:FILESTAT
   REPLACE CLOSE2 WITH '     '
   USE
   RELEASE ALL LIKE H:*
   RETURN
ELSE
   IF  TIME <> '              '
      STORE '1' TO M:TYPE
      RELEASE ALL LIKE H:*
      USE D:FILESTAT
      REPLACE CLOSE2 WITH '     '
      USE
      RETURN
   ELSE
      STORE    TO H:DUMMY
      POKE 61440, 180, 44, 205, 33, 137, ;
        22, 13, 240, 137, 14, 15, 240, 195
      SET CALL TO 61440
      CALL H:DUMMY
      STORE STR(PEEK(61456),2) TO H:HOUR
      STORE STR(PEEK(61455),2) TO H:MIN
      STORE STR(PEEK(61454),2) TO H:SEC
      IF $(H:HOUR,1,1) =
         STORE 0 +$(H:HOUR,2,1) TO H:HOUR
      ENDIF
      IF $(H:MIN,1,1) =
         STORE 0+$(H:MIN,2,1) TO H:MIN
      ENDIF
      IF $(H:SEC,1,1) =
         STORE 0+$(H:SEC,2,1) TO H:SEC
      ENDIF
      STORE C:JULIAN+H:HOUR+H:MIN+H:SEC;
         TO M:TIME
      REPL TIME WITH M:TIME
      STORE # TO M:REC1
      STORE CASE TO M:CASE
      STORE QTYINS TO M:QTYINS
      STORE QTYREC TO M:QTYREC
      STORE QTYSTK TO M:QTYSTK
      STORE DEFV TO M:DEFV
      STORE DEFR TO M:DEFR
      STORE ITEM TO M:ITEM
      STORE OVER TO M:OVER
      STORE OTF TO M:OTF
      STORE GOV TO M:GOV
      STORE TIME TO M:TIME
      STORE WHO TO M:WHO
      STORE DITEM TO M:DITEM
      STORE CCOST TO M:CCOST
      STORE WNTY TO M:WNTY
      STORE WUC TO M:WUC
      STORE DIS TO M:DIS
      STORE DETAILS TO M:DETAILS
      STORE REPLY TO M:REPLY
      STORE ACTTKN TO M:ACTTKN
      STORE COSTC TO M:COSTC
      STORE STATUSC TO M:STATUSC
      STORE CAUSEC TO M:CAUSEC
      STORE RETC TO M:RETC
      STORE ACTDISP TO M:ACTDISP
      STORE MFG TO M:MFG
      STORE LOT TO M:LOT
      STORE '0' TO M:TYPE
      USE D:FILESTAT
      REPL CLOSE2 WITH '     '
```

```
                                    USE
                                    RELEASE ALL LIKE H:*
                                    RETURN
                                ENDIF
                            ENDIF
                        ENDIF
                    ELSE

*****   FOR TYPE F, A NEW RECORD IS CREATED BY TRANSFERRING
*****   DATA FROM THE OPEN FILE TO THE CLOSE FILE

                        IF $(M:TYPE,2,1) = 'F'
                            USE D:FILESTAT
                            IF CLOSE2 = C:WHO
                                USE D:OPEN2 INDEX D:OCASE2
                                FIND &M:CASE
                                IF # <> 0
                                                + ' FILE          '
                                    USE D:CLOSE2 INDEX D:CCASE2
                                    APPEND BLANK

REPL CASE WITH !(M:CASE),QTYINS WITH M:QTYINS,QTYREC WITH;
 M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),DEFR ;
WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH !(M:OVER),;
OTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH !(M:TIME)
REPL WHO WITH !(C:WHO),DITEM WITH !(M:DITEM),WNTY WITH ;
!(M:WNTY),WUC WITH !(M:WUC),DIS WITH !(M:DIS),DETAILS ;
WITH !(M:DETAILS),ACTDISP WITH !(M:ACTDISP),MFG WITH ;
!(M:MFG),LOT WITH !(M:LOT)

                                    STORE '0' TO M:TYPE
                                    USE D:FILESTAT
                                    REPL CLOSE2 WITH  '     '
                                    USE
                                    @ 23,25 SAY '                    ';
                                                + '                '
                                    RELEASE ALL LIKE H:*
                                    RETURN
                                ENDIF
                            ENDIF
                        ELSE
                            IF $(M:TYPE,2,1) = 'G'
                                USE D:FILESTAT
                                IF CLOSE2 = C:WHO
                                    USE D:CLOSE2
                                    GOTO M:REC1
                                    IF TIME = M:TIME
                                        REPL TIME WITH '           '
                                    ENDIF
                                    USE D:FILESTAT
                                    REPL CLOSE2 WITH '     '
                                    USE
                                ENDIF
                                RELEASE ALL LIKE H:*
                                RETURN
                            ENDIF
                        ENDIF
                    ENDIF
                ENDIF
            ENDDO
        ENDIF
    ENDIF
ENDCASE
RETURN

***** END OF PROGRAM
```

VIII. SUPERVISOR MENU

```
*****************************************************************
**                                                             **
**   DATE: 11 JANUARY 1984                                     **
**   VERSION: 1.0                                              **
**   MODULE NAME: SUPMENU1                                     **
**   MODULE PURPOSE: PROVIDE MENU FOR SUPERVISOR TO            **
**           ACCESS QDR SYSTEM PROGRAMS                        **
**                                                             **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: C:WHO. C:JULIAN                                **
**      OUTPUTS: NONE                                          **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**           THE SUPERVISOR IS PRESENTED WITH A MENU OF        **
**           ALL PROSESSING CAPABILITIES AVAILABLE. AFTER      **
**           ONE IS CHOSEN, THE MODULE THEN CALLS THE          **
**           DESIGNATED PROGRAM INTO ACTION OR LOGS THE        **
**           SUPERVISOR OUT OF THE QDR SYSTEM                  **
**                                                             **
**   SUPERORDINATE MODULES: LOGON                              **
**   SUBORDINATE MODULES: MENU1,C-REASGN,UTILMENU,SUPRPTS,     **
**                        SUPRPT2                              **
**   AUTHOR: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************
ERASE
STORE T TO V:CONTINUE
DO WHILE V:CONTINUE
STORE ' ' TO V:CHOICE
TEXT



                    WELCOME TO THE QDR SUPERVISOR MENU

                      1 - MAIN MENU PROCESSING
                      2 - CASE REASSIGNMENT
                      3 - ANALYST WORKLOAD STATISTICS
                      4 - UTILITY PROGRAMS
                      5 - REPORT GENERATION
                      6 - YEAR END PROCESSING
                      7 - SORTED LISTINGS
                      8 - EXIT FROM THE SYSTEM


                      ENTER YOUR CHOICE

ENDTEXT
@ 21,30 GET V:CHOICE
READ
?
IF    V:CHOICE >= 1 .AND. V:CHOICE <= 8

?
      DO CASE
          CASE V:CHOICE= 1
               RELEASE ALL LIKE V:*
               DO C:MENU1.PRG
```

```
            CASE V:CHOICE= 2
                 RELEASE ALL LIKE V:*
                 DO C:C-REASGN.PRG
            CASE V:CHOICE= 3
                 RELEASE ALL LIKE V:*
                 DO C:STATGEN.PRG
            CASE V:CHOICE= 4
                 RELEASE ALL LIKE V:*
                 DO C:UTILMENU.PRG
            CASE V:CHOICE= 5
                 RELEASE ALL LIKE V:*
                 DO C:SUPRPTS.PRG
            CASE V:CHOICE= 6
                 RELEASE ALL LIKE V:*
                 DO C:YEAREND.PRG
            CASE V:CHOICE=7
                 RELEASE ALL LIKE V:*
                 DO C:SUPRPT2.PRG
            CASE V:CHOICE= 8
                 RELEASE ALL EXCEPT C:*
                 ERASE
                 RETURN
       ENDCASE
       ERASE
       STORE T TO V:CONTINUE
       STORE ' ' TO V:CHOICE
ELSE
  ?' < PLEASE ANSWER WITH  1 - 8 ONLY >'
ENDIF <V:CHOICE>
ENDDO <V:CONTINUE>
***** END OF PROGRAM
```

IX. SUPERVISOR UTILITY MENU

```
*****************************************************************
**                                                             **
**   Date: 16 January 1984                                     **
**   Version: 1.0                                              **
**   Module Name: UTILMENU                                     **
**   Module Purpose: Provide Supervisor with menu of           **
**                   utility programs available to him.        **
**                                                             **
**   Module Interface Definition                               **
**      Inputs: C:WHO, C:JULIAN                                **
**      Outputs: None                                          **
**   Module Processing Narrative Description:                  **
**                                                             **
**        Displays menu of all utility programs avail-         **
**        able to the supervisor. Calls the appropriate        **
**        program after user selection. Additional level       **
**        of security required for packing Data Base.          **
**                                                             **
**   Superordinate Modules: SUPMENU1                           **
**   Subordinate Modules:  ANALYST,PASS,COGUPDT,ADDRUPDT,      **
**                         STATGEN,COGCNT,UTILNDX,DBPACK       **
**   Author: J.G. BOYNTON & R.G. NICHOLS                       **
**                                                             **
*****************************************************************

STORE T TO U:CONTINUE

*****  Display Options Available To The Operator

DO WHILE U:CONTINUE
   ERASE
   @ 6,25 SAY '***** Utility Processing *****'
   @ 9,29 SAY '1 - Analyst Update'
   @ $+1,29 SAY '2 - Password Processing'
   @ $+1,29 SAY '3 - COG Update'
   @ $+1,29 SAY '4 - Address File Update'
   @ $+1,29 SAY '5 - Internal Statistics Update'
   @ $+1,29 SAY '6 - Cog Count'
   @ $+1,29 SAY '7 - Re-Index Index Files For The System'
   @ $+1,29 SAY '8 - Clean Up The Database (Pack)'
   @ $+1,29 SAY '9 - Exit To Supervisor Menu'
   STORE ' 'TO U:REPLY
   @ 19,40 GET U:REPLY PICTURE '9'
   READ

*****  Accept Menu Selection

   DO WHILE U:REPLY < '1' .OR. U:REPLY > '9'
      @ 23,32 SAY 'Enter 1 - 9 Only' + CHR(7)
      @ 19,40 GET U:REPLY PICTURE '9'
      READ
   ENDDO

*****  Call Routine Necessary To Perform Desired Function

   DO CASE
      CASE U:REPLY = '9'
```

```
      RELEASE ALL LIKE U:*
      RETURN
   CASE U:REPLY = '1'
      DO C:ANALYST
   CASE U:REPLY = '2'
      DO C:PASS
   CASE U:REPLY = '3'
      DO C:COGUPDT
   CASE U:REPLY = '4'
      DO C:ADDRUPDT
   CASE U:REPLY = '5'
      DO C:STATGEN
   CASE U:REPLY = '6'
      DO C:COGCNT
   CASE U:REPLY = '7'
```

```
*****  Display Warning To The Operator

      ERASE
      @  1,25 SAY '***** Data Base Reindex *****'
      @  3,24 SAY '* * * * * * * * * * * * * * * * * * *'
      @  4,24 SAY '*                                   *'
      @  5,24 SAY '*              WARNING              *'
      @  6,24 SAY '*                                   *'
      @  7,24 SAY '*   This Program Will Delete        *'
      @  8,24 SAY '*   All Index Files and Then        *'
      @  9,24 SAY '*   Will Re-Index All Files         *'
      @ 10,24 SAY '*                                   *'
      @ 11,24 SAY '*   If Existing Files Are           *'
      @ 12,24 SAY '*   Large, This Could Take          *'
      @ 13,24 SAY '*             Hours                 *'
      @ 14,24 SAY '*                                   *'
      @ 15,24 SAY '* * * * * * * * * * * * * * * * * * *'
      @ 17,24 SAY '     Are You SURE You Want To'
      @ 18,24 SAY '          Continue'
      @ 19,24 SAY '         <Enter Y or N>' + CHR(7)
      STORE ' ' TO U:REPLY2
      @ 21,40 GET U:REPLY2
      READ
```

```
*****  Accept Response From User

      DO WHILE !(U:REPLY2)<>'Y' .AND. !(U:REPLY2)<>'N'
         @ 23,32 SAY 'Enter Y or N Only' + CHR(7)
         @ 21,40 GET U:REPLY2 PICTURE 'A'
         READ
      ENDDO
      @ 23,32 SAY '                   '
      @ 17,40 SAY ' '
```

```
***** Accept and Verify Password Before Executing Request

      IF U:REPLY2 = 'Y'
         @ 21,30 SAY 'Enter Your Password '
         STORE '        ' TO U:PASSWORD
         SET CONSOLE OFF
         ACCEPT TO U:PASSWORD
         SET CONSOLE ON
         IF U:PASSWORD <> '        '
            USE D:TECHCODE INDEX D:TECH
            FIND &C:WHO
            IF PSWD = U:PASSWORD .AND. # <> 0
               DO C:UTILNDX
            ELSE
               @ 23,18 SAY 'Request ABORTED - Strike ';
                     +'Any Key To Continue'
```

```
                    WAIT
                ENDIF
            ENDIF
        ENDIF
    CASE U:REPLY = '8'
        DO C:DBPACK
ENDCASE
ENDDO

***** END OF PROGRAM
```

X. USER REPORT MENU

```
*****************************************************************
**                                                             **
**   Date: 11 January 1984                                     **
**   Version: 1.0                                              **
**   Module Name: RPTMENU                                      **
**   Module Purpose: Allow analyst to receive a listing        **
**                   of his current open cases.                **
**   Module Interface Definition                               **
**      Inputs: C:WHO, C:JULIAN                                **
**      Outputs: None                                          **
**   Module Processing Narrative Description:                  **
**                                                             **
**         Menu is provided in order to select a listing       **
**         of open cases that belong to the Analyst            **
**         making the request. If report listing is            **
**         chosen, then module OCASERPT is called. Exit        **
**         is to return to MENU1.                              **
**   Supercrdinate Modules: MENU1                              **
**   Subordinate Modules: OCASERPT                             **
**   Author: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************
STORE T TO C:TRUE
DO WHILE C:TRUE
ERASE
*
STORE ' ' TO V:CHOICE
TEXT

                        *****  QUERY REPORT AVAILABLE  *****


                               1 - Openfile by Case
                               2 - Exit




                                Enter Your Choice

ENDTEXT
@ 19,38 GET V:CHOICE
READ
*
IF V:CHOICE >= '1' .AND. V:CHOICE <= '2'
*
    DO CASE
       CASE V:CHOICE = '1'
            DO C:OCASERPT
       CASE V:CHOICE = '2'
            STORE F TO C:TRUE
    ENDCASE

ELSE
  ?  '              < Please Answer With a 1 - 2 ONLY >'
  ?
```

```
  ? '                          PRESS ANY KEY TO CONTINUE'
  ?
                                WAIT
ENDIF <V:CHOICE>
ENDDO <C:TRUE>
RELEASE ALL LIKE V:*
RELEASE C:TRUE

***** END OF PROGRAM
```

XI. SUPERVISOR REPORT MENU

```
*************************************************************
**                                                         **
**   Date: 15 January 1984                                 **
**   Version: 1.0                                          **
**   Module Name: SUPRPTS                                  **
**   Module Purpose: Provide Supervisor a menu of          **
**                   available reports.                    **
**                                                         **
**   Module Interface Definition                           **
**      Inputs: C:WHO, C:JULIAN                            **
**     Outputs: None                                       **
**   Module Processing Narrative Description:              **
**                                                         **
**       Displays a menu of available reports and prompts  **
**       Supervisor to chose one or return to SUPMENU1.    **
**       Weekly and Monthly reports are directed to the    **
**       printer. CategoryI and Extended value reports     **
**       are created in text files on D: drive and may be  **
**       printed by 'typing' the file using standard       **
**       operating system functions. All reports should    **
**       be run only during 'off' hours due to their       **
**       large amount of resource utilization.             **
**                                                         **
**   Superordinate Modules: SUPMENU1                       **
**   Subordinate Modules: XXBWSTAT,XXMNSTAT,CATIRPT,EXTVAL **
**   Author: J.G. BOYNTON                                  **
**                                                         **
*************************************************************

ERASE
STORE .T. TO V:CONTINUE
DO WHILE V:CONTINUE
SET TALK OFF
STORE ' ' TO V:CHOICE
TEXT



                    WELCOME TO THE QDR SPECIAL REPORT MENU

                        1 - Biweekly Statistics Report
                        2 - Monthly Statistics Report
                        3 - Category I Report
                        4 - Extended Value Report
                        5 - Exit to Supervisor Menu

                            Enter your choice

ENDTEXT
@ 19,35 GET V:CHOICE
READ
?
IF    V:CHOICE >= "1" .AND. V:CHOICE <= "5"

   IF V:CHOICE = "1" .OR. V:CHOICE = "2"
      ERASE
      @  3,15 SAY '** YOUR PRINTER MUST BE TURNED ON AND';
                  +'AVAILABLE **'
```

```
        @ 12,20 SAY '         PRESS ANY KEY TO START'
        WAIT
        @ 22,10 SAY '                                 '
    ENDIF
?
    DO CASE
        CASE V:CHOICE= "1"
        RELEASE ALL LIKE V:*
        DO C:XXEISTAT.PRG
        CASE V:CHOICE= "2"
        RELEASE ALL LIKE V:*
        DO C:XXMNSTAT.PRG
        CASE V:CHOICE= "3"
        RELEASE ALL LIKE V:*
        USE D:OPEN1 INDEX D:OCASE1
        SET TALK OFF
        STORE 0 TO P:COUNT
        STORE 0 TO P:TOTAL
        SET FORMAT TO SCREEN
        ERASE
        SET ALTERNATE TO D:CATIRPT
        SET ALTERNATE ON
        ?       'Date: ',DATE()
        ?
        ?       '                          *****        QDR';
        +' CATEGORY I REPORT       *****          '
        ?
        ?       '       CASE #           EXTENDED PRICE';
        +'          OPEN DATE          COG   '
        ?
        STORE 0 TO P:PAGE
        STORE 5 TO ROW
        DO WHILE  .NOT. EOF
            STORE P:TOTAL+1 TO P:TOTAL
            IF CAT='1'
                ? '      ',CASE,'      ',EPRC,;
                '        ',$(DATES,11,5),;
                '        ',COG
                STORE ROW+1 TO ROW
                SKIP
                STORE P:COUNT+1 TO P:COUNT
                IF ROW > 60
                    ERASE
                    ? CHR(12)
                    STORE 0 TO ROW
                    STORE P:PAGE+1 TO P:PAGE
                    ?
                    ?
                    ? '      PAGE  ',P:PAGE
                    ?
                    ?       '       CASE #          EXT';
                    +'ENDED PRICE          OPEN DATE';
                    +'          COG   '
                    ?
                    STORE ROW+4 TO ROW
                ENDIF <PAGE IS FULL>
            ELSE
                SKIP
            ENDIF <NOT CAT I>
        ENDDO
        ?
        ?
        ?
        ?
        ?    '      CAT 1 CASES:',P:COUNT
        ?    '      TOTAL CASES:',P:TOTAL
        ?
        ?
        ?    '                      *****      END OF CAT';
```

```
+'EGORY I REPORT      *****'
? CHR(12)
SET ALTERNATE OFF
SET ALTERNATE TO
? CHR(7)
? CHR(7)
ERASE
@ 12,20 SAY ' You May Receive Your Cat 1 ';
          +'  Report On '
@ 13,20 SAY '           D:CATIRPT.TXT  '
@ 20,20 SAY '      Press Any Key To Continue'
WAIT

CASE V:CHOICE= "4"
    RELEASE ALL LIKE V:*
    USE D:OPEN1 INDEX D:EXTVAL
    REINDEX
    GOTO TOP
    SKIP
    SET TALK OFF
    STORE 0 TO P:COUNT
    STORE 0 TO P:TOTAL
    SET FORMAT TO SCREEN
    ERASE
    SET ALTERNATE TO D:EXTVALUE
    SET ALTERNATE ON
    ?      'Date: ',DATE()
    ?
    ?      '                    *****       QDR';
    +' EXTENDED VALUE REPORT       *****       '
    ?
    ?      '                                      ';
    +'                                        ';
    +'                              SCREENING'
    ?      '     CASE #   COG    SM                 ';
    +'NSN             CAT      NOMEN          UIC    ';
    +'EXT PRICE    OPEN DATE    CODE/DATE'
    ?
    STORE 0 TO P:PAGE
    STORE 6 TO ROW
    DO WHILE .NOT. EOF
            STORE P:TOTAL+1 TO P:TOTAL
            ?  '  ',CASE,' ',COG,' ',SM,' ',;
            $(NSN,1,4),'-',$(NSN,5,2),'-',;
            $(NSN,7,7),'   ',CAT,' ',;
            $(NOMEN,1,10),' ',UIC,' ',EPRC,;
            '    ',$(DATES,11,5),'    ',SCR,'/',;
            $(DATES,21,5)
            STORE ROW+1 TO ROW
            STORE P:COUNT+1 TO P:COUNT
            IF ROW > 60
                ERASE
                ? CHR(12)
                STORE 0 TO ROW
                STORE P:PAGE+1 TO P:PAGE
                ?
                ?
                ? '      PAGE  ',P:PAGE
                ?
                ?   '                                   ';
                +'                                     ';
                +'                                     ';
                +'          SCREENING'
                ?   '      CASE #    COG    SM      ';
                +'   NSN            CAT          NOMEN';
                +'        UIC     EXT PRICE     OPEN';
                +'DATE  CODE/DATE'
                ?
                STORE ROW+4 TO ROW
```

```
                    ENDIF <PAGE IS FULL>
                    SKIP
               ENDDO
               ?
               ?
               ?
               ?
               ?    '      TOTAL CASES:',P:TOTAL
               ?
               ?
               ?    '                          *****     END OF ';
               +'EXTENDED VALUE REPORT    *****'
               ? CHR(12)
               SET ALTERNATE OFF
               SET ALTERNATE TO
               ? CHR(7)
               ? CHR(7)
               ERASE
               @ 12,20 SAY ' You May Receive Your Extended';
                         +'  Value Report On '
               @ 13,20 SAY '                    D:EXTVALUE.TXT  '
               @ 20,20 SAY '           Press Any Key To Continue'
               WAIT
          CASE V:CHOICE= "5"
               ERASE
               RETURN
     ENDCASE
     ERASE

     STORE T TO V:CONTINUE
     STORE ' ' TO V:CHOICE
ELSE
  ?' < Please Answer With  1 - 5 ONLY >'

ENDIF <V:CHCICE>

ENDDO <V:CONTINUE>

***** END OF PROGRAM
```

XII. QUERY MODULE

```
*****************************************************************
**                                                             **
**   Date: 23 Nov 1983                                         **
**   Version: 1.0                                              **
**   Module Name: QUERY                                        **
**   Module Purpose: Free Format Query Against the OPEN        **
**                   and CLOSED Data Files                     **
**                                                             **
**   Module Interface Definition                               **
**      Inputs: C:WHO, C:JULIAN                                **
**      Outputs: None                                          **
**                                                             **
**   Module Processing Narrative Description:                  **
**                                                             **
**        Accepts Selection and Display Parameters from        **
**        the user and generates the necessary Data Base       **
**        Commands to extract the desired information.         **
**        Temporary files are created as the QUERY is          **
**        being processed.  These files are deleted upon       **
**        exiting.  The user may either print or display       **
**        the information extracted.                           **
**                                                             **
**   Superordinate Modules: MENU1                              **
**   Subordinate Modules: None                                 **
**   Author: R. G. NICHOLS                                     **
**                                                             **
*****************************************************************

*****  Display Menu Selection Options and Accept Response

*SET COLOR TO 112, 6
STORE ' ' TO Q:REPLY
ERASE
@ 6,26 SAY '***** Query Processing *****'
@ 10,27 SAY 'THIS PROGRAM ALLOWS YOU TO'
@ 12,28 SAY 'QUERY THE QDR DATA BASE'
@ 15,32 SAY '1 - Continue'
@ 17,32 SAY '2 - Return to Menu'
@ 20,40 SAY ' ' GET Q:REPLY
READ
DO WHILE Q:REPLY <> '1' .AND. Q:REPLY <> '2'
   @ 23,20 SAY 'Enter 1 or 2 for Your Response'+chr(7)
   @ 20,40 SAY ' ' GET Q:REPLY
   READ
ENDDO

*****  If Response is to Exit Release all Memory Variables
*****  and Return to MENU1

IF Q:REPLY = '2'
   RELEASE ALL LIKE Q:*
   RETURN
ENDIF

*****  Allow User to Select Files to Run The Query Against

STORE ' ' TO Q:REPLY
ERASE
@ 6,24 SAY ' ***  Query Processing Module ***'
@ 10,20 SAY 'Select File(s) to be Used for this Query'
@ 12,25 SAY '1 - OPEN FILE'
```

```
@ 14,25 SAY '2 - CLOSED FILE'
@ 16,25 SAY '3 - Merged OPEN and CLOSED File'
@ 20,40 GET Q:REPLY PICTURE '9'
READ
DO WHILE Q:REPLY<>'1' .AND. Q:REPLY<>'2' .AND.Q:REPLY<>'3'
   @ 23,25 SAY 'Entry MUST Be 1, 2, or 3' + CHR(7)
   @ 20,40 GET Q:REPLY PICTURE '9'
   READ
ENDDO

@ 23,28 SAY '                              '
STORE 10 TO Q:CNTR
STORE 'Q:I' + STR(Q:CNTR,2) TO Q:LINE

DO CASE

*****  If OPEN File Is Selected Indicate O File Selection

   CASE Q:REPLY = '1'
      STORE 1 TO Q:NBPASSES
      STORE 'O' TO Q:FILE

*****  If CLOSE File Is Selected Indicate C File Selection

   CASE Q:REPLY = '2'
      STORE 1 TO Q:NBPASSES
      STORE 'C' TO Q:FILE

*****  If OPEN File Is Selected Indicate O File Selection
*****  and Indicate Two Passes Required For Execution of
*****  Generated Code

   CASE Q:REPLY = '3'
      STORE 2 TO Q:NBPASSES
      STORE 'O' TO Q:FILE
ENDCASE
STORE ' ' TO Q:SELCMD1
STORE ' ' TO Q:SELCMD2
STORE '00' TO Q:SELECT
STORE 0 TO Q:ITEM

*****  Start Loop To Accept Selection Criteria

DO WHILE Q:ITEM <= 4 .AND. Q:SELECT <> '58'

*****  Display First Screen of Menu

   IF Q:SELECT = '00'
*  - SCREEN1 MENU -
      ERASE
      @ 2,20 SAY 'Enter Selection Criteria For This Query'
      @ 3,20 SAY '(A Maximum of 5 Items May Be Selected)'
      @ 4,0 SAY '----------------------------------------';
              + '----------------------------------------'
      @ 5,0 SAY 'Data Elements'
      @ 5,25 SAY '!'
*     SET COLOR TO 112,2
      @ 5,27 SAY ' 58  End Element Select'
      @ 5,53 SAY ' 59  Abandon Query'
*     SET COLOR TO 112, 6
      @ 5,51 SAY '!'
      @ 6,25 SAY '!'
      @ 6,51 SAY '!'
      @ 7,1 SAY '01  Case Number'
      @ 7,25 SAY '!  11  Origin Code'
      @ 7,51 SAY '!  21  Interim Repor'
      @ 7,71 SAY 't Date'
      @ 8,1 SAY '02  Cog'
      @ 8,25 SAY '!  12  Type Document'
```

```
        @ 8,51 SAY '!   22  Origin Prep Date'
        @ 9,1 SAY '03   NSN'
        @ 9,25 SAY '!   13  Discovery Date     !';
                   + '  23  Document Number'
        @ 10,1 SAY '04  Category'
        @ 10,25 SAY '!  14  Date Received'
        @ 10,51 SAY '!  24  Report Control'
        @ 10,71 SAY 'l Number'
        @ 11,1 SAY '05  Nomenclature'
        @ 11,25 SAY '!  15  Open Date'
        @ 11,51 SAY '!  25  FSCM'
        @ 12,1 SAY '06  UIC of Origin'
        @ 12,25 SAY '!  16  Transmittal Date   !';
                   + '  26  Contract Number'
        @ 13,1 SAY '07  Unit of Issue'
        @ 13,25 SAY '!  17  IM Response Date   !';
                   + '  27  Credit Code'
        @ 14,1 SAY '08  Unit Price'
        @ 14,25 SAY '!  18  Close Date'
        @ 14,51 SAY '!  28  Screening Code'
        @ 15,1 SAY '09  Quantity Deficient  !';
                   +'  19  Reopen Date        !  29  SMIC'
        @ 16,1 SAY '10  Extended Price'
        @ 16,25 SAY '!  20  Screen Report'
        @ 16,46 SAY 'Date !  30  Next Page of Elements'
        @ 17,0 SAY '-----------------------------------';
                   + '-----------------------------------'
        @ 18,0 SAY 'Relations   a - Include    b - Exclude'
        @ 18,42 SAY 'c - Range    d - Equal'
        @ 19,10 SAY 'e - Not Equal       f - Less Than    ';
                   + '  g - Greater Than'
        @ 21,27 SAY 'Enter Data Element Number ' GET ;
                    Q:SELECT PICTURE '99'
        READ
        DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
           @ 23,26 SAY 'Select From Above (00 - 59)' + CHR(7)
           @ 21,27 SAY 'Enter Data Element Number ' GET ;
                       Q:SELECT PICTURE '99'
           READ
        ENDDO
        @ 23,26 SAY '                              '
    ELSE

*****  Display Second Screen of Menu

        IF Q:SELECT = '30'
           ERASE
           @ 2,20 SAY 'Enter Selection Criteria For This';
                      + ' Query'
           @ 3,20 SAY '(A Maximum of 5 Items May Be Selected)'
           @ 4,0 SAY '-----------------------------------';
                     + '-----------------------------------'
           @ 5,0 SAY 'Data Elements'
           @ 5,25 SAY '!'
*          SET COLOR TO 112,2
           @ 5,27 SAY ' 58  End Element Select'
           @ 5,53 SAY ' 59  Abandon Query'
*          SET COLOR TO 112, 6
           @ 5,51 SAY '!'
           @ 6,25 SAY '!'
           @ 6,51 SAY '!'
           @ 7,1 SAY '31  90 Region'
           @ 7,25 SAY '!  40  Deficiency Ver     !';
                      + '  49  Action Code'
           @ 8,1 SAY '32  Type Defect'
           @ 8,25 SAY '!  41  Deficiency Resp    !';
                      + '  50  Cost Code'
           @ 9,1 SAY '33  Vendor Liab Code'
           @ 9,25 SAY '!  42  New-Repair/Ovhl    !';
```

```
                + '  51  Status Code'
        @ 10,1 SAY '34  Action Point'
        @ 10,25 SAY '!  43  Date Mfg/Ovhl'
        @ 10,51 SAY '!  52  Cause Code'
        @ 11,1 SAY '35  Screen Quantity'
        @ 11,25 SAY "!  44  Opn Time at Failure!";
                + "  53  Action Dis'n"
        @ 12,1 SAY '36  Analyst Code'
        @ 12,25 SAY '!  45  GFM'
        @ 12,51 SAY '!  54  Part Number'
        @ 13,1 SAY '37  Quantity Inspected  !';
                + '  46  Work Unit Code     !  55'
        @ 13,58 SAY 'Lot/Ser/Batch'
        @ 14,1 SAY '38  Quantity Received   !';
                + '  47  Discovery Code     !  56'
        @ 14,58 SAY 'Def Item'
        @ 15,1 SAY '39  Quantity in Stock   !';
                + '  48  Return Code        !  57'
        @ 15,58 SAY 'Warranty'
        @ 16,1 SAY '58  End Element Select  !';
                + '  59  Abandon Query'
        @ 16,51 SAY '!  00  Prev Page of Elements'
        @ 17,0 SAY '----------------------------------------';
          + '----------------------------------------'
        @ 18,0 SAY 'Relations   a - Include    b - Exclude'
        @ 18,42 SAY 'c - Range    d - Equal'
        @ 19,10 SAY 'e - Not Equal       f - Less Than    ';
                + '  g - Greater Than'
        @ 21,27 SAY 'Enter Data Element Number ' GET ;
                    Q:SELECT PICTURE '99'
        READ
        DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
           @ 23,26 SAY 'Select From Above (00 - 59)'+CHR(7)
           @ 21,27 SAY 'Enter Data Element Number ' ;
                       GET Q:SELECT PICTURE '99'
           READ
        ENDDO
        @ 23,26 SAY '                              '
     ELSE

*****  Begin Case To Generate Formats For Entering Initial
*****  Values - Each Selected Item Has Its Name and Picture
*****  Stored in an Indirect Variable

        DO CASE

*****  If Termination Requested Release Local Memory and
*****  Return to Calling Routine

           CASE Q:SELECT = '59'
              RELEASE ALL LIKE Q:*
              RETURN

*****  Begin Generating Selection Code
*****  If a Character Field Set Character Flag
*****  Load The Picture for the Data Field
*****  Initialize the Data Field and Then Continue
*****  To Generate Code

           CASE Q:SELECT = '01'
             STORE 'CASE' TO Q:SELITEM
             STORE "'999999A'" TO Q:SELPIC
             STORE '          ' TO Q:INIT1
             STORE T TO Q:CHAR
             STORE 'Q:SELCMD1' TO Q:SELCMD
           CASE Q:SELECT = '02'
             STORE 'COG' TO Q:SELITEM
             STORE "'9A'" TO Q:SELPIC
             STORE T TO Q:CHAR
```

```
   STORE '  ' TO Q:INIT1
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '03'
   STORE 'NSN' TO Q:SELITEM
   STORE "'9999XXXXX9999'" TO Q:SELPIC
   STORE T TO Q:CHAR
   STORE '                ' TO Q:INIT1
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '04'
   STORE 'CAT' TO Q:SELITEM
   STORE "'9'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '05'
   STORE 'NOMEN' TO Q:SELITEM
   STORE "'XXXXXXXXXXXXXXXXX'" TO Q:SELPIC
   STORE '                    ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '06'
   STORE 'UIC' TO Q:SELITEM
   STORE "'AXXXXX'" TO Q:SELPIC
   STORE '      ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '07'
   STORE 'UI' TO Q:SELITEM
   STORE "'AA'" TO Q:SELPIC
   STORE '  ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '08'
   STORE 'UPRC' TO Q:SELITEM
   STORE "'999999.99'" TO Q:SELPIC
   STORE 9 TO Q:NR
   STORE 2 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '09'
   STORE 'QTYDEF' TO Q:SELITEM
   STORE "'999999'" TO Q:SELPIC
   STORE 6 TO Q:NR
   STORE 0 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '10'
   STORE 'EPRC' TO Q:SELITEM
   STORE "'9999999999.99'" TO Q:SELPIC
   STORE 12 TO Q:NR
   STORE 2 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '11'
   STORE 'ORG' TO Q:SELITEM
   STORE "'XXX'" TO Q:SELPIC
   STORE '   ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '12  '
   STORE 'DOC' TO Q:SELITEM
   STORE "'9'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '13'
```

```
   STORE '$(DATES,1,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE I TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '14'
   STORE '$(DATES,6,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '15'
   STORE '$(DATES,11,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '16'
   STORE '$(DATES,16,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '17'
   STORE '$(DATES,26,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '18'
   STORE '$(DATES,36,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '19'
   STORE '$(DATES,41,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '20'
   STORE '$(DATES,21,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '21'
   STORE '$(DATES,31,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '22'
   STORE '$(DATES,46,5)' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE '     ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '23'
   STORE 'DOCNO' TO Q:SELITEM
   STORE "'XXXXXX99999999'" TO Q:SELPIC
   STORE '              ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'C:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '24'
   STORE 'REPCON' TO Q:SELITEM
   STORE "'XXXXXX999999'" TO Q:SELPIC
   STORE '            ' TO Q:INIT1
```

```
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '25'
   STORE 'FSCH' TO Q:SELITEM
   STORE "'XXXXXX'" TO Q:SELPIC
   STORE '      ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '26'
   STORE 'NUM' TO Q:SELITEM
   STORE "'XXXXXX99AXXXXXXXX'" TO Q:SELPIC
   STORE '                  ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '27'
   STORE 'CR' TO Q:SELITEM
   STORE "'A'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '28'
   STORE 'SCR' TO Q:SELITEM
   STORE "'XXX'" TO Q:SELPIC
   STORE '   ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '29'
   STORE 'SM' TO Q:SELITEM
   STORE "'AX'" TO Q:SELPIC
   STORE '  ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '31'
   STORE 'C9Q' TO Q:SELITEM
   STORE "'X'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '32'
   STORE 'DEF' TO Q:SELITEM
   STORE "'99'" TO Q:SELPIC
   STORE '  ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '33'
   STORE 'VLC' TO Q:SELITEM
   STORE "'A'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '34'
   STORE 'ACTPT' TO Q:SELITEM
   STORE "'AXXXXX99999'" TO Q:SELPIC
   STORE '          ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '35'
   STORE 'SCRQTY' TO Q:SELITEM
   STORE "'999999'" TO Q:SELPIC
   STORE 6 TO Q:NR
   STORE 0 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '36'
   STORE 'WHO' TO Q:SELITEM
   STORE "'XXXX'" TO Q:SELPIC
   STORE '    ' TO Q:INIT1
   STORE T TO Q:CHAR
```

```
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '37'
   STORE 'CTYINS' TO Q:SELITEM
   STORE "'999999'" TO Q:SELPIC
   STORE 6 TO Q:NR
   STORE 0 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 6 TO Q:NR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '38'
   STORE 'CTYREC' TO Q:SELITEM
   STORE "'999999'" TO Q:SELPIC
   STORE 6 TO Q:NR
   STORE 0 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 6 TO Q:NR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '39'
   STORE 'CTYSTK' TO Q:SELITEM
   STORE "'999999'" TO Q:SELPIC
   STORE 6 TO Q:NR
   STORE 0 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 6 TO Q:NR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '40'
   STORE 'DEFV' TO Q:SELITEM
   STORE "'A'" TO Q:SELPIC
   STORE " " TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '41'
   STORE 'DEFR' TO Q:SELITEM
   STORE "'A'" TO Q:SELPIC
   STORE " " TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '42'
   STORE 'ITEM' TO Q:SELITEM
   STORE "'A'" TO Q:SELPIC
   STORE " " TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '43'
   STORE 'CVER' TO Q:SELITEM
   STORE "'99999'" TO Q:SELPIC
   STORE "      " TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '44'
   STORE 'CTF' TO Q:SELITEM
   STORE "'A9999'" TO Q:SELPIC
   STORE "      " TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '45'
   STORE 'GOV' TO Q:SELITEM
   STORE "'X'" TO Q:SELPIC
   STORE " " TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '46'
   STORE 'WUC' TO Q:SELITEM
   STORE "'XXXXXXX'" TO Q:SELPIC
   STORE "       " TO Q:INIT1
   STORE T TO Q:CHAR
```

```
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '47'
            STORE 'DIS' TO Q:SELITEM
            STORE "'AA'" TO Q:SELPIC
            STORE "  " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '48'
            STORE 'RETC' TO Q:SELITEM
            STORE "'9'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '49'
            STORE 'ACTTKN' TO Q:SELITEM
            STORE "'AAA'" TO Q:SELPIC
            STORE "   " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '50'
            STORE 'COSTC' TO Q:SELITEM
            STORE "'A'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '51'
            STORE 'STATUSC' TO Q:SELITEM
            STORE "'AA'" TO Q:SELPIC
            STORE "  " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '52'
            STORE 'CAUSEC' TO Q:SELITEM
            STORE "'A'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '53'
            STORE 'ACTDISP' TO Q:SELITEM
            STORE "'A'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '54'
            STORE 'MFG' TO Q:SELITEM
            STORE "'XXXXXXXXXXXXXXX'" TO Q:SELPIC
            STORE "                " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '55'
            STORE 'LOT' TO Q:SELITEM
            STORE "'XXXXXXXXX'" TO Q:SELPIC
            STORE "          " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '56'
            STORE 'DITEM' TO Q:SELITEM
            STORE "'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'";
                  TO Q:SELPIC
            STORE "                                 ";
                  TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
      ENDCASE

*****  Display Selection Relations and Accept Relationship
*****  and Initial Search Values

   IF Q:SELECT<>'00' .AND. Q:SELECT<>'30' .AND.;
```

```
      Q:SELECT<>'58'
      STORE Q:ITEM + 1 TO Q:ITEM
      ERASE
      STORE ' ' TO Q:SELECT
      @ 06,0 SAY 'Relations    a - Include     b - Exclude'
      @ 06,42 SAY 'c - Range     d - Equal'
      @ 07,10 SAY 'e - Not Equal          f - Less Than      ';
              + '  g - Greater Than'
      @ 10,10 SAY 'Enter Relationship for Selection ' GET ;
                  Q:SELECT PICTURE 'A'
      READ

*****  Validate Entered Value

      DO WHILE !(Q:SELECT) < 'A' .OR. !(Q:SELECT) > 'G'
         @ 23,18 SAY 'Enter Relationship as Displayed ';
                 + 'Above (A - G)' + CHR(7)
         @ 10,10 SAY 'Enter Relationship for Selection ';
                     GET Q:SELECT PICT 'A'
         READ
      ENDDO
      @ 23,18 SAY '                                      ';
              + '                '

*****  If Range Selected, Accept Two Initial Values

      IF !(Q:SELECT) = 'C'
         STORE Q:INIT1 TO Q:INIT2
         @ 14,10 SAY 'Enter MINIMUM Value Allowed ' ;
                     GET Q:INIT1 PICT &Q:SELPIC
         READ
         @ 16,10 SAY 'Enter MAXIMUM Value Allowed ' ;
                     GET Q:INIT2 PICT &Q:SELPIC
         READ

*****  Ensure That Values are Properly Ordered

         IF Q:INIT1 > Q:INIT2
            STORE Q:INIT1 TO Q:TEMP
            STORE Q:INIT2 TO Q:INIT1
            STORE Q:TEMP TO Q:INIT2
            RELEASE Q:TEMP
         ENDIF

*****  If Character Field, Place Quotes Around Initial
*****  Value(s)

         IF Q:CHAR
            STORE "'"+!(Q:INIT1)+"'" TO Q:INIT1
            STORE "'"+!(Q:INIT2)+"'" TO Q:INIT2
         ELSE

*****  Format Numerics to be Characters For Code Generation

            STORE STR(Q:INIT1,Q:NR,Q:DEC) TO Q:INIT1T
            STORE Q:INIT1T TO Q:INIT1
            STORE STR(Q:INIT2,Q:NR,Q:DEC) TO Q:INIT2T
            STORE Q:INIT2T TO Q:INIT2
            RELEASE Q:INIT1T, Q:INIT2T
         ENDIF

*****  Form Partial Command Line

         IF &Q:SELCMD = ' '
            STORE Q:SELITEM+'>'+Q:INIT1+'.AND.'+Q:SELITEM+;
                          '<'+Q:INIT2 TO &Q:SELCMD
         ELSE
            STORE &Q:SELCMD+'.AND.'+Q:SELITEM+'>'+Q:INIT1;
               +'.AND.'+Q:SELITEM+'<'+Q:INIT2 TO &Q:SELCMD
```

```
      ENDIF
   ELSE

*****  Accept Selection Values For Query (Single Value)

    @ 12,10 SAY 'Enter Value for Selection ' GET;
            Q:INIT1 PICT &Q:SELPIC
      READ

*****  If Character, Place Quotes Around Initial Value

      IF Q:CHAR
         STORE "'"+!(Q:INIT1)+"'" TO Q:INIT1
      ELSE

*****  Format Numerics to be Characters For Code Generation

         STORE STR(Q:INIT1,Q:NR,Q:DEC) TO Q:INIT1T
         STORE Q:INIT1T TO Q:INIT1
         RELEASE Q:INIT1T
      ENDIF

*****  Form Partial Command Line
*****  Command Line Formation Uses Indirect Addressing to
*****  Point to the Location Of the Command Line

*****  If A Previous Line Has Been Created, Join Together
*****  With an AND

      IF &Q:SELCMD <> ' '
         STORE &Q:SELCMD+'.AND.' TO &Q:SELCMD
      ENDIF
      DO CASE
         CASE !(Q:SELECT) = 'A'
            STORE &Q:SELCMD-Q:SELITEM+'='+Q:INIT1 TO &Q:SELCMD
         CASE !(Q:SELECT) = 'B'
            STORE &Q:SELCMD-Q:SELITEM+'<>'+Q:INIT1 TO &Q:SELCMD
         CASE !(Q:SELECT) = 'D'
            STORE &Q:SELCMD-Q:SELITEM+'='+Q:INIT1 TO &Q:SELCMD
         CASE !(Q:SELECT) = 'E'
            STORE &Q:SELCMD-Q:SELITEM+'<>'+Q:INIT1 TO &Q:SELCMD
         CASE !(Q:SELECT) = 'F'
            STORE &Q:SELCMD-Q:SELITEM+'<'+Q:INIT1 TO &Q:SELCMD
         CASE !(Q:SELECT) = 'G'
            STORE &Q:SELCMD-Q:SELITEM+'>'+Q:INIT1 TO &Q:SELCMD
      ENDCASE
   ENDIF
   STORE '00' TO Q:SELECT
ENDIF
   ENDIF
ENDIF
ENDDO
*SET COLOR TO 112, 3
RELEASE Q:SELITEM, Q:SELPIC, Q:CHAR, Q:INIT1, Q:INIT2, Q:NR
STORE F TO Q:DATESEL
STORE 'CASE ' TO Q:FLDCMD1
STORE 'CASE ' TO Q:FLDCMD2
STORE ' ' TO Q:FIELD
STORE 0 TO Q:ITEM
STORE '00' TO Q:SELECT
STORE ' ' TO Q:CHOSEN

*****  Display Selection Menu to Allow Selection of Items
*****  To Be Displayed - Displays First Screen

DO WHILE Q:ITEM <= 9 .AND. Q:SELECT <> '58'
   IF Q:SELECT = '00'
      ERASE
      @ 2,21 SAY 'Enter Field Selection For This Query'
```

```
       @ 3,19 SAY '(A Maximum of 10 Fields May Be Selected)'
       @ 4,0 SAY '-----------------------------------------';
               + '-----------------------------------------'
       @ 5,0 SAY 'Data Elements'
       @ 5,25 SAY '!'
*      SET COLOR TO 112,2
       @ 5,27 SAY ' 58  End Element Select'
       @ 5,53 SAY ' 59  Abandon Query'
*      SET COLOR TO 112, 3
       @ 5,51 SAY '!'
       @ 6,25 SAY '!'
       @ 6,51 SAY '!'
       @ 7,1 SAY '01   Case Number'
       @ 7,25 SAY '!   11  Origin Code'
       @ 7,51 SAY '!   21  Interim Repor'
       @ 7,71 SAY 't Date'
       @ 8,1 SAY '02   Cog'
       @ 8,25 SAY '!   12  Type Document'
       @ 8,51 SAY '!   22  Origin Prep Date'
       @ 9,1 SAY '03   NSN'
       @ 9,25 SAY '!   13  Discovery Date      !';
               + '     23  Document Number'
       @ 10,1 SAY '04   Category'
       @ 10,25 SAY '!   14  Date Received'
       @ 10,51 SAY '!   24  Report Contro'
       @ 10,71 SAY 'l Number'
       @ 11,1 SAY '05   Nomenclature'
       @ 11,25 SAY '!   15  Open Date'
       @ 11,51 SAY '!   25  FSCM'
       @ 12,1 SAY '06   UIC of Origin'
       @ 12,25 SAY '!   16  Transmittal Date    !';
               + '     26  Contract Number'
       @ 13,1 SAY '07   Unit of Issue'
       @ 13,25 SAY '!   17  IM Response Date    !';
               + '     27  Credit Code'
       @ 14,1 SAY '08   Unit Price'
       @ 14,25 SAY '!   18  Close Date'
       @ 14,51 SAY '!   28  Screening Code'
       @ 15,1 SAY '09   Quantity Deficient  !';
               + '  19  Reopen Date         !  29  SMIC'
       @ 16,1 SAY '10   Extended Price'
       @ 16,25 SAY '!   20  Screen Report'
       @ 16,46 SAY 'Date !   30  Next Page of Elements'
       @ 17,0 SAY '-----------------------------------------';
               + '-----------------------------------------'

*****  Display Previously Selected Fields

       @ 19,0 SAY 'Fields Currently Selected '+ Q:CHOSEN
       @ 21,27 SAY 'Enter Field Number ' GET Q:SELECT PICTURE '99'
       READ

*****  Validate Field Selection

       DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
          @ 23,26 SAY 'Select From Above (00 - 59)'+CHR(7)
          @ 21,27 SAY 'Enter Field Number ' GET ;
                        Q:SELECT PICTURE '99'
          READ
       ENDDO
       @ 23,26 SAY '                              '
    ELSE

*****  Display Second Screen For Selection

       IF Q:SELECT = '30'
          ERASE
          @ 2,21 SAY 'Enter Field Selection For This Query'
          @ 3,19 SAY '(A Maximum of 10 Fields May Be Selected)'
```

```
          @ 4,0 SAY '----------------------------------------';
            +'----------------------------------------';
          @ 5,0 SAY 'Data Elements'
          @ 5,25 SAY '!'
*         SET COLOR TO 112,2
          @ 5,27 SAY ' 58  End Element Select'
          @ 5,53 SAY ' 59  Abandon Query'
*         SET COLOR TO 112, 3
          @ 5,51 SAY '!'
          @ 6,25 SAY '!'
          @ 6,51 SAY '!'
          @ 7,1 SAY '31  90 Region'
          @ 7,25 SAY '!  40  Deficiency Ver     !';
                   + '  49  Action Code'
          @ 8,1 SAY '32  Type Defect'
          @ 8,25 SAY '!  41  Deficiency Resp    !';
                   + '  50  Cost Code'
          @ 9,1 SAY '33  Vendor Liab Code'
          @ 9,25 SAY '!  42  New-Repair/Ovhl    !';
                   + '  51  Status Code'
          @ 10,1 SAY '34  Action Point'
          @ 10,25 SAY '!  43  Date Mfg/Ovhl'
          @ 10,51 SAY '!  52  Cause Code'
          @ 11,1 SAY '35  Screen Quantity'
          @ 11,25 SAY "!  44  Opn Time at Failure!";
                    + "  53  Action Dis'n"
          @ 12,1 SAY '36  Analyst Code'
          @ 12,25 SAY '!  45  GFM'
          @ 12,51 SAY '!  54  Part Number'
          @ 13,1 SAY '37  Quantity Inspected  !';
                   + '  46  Work Unit Code     !  55'
          @ 13,58 SAY 'Lot/Ser/Batch'
          @ 14,1 SAY '38  Quantity Received   ! ';
                   + '  47  Discovery Code     !  56'
          @ 14,58 SAY 'Def Item'
          @ 15,1 SAY '39  Quantity in Stock   !  ';
                   + '48  Return Code         !  57'
          @ 15,58 SAY 'Warranty'
          @ 16,1 SAY '58  End Element Select  !';
                   + '  59  Abandon Query'
          @ 16,51 SAY '!  00  Prev Page of Elements'
          @ 17,0 SAY '----------------------------------------';
            +'----------------------------------------';
          @ 19,0 SAY 'Fields Currently Selected '+ Q:CHOSEN
          @ 21,27 SAY 'Enter Field Number ' GET :
                     Q:SELECT PICTURE '99'
          READ

*****   Validate Field Selection

          DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
             @ 23,26 SAY 'Select From Above (00 - 59) '+CHR(7)
             @ 21,27 SAY 'Enter Field Number ' GET :
                        Q:SELECT PICTURE '99'
             READ
          ENDDO
          @ 23,26 SAY '                              '
        ELSE

*****   Begin Creating Code For Fields Selected

          DO CASE

*****   If 59 Entered, Release All Local Memory and Return

             CASE Q:SELECT = '59'
                RELEASE ALL LIKE Q:*
                RETURN
```

```
*****   Store Selection Name to Q:SELITEM
*****   Store Field Selection Pointer To Q:FLDCMD

          CASE Q:SELECT = '01'
            STORE 'CASE' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '02'
            STORE 'COG' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '03'
            STORE 'NSN' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '04'
            STORE 'CAT' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '05'
            STORE 'NOMEN' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '06'
            STORE 'UIC' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '07'
            STORE 'UI' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '08'
            STORE 'UPRC' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '09'
            STORE 'QTYDEF' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '10'
            STORE 'EPRC' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '11'
            STORE 'CRG' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '12'
            STORE 'DOC' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '13'
            STORE '$(DATES, 1,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '14'
            STORE '$(DATES, 6,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '15'
            STORE '$(DATES,11,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '16'
            STORE '$(DATES,16,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '17'
            STORE '$(DATES,26,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '18'
            STORE '$(DATES,36,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '19'
            STORE '$(DATES,41,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '20'
            STORE '$(DATES,21,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '21'
            STORE '$(DATES,31,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '22'
            STORE '$(DATES,46,5)' TO Q:SELITEM
            STORE 'Q:FLDCMD1' TO Q:FLDCMD
```

```
CASE Q:SELECT = '23'
   STORE 'DOCNO' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '24'
   STORE 'REPCOM' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '25'
   STORE 'FSCM' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '26'
   STORE 'NUM' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '27'
   STORE 'CR' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '28'
   STORE 'SCR' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '29'
   STORE 'SM' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '31'
   STORE 'C9Q' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '32'
   STORE 'DEF' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '33'
   STORE 'VLC' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '34'
   STORE 'ACTPT' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '35'
   STORE 'SCRQTY' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '36'
   STORE 'WHO' TO Q:SELITEM
   STORE 'C:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '37'
   STORE 'QTYINS' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '38'
   STORE 'QTYREC' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '39'
   STORE 'QTYSTK' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '40'
   STORE 'DEFV' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '41'
   STORE 'DEFR' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '42'
   STORE 'ITEM' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '43'
   STORE 'CVER' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '44'
   STORE 'OTF' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '45'
   STORE 'GOV' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '46'
   STORE 'WUC' TO Q:SELITEM
   STORE 'C:FLDCMD2' TO Q:FLDCMD
```

```
                CASE Q:SELECT = '47'
                   STORE 'DIS' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '48'
                   STORE 'RETC' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '49'
                   STORE 'ACTTKN' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '50'
                   STORE 'COSTC' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '51'
                   STORE 'STATUSC' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '52'
                   STORE 'CAUSEC' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '53'
                   STORE 'ACTDISP' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '54'
                   STORE 'MFG' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '55'
                   STORE 'LOT' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '56'
                   STORE 'DITEM' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
                CASE Q:SELECT = '57'
                   STORE 'WNTY' TO Q:SELITEM
                   STORE 'Q:FLDCMD2' TO Q:FLDCMD
             ENDCASE
             IF Q:SELECT <> '00' .AND. Q:SELECT <> '30' .AND.;
                Q:SELECT <> '58'
                STORE Q:ITEM + 1 TO Q:ITEM
                IF Q:ITEM = 1
                   STORE Q:SELECT TO Q:CHOSEN
                   STORE Q:SELITEM TO Q:DISPLAY
                ELSE
                   STORE Q:CHOSEN+','+Q:SELECT TO Q:CHOSEN
                   STORE Q:DISPLAY+','+Q:SELITEM TO Q:DISPLAY
                ENDIF
                IF Q:SELECT <> '01'
                   IF $(Q:SELITEM,1,1)='$' .AND. .NOT. Q:DATESEL
                      STORE 'DATES' TO Q:SELITEM
                      STORE &Q:FLDCMD-','+Q:SELITEM TO &Q:FLDCMD
                      STORE ' ' TO Q:SELITEM
                      STORE T TO Q:DATESEL
                   ELSE
                      IF $(Q:SELITEM,1,1)<>'$'
                         STORE &Q:FLDCMD-','+Q:SELITEM TO &Q:FLDCMD
                      ENDIF
                   ENDIF
                ENDIF

*****  Generate Code For Field Selection
                IF Q:FIELD = ' '
                   STORE Q:FIELD-Q:SELITEM TO Q:FIELD
                ELSE
                   STORE Q:FIELD-','-Q:SELITEM TO Q:FIELD
                ENDIF
                STORE '00' TO Q:SELECT
             ENDIF
          ENDIF
       ENDIF
    ENDDO
```

```
*****  Release All Unnecessary Memory Variables

RELEASE Q:REPLY, Q:SELECT, Q:ITEM, Q:SELITEM, Q:SELCMD,;
        Q:FLDCMD, Q:CHOSEN

STORE Q:NRPASSES TO Q:LOOPCNT

*****  If Both OPEN and CLOSED Files are Selected
*****  The Execution Loop Will Be Run Twice

DO WHILE Q:LOOPCNT >= 1

*****  Select File To Be Used In This Query

IF Q:FILE = 'O'
   STORE 'D:'+C:WHO-'OPEN' TO Q:TEMP3
ELSE
   STORE 'D:'+C:WHO-'CLOS' TO Q:TEMP3
ENDIF

*****  Generate Executable Code To Perform Query Selection
*****  Check to See If The Selection Deals With The First
*****  Half of the Data Base

IF Q:SELCMD1 <> ' '
   IF Q:FILE = 'O'
      STORE 'USE D:OPEN1'TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ELSE
      STORE 'USE D:CLOSE1'TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ENDIF
   STORE 'D:'+C:WHO+'TMP1' TO Q:TEMP1
   STORE 'COPY TO '+C:TEMP1 TO &Q:LINE
   IF Q:FLDCMD1 <> 'CASE '
      STORE &Q:LINE+' FIELD '+Q:FLDCMD1+' FOR '+Q:SELCMD1;
            TO &Q:LINE
   ELSE
      STORE &Q:LINE+' FOR '+Q:SELCMD1 TO &Q:LINE
   ENDIF
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
ENDIF
*****  Generate Executable Code To Perform Query Selection
*****  Check to See If The Selection Deals With The Second
*****  Half of the Data Base

IF Q:SELCMD2 <> ' '
   IF Q:FILE = 'C'
      STORE 'USE D:OPEN2' TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ELSE
      STORE 'USE D:CLOSE2' TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ENDIF
   STORE 'D:'+C:WHO+'TMP2' TO Q:TEMP2
   STORE 'COPY TO '+C:TEMP2 TO &Q:LINE
   IF Q:FLDCMD2 <> 'CASE '
      STORE &Q:LINE+' FIELD '+Q:FLDCMD2+' FOR '+Q:SELCMD2;
            TO &Q:LINE
   ELSE
      STORE &Q:LINE+' FOR '+Q:SELCMD2 TO &Q:LINE
   ENDIF
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
```

```
ENDIF

*****  Generate Code to Join Together Both Halves of the
*****  Selected Files

IF Q:SELCMD1 <> ' '  .AND. Q:SELCMD2 <> ' '
   STORE 'SELECT PRIMARY' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'USE '+Q:TEMP1 TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'SELECT SECONDARY' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'USE '+Q:TEMP2 TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'JOIN TO '+Q:TEMP3+' FOR P.CASE=S.CASE FIELD '+;
         Q:FIELD TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'USE' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'DELETE FILE D:'+Q:TEMP1-'.DBF' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'DELETE FILE D:'+Q:TEMP2-'.DBF' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
ELSE
   IF Q:SELCMD1 <> ' ' .AND. Q:SELCMD2 = ' '

*****  Generate Codes to Rename Files as Necessary
      IF Q:FLDCMD2 = 'CASE '
         STORE 'RENAME '+Q:TEMP1-'.DBF TO '+Q:TEMP3-'.DBF';
               TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
      ELSE
         STORE 'SELECT SECONDARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE '+Q:TEMP1 TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'SELECT PRIMARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         IF Q:FILE = 'O'
            STORE 'USE D:OPEN2' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ELSE
            STORE 'USE D:CLOSE2' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ENDIF
         STORE 'JOIN TO '+Q:TEMP3+;
               ' FOR P.CASE=S.CASE FIELD '+Q:FIELD TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'DELETE FILE D:'+Q:TEMP1-'.DBF' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
```

```
      ENDIF
   ELSE
      IF Q:FLDCMD1 = 'CASE '
         STORE 'RENAME '+Q:TEMP2-'.DBF TO '+Q:TEMP3-'.DBF';
            TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
      ELSE
         STORE 'SELECT SECONDARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE '+Q:TEMP2 TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'SELECT PRIMARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         IF Q:FILE = 'O'
            STORE 'USE D:OPEN1' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ELSE
            STORE 'USE D:CLOSE1' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ENDIF
         STORE 'JOIN TO '+Q:TEMP3+' FOR P.CASE=S.CASE '
            +'FIELD '+Q:FIELD TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'DELETE FILE D:'+Q:TEMP2-'.DBF' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
      ENDIF
   ENDIF
ENDIF
STORE Q:LOOPCNT-1 TO Q:LOOPCNT

*****  If Two Passes Required, Switch to Closed File
*****  For Second Pass
IF Q:NRPASSES = 2
   STORE 'C' TO Q:FILE
ENDIF
ENDDO

*****  If Two Passes Required, Generate Code To Join Files
*****  Created by Individual Passes

IF Q:NRPASSES = 2
   STORE 'USE D:'+C:WHO+'OPEN' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'APPEND FROM '+"D:"+C:WHO+'CLOS' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
ENDIF
*SET COLOR TO 112, 6
ERASE
@ 10,23 SAY 'Your Query Is Now Being Processed'
@ 12,33 SAY 'Please Standby'

*****  Begin Execution of Generated Code

STORE 10 TO Q:EXECNTR
DO WHILE Q:EXECNTR <= Q:CNTR-1
   STORE 'Q:L'+STR(Q:EXECNTR,2) TO Q:EXELINE
```

```
   &&Q:EXELINE
   STORE Q:EXECNTR + 1 TO Q:EXECNTR
ENDDO
STORE "'"+'D:'+C:WHO+'OPEN.DBF'+"'" TO Q:OPENFILE
STORE "'"+'D:'+C:WHO+'CLOS.DBF'+"'" TO Q:CLOSFILE
IF FILE(&Q:OPENFILE) .AND. FILE(&Q:CLOSFILE)
   STORE 'D:'+C:WHO+'OPEN' TO Q:USEFILE
   STORE 'D:'+C:WHO+'CLOS.DBF' TO Q:DELETEF
   DELETE FILE &Q:DELETEF
ELSE
   IF FILE(&Q:OPENFILE)
      STORE 'D:'+C:WHO+'OPEN' TO Q:USEFILE
   ELSE
      STORE 'D:'+C:WHO+'CLOS' TO Q:USEFILE
   ENDIF
ENDIF

*****  Display The Number of Records Selected and
*****  Provide the Option of Hard Copy or Screen Reports

USE &Q:USEFILE
GOTO EOTTOM
ERASE
@ 10,16 SAY #
@ 10,22 SAY 'Records Have Been Selected For This Query'
@ 13,30 SAY '1. Print Hard Copy'
@ 15,30 SAY '2. Display To Screen'
@ 17,30 SAY '3. Abort Query'
STORE ' ' TO Q:REPLY
@ 20,40 GET Q:REPLY
READ
DO WHILE Q:REPLY < '1' .OR. Q:REPLY > '3'
   @ 23,33 SAY 'Enter 1, 2 or 3'+ CHR(7)
   @ 20,40 GET Q:REPLY
   READ
ENDDO
DO CASE
   CASE Q:REPLY = '1'
      SET PRINT ON
      USE &Q:USEFILE
      DO WHILE .NOT. EOF
         ERASE
         STORE 0 TO Q:LINENR
         DO WHILE .NOT. EOF .AND. Q:LINENR <= 59
            DISPLAY ALL FIELD &Q:DISPLAY OFF
            SKIP
            STORE Q:LINENR + 1 TO Q:LINENR
         ENDDO
         ? CHR(12)
      ENDDO
      SET PRINT OFF
   CASE Q:REPLY = '2'
      ERASE
      USE &Q:USEFILE
      DISPLAY ALL FIELD &Q:DISPLAY OFF
      WAIT
   CASE Q:REPLY = '3'
      USE
      DELETE FILE &Q:USEFILE+'.DBF'
      RELEASE ALL LIKE Q:*
      RETURN
ENDCASE
USE
STORE Q:USEFILE+'.DBF' TO Q:USEFILE
DELETE FILE &Q:USEFILE
RELEASE ALL LIKE Q:*
RETURN

***** END OF PROGRAM
```

XIII. STATISTICS GENERATION MODULE

```
************************************************************
**                                                        **
**   Date: 19 Jan 1984                                    **
**   Version: 1.0                                         **
**   Module Name: STATGEN                                 **
**   Module Purpose: Generate Count of Cases in Each      **
**                   Processing Phase and Create Time     **
**                   Frame Statistics                     **
**                                                        **
**   Module Interface Definition                          **
**      Inputs: None                                      **
**      Outputs: None                                     **
**   Module Processing Narrative Description:             **
**                                                        **
**         Calculates the Time Span Between Operations    **
**         and Updates The TECHCODE File to Indicate the  **
**         Number of Cases in Each Processing Status      **
**                                                        **
**   Superordinate Modules: UTILMENU                      **
**   Subordinate Modules: None                            **
**   Author: R. G. NICHOLS                                **
**                                                        **
************************************************************

*****  Display Warning

ERASE
@  1,19 SAY '***** Statistics Generation Processing *****'
@  3,24 SAY '* * * * * * * * * * * * * * * * *'
@  4,24 SAY '*                               *'
@  5,24 SAY '*            WARNING            *'
@  6,24 SAY '*                               *'
@  7,24 SAY '*   This Program Will Read      *'
@  8,24 SAY '*      All Records While        *'
@  9,24 SAY '*         Processing            *'
@ 10,24 SAY '*                               *'
@ 11,24 SAY '*    If Existing Files Are      *'
@ 12,24 SAY '*    Large, This Could Take     *'
@ 13,24 SAY '*          Hours                *'
@ 14,24 SAY '*                               *'
@ 15,24 SAY '* * * * * * * * * * * * * * * * *'
@ 17,24 SAY '    Are You SURE You Want To'
@ 18,24 SAY '          Continue'
@ 19,24 SAY '        <Enter Y or N>' + CHR(7)
STORE ' ' TO S:REPLY2
@ 21,40 GET S:REPLY2
READ
DO WHILE !(S:REPLY2) <> 'Y' .AND. !(S:REPLY2) <> 'N'
   @ 23,32 SAY 'Enter Y or N Only' + CHR(7)
   @ 21,40 GET S:REPLY2 PICTURE 'A'
   READ
ENDDO
@ 23,32 SAY '                    '
@ 17,40 SAY ' '

*****  Verify Password Prior to Beginning Computations

IF S:REPLY2 = 'Y'
   @ 21,30 SAY 'Enter Your Password '
   STORE '          ' TO S:PASSWORD
   SET CONSOLE OFF
```

```
   ACCEPT TO S:PASSWORD
   SET CONSOLE ON
   IF S:PASSWORD <>  '          '
      USE D:TECHCODE INDEX D:TECH
      FIND &C:WHO
      IF PSWD <> S:PASSWORD .OR. # = 0
         @ 23,18 SAY 'Request ABORTED ';
                   + '- Strike Any Key To Continue'
         WAIT
         RELEASE ALL LIKE S:*
         RETURN
      ENDIF
   ENDIF
ELSE
   RELEASE ALL LIKE S:*
   RETURN
ENDIF

*****  Display Processing Message to User

ERASE
@ 6,27 SAY 'Internal Statistics Update'
@ 8,35 SAY 'In Process'
@ 16,26 SAY '***** DO NOT INTERRUPT *****'

SELECT PRIMARY
USE D:OPEN1 INDEX D:OCASE1


*****  Begin Computing Loop

DO WHILE .NOT. EOF
   DO WHILE $(DATES,46,1) <> ' ' .AND. .NOT. EOF
      STORE CASE TO S:CASE
      STORE WHO TO S:WHO

      STORE 0 TO S:ASSIGNED
      STORE 0 TO S:ACTIVE
      STORE 0 TO S:TRANSMIT
      STORE 0 TO S:RESPOND
      STORE 0 TO S:CLOSED

      STORE $(DATES,46,1) TO S:DATECHG
      STORE $(DATES,6,5) TO S:RECEIPT
      STORE $(DATES,11,5) TO S:OPEN
      STORE $(DATES,16,5) TO S:XMIT
      STORE $(DATES,26,5) TO S:RESPONSE
      STORE $(DATES,36,5) TO S:CLOSE

      STORE 0 TO S:MAILDLAY
      STORE 0 TO S:XMITDLAY
      STORE 0 TO S:RESPDLAY
      STORE 0 TO S:CLOSDLAY
      STORE 0 TO S:PROCDLAY


*****  Calculate Time Span From Receipt to Case Open

      IF S:RECEIPT <>  '      ' .AND. S:OPEN <>  '      '
         IF $(S:RECEIPT,1,2) < $(S:OPEN,1,2)
            IF VAL($(S:OPEN,1,2))-VAL($(S:RECEIPT,1,2))=1
               STORE VAL($(S:OPEN,3,3))+365-;
                  VAL($(S:RECEIPT,3,3))+1 TO S:MAILDLAY
            ELSE
               IF VAL($(S:OPEN,1,2))-VAL($(S:RECEIPT,1,2))=2
                  STORE VAL($(S:OPEN,3,3))+730;
                     -VAL($(S:RECEIPT,3,3))+1 TO S:MAILDLAY
               ELSE
                  STORE 999 TO S:MAILDLAY
```

```
            ENDIF
         ENDIF
      ELSE
         STORE VAL($(S:OPEN,3,3))-VAL($(S:RECEIPT,3,3));
               +1 TO S:MAILDLAY
      ENDIF
   ENDIF
*****  Calculate Time Span From Case Open to Letter Transmit

   IF S:XMIT <>  '      '
      IF $(S:OPEN,1,2) < $(S:XMIT,1,2)
         IF VAL($(S:XMIT,1,2))-VAL($(S:OPEN,1,2))=1
            STORE VAL($(S:XMIT,3,3))+365-;
               VAL($(S:OPEN,3,3))+1 TO S:XMITDLAY
         ELSE
            IF VAL($(S:XMIT,1,2))-VAL($(S:OPEN,1,2))=2
               STORE VAL($(S:XMIT,3,3))+730-;
                  VAL($(S:OPEN,3,3))+1 TO S:XMITDLAY
            ELSE
               STORE 999 TO S:XMITDLAY
            ENDIF
         ENDIF
      ELSE
         STORE VAL($(S:XMIT,3,3))-VAL($(S:OPEN,3,3))+1 ;
            TO S:XMITDLAY
      ENDIF
   ENDIF

*****  Calculate Time Span From Letter Transmit to Item
*****  Manager Response

   IF S:RESPONSE <>  '      '
      IF $(S:XMIT,1,2) < $(S:RESPONSE,1,2)
         IF VAL($(S:RESPONSE,1,2))-VAL($(S:XMIT,1,2))=1
            STORE VAL($(S:RESPONSE,3,3))+365-;
               VAL($(S:XMIT,3,3))+1 TO S:RESPDLAY
         ELSE
            IF VAL($(S:RESPONSE,1,2)) - ;
                  VAL($(S:XMIT,1,2)) = 2
               STORE VAL($(S:RESPONSE,3,3))+730 - ;
                     VAL($(S:XMIT,3,3))+1 TO S:RESPDLAY
            ELSE
               STORE 999 TO S:RESPDLAY
            ENDIF
         ENDIF
      ELSE
         STORE VAL($(S:RESPONSE,3,3))-VAL($(S:XMIT,3,3));
               + 1 TO S:RESPDLAY
      ENDIF
   ENDIF

*****  Calculate Time Span From Item Manager Response to
*****  Case Close

   IF S:CLOSE <>  '      '
      IF $(S:RESPONSE,1,2) < $(S:CLOSE,1,2)
         IF VAL($(S:CLOSE,1,2))-VAL($(S:RESPONSE,1,2))=1
            STORE VAL($(S:CLOSE,3,3))+365 - ;
               VAL($(S:RESPONSE,3,3))+1 TO S:CLOSDLAY
         ELSE
            IF VAL($(S:CLOSE,1,2)) - ;
                  VAL($(S:RESPONSE,1,2)) = 2
               STORE VAL($(S:CLOSE,3,3))+730 - ;
                  VAL($(S:RESPONSE,3,3))+1 TO S:CLOSDLAY
            ELSE
               STORE 999 TO S:CLOSDLAY
            ENDIF
         ENDIF
      ELSE
```

```
            STORE VAL($(S:CLOSE,3,3)) -;
                VAL($(S:RESPONSE,3,3))+1 TO S:CLOSDLAY
         ENDIF

*****  Calculate Time Span From Case Open to Case Close

         IF $(S:OPEN,1,2) < $(S:CLOSE,1,2)
            IF VAL($(S:CLOSE,1,2))-VAL($(S:OPEN,1,2)) = 1
               STORE VAL($(S:CLOSE,3,3)) + 365 - ;
                  VAL($(S:OPEN,3,3))+1 TO S:PROCDLAY
            ELSE
               IF VAL($(S:CLOSE,1,2))-VAL($(S:OPEN,1,2))=2
                  STORE VAL($(S:CLOSE,3,3)) + 730 - ;
                     VAL($(S:OPEN,3,3)) + 1 TO S:PROCDLAY
               ELSE
                  STORE 999 TO S:PROCDLAY
               ENDIF
            ENDIF
         ELSE
            STORE VAL($(S:CLOSE,3,3)) - VAL($(S:OPEN,3,3));
              + 1 TO S:PROCDLAY
         ENDIF
      ENDIF
      SELECT SECONDARY
      USE D:QTIME INDEX D:QCASE

*****  Update Time Frame File With New Time Spans
*****  If a Record Does Not Exist For a Case, Create It

      FIND &S:CASE
      IF # = 0
         APPEND BLANK
         REPLACE CASE WITH S:CASE,WHO WITH S:WHO
         IF S:DATECHG <> 'N'
            STORE '9999' TO S:WHO
         ENDIF
      ENDIF
      IF S:DATECHG = 'N'
         STORE 1 TO S:ASSIGNED
         STORE 1 TO S:ACTIVE
      ENDIF

*****  Change Status From Active to Transmitted or
*****  Vice Versa

      IF S:XMITDLAY > 0 .AND. XMITDLAY = 0
         STORE S:ACTIVE - 1 TO S:ACTIVE
         STORE S:TRANSMIT + 1 TO S:TRANSMIT
      ELSE
         IF S:XMITDLAY = 0 .AND. XMITDLAY <> 0
            STORE S:ACTIVE + 1 TO S:ACTIVE
            STORE S:TRANSMIT - 1 TO S:TRANSMIT
         ENDIF
      ENDIF

*****  Change Status From Transmitted to Responded or
*****  Vice Versa

      IF S:RESPDLAY > 0 .AND. RESPDLAY = 0
         STORE S:TRANSMIT - 1 TO S:TRANSMIT
         STORE S:RESPOND + 1 TO S:RESPOND
      ELSE
         IF S:RESPDLAY = 0 .AND. RESPDLAY <> 0
            STORE S:TRANSMIT + 1 TO S:TRANSMIT
            STORE S:RESPOND - 1 TO S:RESPOND
         ENDIF
      ENDIF

*****  Change Status From Responded to Closed or
```

```
*****  Vice Versa

       IF S:CLOSDLAY > 0 .AND. CLOSDLAY = 0
          STORE S:RESPOND - 1 TO S:RESPOND
          STORE S:CLOSED + 1 TO S:CLOSED
       ELSE
          IF S:CLOSDLAY = 0 .AND. CLOSDLAY <> 0
             STORE S:RESPOND - 1 TO S:RESPOND
             STORE S:CLOSED + 1 TO S:CLOSED
          ENDIF
       ENDIF


*****  Update Time Span File

       REPLACE CASE WITH S:CASE,WHO WITH S:WHO,MAILDLAY :
WITH S:MAILDLAY,XMITDLAY WITH S:XMITDLAY,RESPDLAY WITH :
S:RESPDLAY,CLOSDLAY WITH S:CLOSDLAY,PROCDLAY WITH S:PROCDLAY

       SELECT SECONDARY
       USE D:TECHCODE INDEX D:TECH

*****  Update Techcode File

       FIND &S:WHO
       IF # <> 0
          REPLACE ASSIGNED WITH ASSIGNED + S:ASSIGNED,;
   ACTIVE WITH ACTIVE + S:ACTIVE,TRANSMIT WITH TRANSMIT :
+ S:TRANSMIT,RESPOND WITH RESPOND+S:RESPOND,CLOSED WITH :
CLOSED + S:CLOSED
       ENDIF
    ENDIF
       SELECT PRIMARY
       REPLACE DATES WITH $(DATES,1,45)+' '
       SKIP
    ENDDO
    SKIP
ENDDO

*****  Release All Local Memory Variables and All Files
*****  Used During Processing

SELECT PRIMARY
USE
SELECT SECONDARY
USE
RELEASE ALL LIKE S:*
RETURN

*****  END OF PROGRAM
```

XIV. JULIAN DATE CONVERSION MODULE

```
*****************************************************************
**                                                             **
**   Date: 18 October 1984                                     **
**   Version: 1.0                                              **
**   Module Name: OJULIAN                                      **
**   Module Purpose: Convert Date (MMDDYY) to Julian           **
**   Module Interface Definition                               **
**      Inputs: V:MM,V:DD,V:YY                                 **
**      Outputs: V:JULDATE                                     **
**   Module Processing Narrative Description:                  **
**                                                             **
**        Receives a date in MMDDYY format and converts        **
**        it to a Julian date and returns the date to          **
**        the calling program.                                 **
**                                                             **
**   Superordinate Modules: XOPEN2                             **
**   Subordinate Modules: None                                 **
**   Author: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************

DO CASE
   CASE V:MM = 01
      STORE V:DD TO V:DAY
   CASE V:MM = 02
      STORE V:DD + 31 TO V:DAY
   CASE V:MM = 03
      STORE V:DD + 59 TO V:DAY
   CASE V:MM = 04
      STORE V:DD + 90 TO V:DAY
   CASE V:MM = 05
      STORE V:DD + 120 TO V:DAY
   CASE V:MM = 06
      STORE V:DD + 151 TO V:DAY
   CASE V:MM = 07
      STORE V:DD + 181 TO V:DAY
   CASE V:MM = 08
      STORE V:DD + 212 TO V:DAY
   CASE V:MM = 09
      STORE V:DD + 243 TO V:DAY
   CASE V:MM = 10
      STORE V:DD + 273 TO V:DAY
   CASE V:MM = 11
      STORE V:DD + 304 TO V:DAY
   CASE V:MM = 12
      STORE V:DD + 334 TO V:DAY
ENDCASE
IF INT(V:YY/4)*4 = V:YY .AND. V:DAY >= 60
   IF V:MM= 02 .AND. V:DD= 29
     STORE V:DAY TO V:DAY
   ELSE
     STORE V:DAY + 1 TO V:DAY
   ENDIF
ENDIF
STORE V:YY * 1000 + V:DAY TO V:JULIAN
STORE STR(V:JULIAN,5) TO V:JULDATE
RETURN

***** END OF PROGRAM
```

XV. COG COUNT MODULE

```
*****************************************************************
**                                                             **
**   Date: 8 Jan 1984                                          **
**   Version: 1.0                                              **
**   Module Name: COGCNT                                       **
**   Module Purpose: Count the Active Cases Assigned to        **
**                   Any Given COG                             **
**                                                             **
**   Module Interface Definition                               **
**      Inputs: None                                           **
**      Outputs: None                                          **
**                                                             **
**   Module Processing Narrative Description:                  **
**                                                             **
**         Indexes the OPEN1 File by COG and Counts            **
**         The Number of Cases Assigned To Each COG            **
**                                                             **
**   Superordinate Modules: UTILMENU                           **
**   Subordinate Modules: None                                 **
**   Author: R. G. NICHOLS                                     **
**                                                             **
*****************************************************************

*****  Display Warning Message and Accept Contine Request

ERASE
@  1,24  SAY '***** COG Count Processing *****'
@  3,24  SAY '* * * * * * * * * * * * * * * * *'
@  4,24  SAY '*                              * '
@  5,24  SAY '*             WARNING          * '
@  6,24  SAY '*                              * '
@  7,24  SAY '*   This Program Will Read     * '
@  8,24  SAY '*      All Records While       * '
@  9,24  SAY '*         Processing           * '
@ 10,24  SAY '*                              * '
@ 11,24  SAY '*    If Existing Files Are     * '
@ 12,24  SAY '*    Large, This Could Take    * '
@ 13,24  SAY '*          Hours               * '
@ 14,24  SAY '*                              * '
@ 15,24  SAY '* * * * * * * * * * * * * * * * '
@ 17,24  SAY '   Are You SURE You Want To'
@ 18,24  SAY '         Continue'
@ 19,24  SAY '        <Enter Y or N>' + CHR(7)
STORE ' ' TO CC:REPLY2
@ 21,40 GET CC:REPLY2
READ
DO WHILE !(CC:REPLY2) <> 'Y' .AND. !(CC:REPLY2) <> 'N'
   @ 23,32 SAY 'Enter Y or N Only' + CHR(7)
   @ 21,40 GET CC:REPLY2 PICTURE 'A'
   READ
ENDDO
@ 23,32 SAY '                  '
@ 17,40 SAY ' '

*****  Prompt For and Accept Password Verification

IF CC:REPLY2 = 'Y'
   @ 21,30 SAY 'Enter Your Password '
   STORE '        ' TO CC:PSWD
   SET CONSOLE OFF
   ACCEPT TO CC:PSWD
```

```
   SET CONSOLE ON
   IF CC:PSWD <> '          '
      USE D:TECHCODE INDEX D:TECH
      FIND &C:WHO
      IF PSWD <> CC:PSWD .OR. # = 0
         @ 23,10 SAY 'Request ABORTED - Strike Any Key To Continue'
         WAIT
         RELEASE ALL LIKE CC:*
         RETURN
      ENDIF
   ENDIF
ELSE
   RELEASE ALL LIKE CC:*
   RETURN
ENDIF

*****  Begin Statistics Update

ERASE
@ 12,20 SAY '       CCG STATISTICS BEING PROCESSED'
@ 14,20 SAY '                PLEASE STANDBY                '
@ 20,20 SAY '***** DO NOT INTERRUPT WHILE PROCESSING *****'

SELECT PRIMARY
USE D:OPEN1 INDEX D:CCGCNT
REINDEX
SELECT SECONDARY
USE D:COG INDEX D:COGS
REPLACE COUNT WITH 0 FOR COUNT <> 0
SELECT PRIMARY
GOTO 2

*****  Count the COGs Assigned Until End Of File Found

DO WHILE .NOT. EOF
   STORE CCG TO CC:CURRENT
   STORE 0 TO CC:COUNT

*****  Increment Counter Until a Different COG or End Of
*****  File Found

   DO WHILE COG = CC:CURRENT .AND. .NOT. EOF
      STORE CC:COUNT + 1 TO CC:COUNT
      SKIP
   ENDDO
   SELECT SECONDARY

*****  Update IM Record

   FIND &CC:CURRENT
   IF # <> 0
      REPLACE COUNT WITH CC:COUNT
   ENDIF
   SELECT PRIMARY
ENDDO
USE
SELECT SECONDARY
USE
RELEASE ALL LIKE CC:*
RETURN

***** END OF PROGRAM
```

XVI. BI-WEEKLY STATISTICS REPORT MODULE

```
**************************************************************
**                                                          **
**   DATE: 27 JANUARY 1984                                  **
**   VERSION: 1.0                                           **
**   MODULE NAME: XXBISTAT                                  **
**   MODULE PURPOSE: CALCULATE BI-WEEKLY STATISTICS         **
**   MODULE INTERFACE DEFINITION                            **
**      INPUTS: C:WHO, C;JULIAN                             **
**      OUTPUTS:                                            **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:               **
**                                                          **
**        ACCEPTS CLOSING DATE FOR THE REPORT IN MMDDYY     **
**        FORMAT. DATE IS CONVERTED TO JULIAN FORMAT BY     **
**        CALLING OJULIAN. DATES FOR PREVIOUS YEAR AND      **
**        OLDEST YEAR ARE CALCULATED AND STORED INTO        **
**        MEMORY VARIABLES. OPEN AND CLOSE DATABASES ARE    **
**        SEARCHED SEQUENTIALLY FOR ANY CASES WHICH WERE    **
**        OPENED OR CLOSED DURING THE PERIOD IN QUESTION.   **
**        THE BIWKSTAT DATABASE IS READ FOR THE COUNTS      **
**        OF THE LAST REPORT TO CALCULATE THE TREND, AND    **
**        THEN THE CURRENT COUNTS ARE PLACED INTO THE       **
**        BIWKSTAT DATABASE FOR FUTURE REFERENCE. THE       **
**        REPORT IS THEN PRINTED USING THE COUNTS FROM      **
**        THIS PROCESSING.  THE PROGRAM SHOULD BE RUN       **
**        IN BATCH, DURING 'OFF' HOURS, AND ONLY ON THE     **
**        SPECIFIC DAY FOR THE CUTOFF TO KEEP THE TREND     **
**        DATA REAL.                                        **
**   SUPERORDINATE MODULES: SUPRPTS                         **
**   SUBORDINATE MODULES: NONE                              **
**   AUTHOR: J.G. BOYNTON                                   **
**                                                          **
**************************************************************

***** INITIALIZATION OF VARIABLES

STORE '      ' TO BW:CURR
STORE '      ' TO BW:PREV
STORE '      ' TO BW:OLD
STORE 0 TO BW:CREC
STORE 0 TO BW:CCLOS
STORE 0 TO BW:C9COG
STORE 0 TO BW:CSPCC
STORE 0 TO BW:PREC
STORE 0 TO BW:PIN
STORE 0 TO BW:PCLOS
STORE 0 TO BW:P9COG
STORE 0 TO BW:PSPCC
STORE 0 TO BW:OREC
STORE 0 TO BW:OCLOS
STORE 0 TO BW:OCLOS
STORE 0 TO BW:O9COG
STORE 0 TO BW:OSPCC
STORE 0 TO BW:CRECC
STORE 0 TO BW:PRECC
STORE 0 TO BW:ORECC
STORE 0 TO BW:OPERR
STORE 0 TO BW:CERROR
STORE 0 TO BW:PERROR
STORE 0 TO BW:OERROR
```

```
***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS
***** FOR INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** C:JULIAN.  BW:LLIMIT= YEAR MINUS TWO YEARS
***** BW:ULIMIT = YEAR PLUS ONE YEAR

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO BW:LLIMIT
STORE STR(ULMT,2) TO BW:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT

        STORE '      ' TO BW:EDATE
        STORE T TO BW:CHOOSE
        ERASE
        DO WHILE BW:CHOOSE

            @ 10,20 SAY 'PLEASE ENTER THE CLOSING DATE'
            @ 11,20 SAY '  FOR THIS BIWEEKLY REPORT   '
            @ 12,20 SAY '        <MMDDYY>             '
            @ 14,30 GET BW:EDATE PICTURE '999999'
            READ
            IF $(BW:EDATE,1,2) <'01' ;
               .OR. $(BW:EDATE,1,2)>'12';
               .OR. $(BW:EDATE,3,2) <'01' ;
               .OR. $(BW:EDATE,3,2)> '31' ;
               .OR. $(BW:EDATE,5,2) < BW:LLIMIT ;
               .OR. $(BW:EDATE,5,2)> BW:ULIMIT
                  @ 23,30 SAY 'DATE OUT OF RANGE'
            ELSE
                  STORE F TO BW:CHOOSE
            ENDIF
        ENDDO<BW:CHOOSE>
        @ 23,30 SAY '                          '
        RELEASE BW:CHOOSE,BW:LLIMIT,BW:ULIMIT

***** CALCULATE THE DATES TO BE SEARCHED FOR AND ASSIGN
***** THEM TO THE VARABLES:  BW:CURR,BW:PREV,BW:OLD

***** ENTER THE CALL TO C:OJULIAN TO CHANGE MMDDYY TO
***** JULIAN FORMAT

          STORE  VAL($(BW:EDATE,1,2)) TO V:MM
          STORE  VAL($(BW:EDATE,3,2)) TO V:DD
          STORE  VAL($(BW:EDATE,5,2)) TO V:YY
          DO C:OJULIAN
          STORE V:JULDATE TO BW:CURR
          RELEASE ALL LIKE V:*

          STORE  $(BW:CURR,1,2) TO BW:TYR
          STORE  VAL(BW:TYR) TO BW:TYR3
          STORE  BW:TYR3-1 TO BW:TYR1
          STORE  BW:TYR3-2 TO BW:TYR2
          STORE  STR(BW:TYR1,2) TO BW:PREVT
          STORE  STR(BW:TYR2,2) TO BW:OLDT
          STORE  BW:PREVT+$(BW:CURR,3,3) TO BW:PREV
          STORE  BW:OLDT+$(BW:CURR,3,3) TO BW:OLD
          RELEASE BW:PREVT,BW:OLDT,BW:TYR,BW:TYR1,BW:TYR2

          ERASE
          @ 12,20 SAY ' BIWEEKLY STATUS REPORT IS BEING ';
                  +'PROCESSED'
          @ 14,20 SAY '          PLEASE STANDBY          '
          @ 23,20 SAY ' **** DO NOT INTERRUPT WHILE '
```

```
                +'PROCESSING ****'

***** END DATE CHANGE AND ASSIGNMENT HERE

        USE D:OPEN1

        DO WHILE .NOT. EOF
           STORE DATES TO M:DATES
           STORE COG TO M:COG

           STORE $(M:DATES,11,5) TO BW:ODAT
           STORE $(M:DATES,36,5) TO BW:CDAT
           IF $(BW:CDAT,1,2) = $(BW:CURR,1,2)
                STORE BW:CREC + 1 TO BW:CREC
                IF BW:CDAT <> '     '
                     STORE BW:CCLOS + 1 TO BW:CCLOS
                ELSE
                     IF $(M:COG,1,1) = '9'
                          STORE BW:C9COG + 1 TO BW:C9COG
                     ELSE
                          STORE BW:CSPCC + 1 TO BW:CSPCC
                     ENDIF
                ENDIF
           ENDIF < THIS CASE IN CURRENT YEAR COUNT>

           IF $(BW:CDAT,1,2) = $(BW:PREV,1,2)
                STORE BW:PREC + 1 TO BW:PREC
                IF BW:CDAT <> '     '
                     STORE BW:PCLOS + 1 TO BW:PCLOS
                ELSE
                     IF $(M:COG,1,1) = '9'
                          STORE BW:P9COG + 1 TO BW:P9COG
                     ELSE
                          STORE BW:PSPCC + 1 TO BW:PSPCC
                     ENDIF
                ENDIF
           ENDIF < THIS CASE IN PREVIOUS YEAR COUNT>

           IF $(BW:CDAT,1,2) = $(BW:OLD,1,2)
                STORE BW:OREC + 1 TO BW:OREC
                IF BW:CDAT <> '     '
                     STORE BW:OCLOS + 1 TO BW:OCLOS
                ELSE
                     IF $(M:COG,1,1) = '9'
                          STORE BW:O9COG + 1 TO BW:O9COG
                     ELSE
                          STORE BW:OSPCC + 1 TO BW:OSPCC
                     ENDIF
                ENDIF
           ENDIF < THIS CASE IN OLDEST YEAR COUNT>

           IF $(BW:CDAT,1,2)<>$(BW:CURR,1,2) .AND.;
              $(BW:CDAT,1,2)<>$(BW:PREV,1,2) .AND.;
              $(BW:CDAT,1,2)<>$(BW:OLD,1,2)
                STORE BW:OPERR + 1 TO BW:OPERR
           ENDIF

           SKIP

        ENDDO <SEARCH OF OPEN1.DBF >

***** END OF THE OPENFILE SEARCH, NOW FOR THE CLOSED FILES

        USE D:CLOSE1

        DO WHILE .NOT. EOF
           STORE DATES TO M:DATES
           STORE COG TO M:COG
```

```
    STORE $(M:DATES,11,5) TO BW:ODAT
    STORE $(M:DATES,36,5) TO BW:CDAT
    IF $(BW:CDAT,1,2) = $(BW:CURR,1,2)
        STORE BW:CRECC + 1 TO BW:CRECC
        IF BW:CDAT <> '     '
            STORE BW:CERROR + 1 TO BW:CERROR
        ENDIF
    ENDIF < THIS CASE IN CURRENT YEAR COUNT>

    IF $(BW:CDAT,1,2) = $(BW:PREV,1,2)
        STORE BW:PRECC + 1 TO BW:PRECC
        IF BW:CDAT <> '     '
            STORE BW:PERROR + 1 TO BW:PERROP
        ENDIF
    ENDIF < THIS CASE IN PREVIOUS YEAR COUNT>

    IF $(BW:CDAT,1,2) = $(BW:OLD,1,2)
        STORE BW:ORECC + 1 TO BW:ORECC
        IF BW:CDAT <> '     '
            STORE BW:OERROR + 1 TO BW:OERROR
        ENDIF
    ENDIF < THIS CASE IN OLDEST YEAR COUNT>
    SKIP

ENDDO <SEARCH OF CLOSE1.DBF >

STORE BW:C9CCG + BW:CSPCC TO BW:CTOT
STORE BW:P9CCG + BW:PSPCC TO BW:PTOT
STORE BW:O9CCG + BW:OSPCC TO BW:OTOT
STORE BW:OERROR+BW:PERROR+BW:CERROR TO BW:TERROR

STORE '19' + $(BW:CURR,1,2) TO BW:CYEAR
STORE '19' + $(BW:PREV,1,2) TO BW:PYEAR
STORE '19' + $(BW:OLD,1,2) TO BW:OYEAR

USE D:BIWKSTAT

STORE TOTALS TO BW:SCTOT
SKIP
STORE TOTALS TO BW:SPTOT
SKIP
STORE TOTALS TO BW:SOTOT

STORE '     ' TO BW:CLABEL
STORE '     ' TO BW:PLABEL
STORE '     ' TO BW:OLABEL

IF BW:SCTOT < BW:CTOT
    STORE 'UP' TO BW:CLABEL
ENDIF
IF BW:SCTOT > BW:CTOT
    STORE 'DOWN' TO BW:CLABEL
ENDIF
IF BW:SPTOT < BW:PTOT
    STORE 'UP' TO BW:PLABEL
ENDIF
IF BW:SPTOT > BW:PTOT
    STORE 'DOWN' TO BW:PLABEL
ENDIF
IF BW:SOTOT < BW:OTOT
    STORE 'UP' TO BW:OLABEL
ENDIF
IF BW:SCTOT > BW:OTOT
    STORE 'DOWN' TO BW:OLABEL
ENDIF

STORE BW:SOTCT-BW:OTCT TO BW:OTRD
STORE BW:SPTCT-BW:PTCT TO BW:PTRD
```

```
        STORE BW:SCTCT-BW:CTCT TO BW:CTRD
SET FORMAT TO PRINT
        @ 2,30 SAY '     CODE 9142 TECHNICAL BRANCH'
        @ 4,30 SAY '     QUALITY DEFICIENT MATERIAL'
        @ 6,30 SAY '        BIWEEKLY STATUS REPORT  '
        @ 8,30 SAY '             THRU'
        @ 8,47 SAY $(BW:EDATE,1,2) +'/'+$(BW:EDATE,3,2) +;
               '/'+$(BW:EDATE,5,2)
        @ 10,30 SAY '        JULIAN DATE'
        @ 10,50 SAY BW:CURR
        @ 12,10 SAY '                                                 '
               +'  SPCC     9-COG     TOTAL          '
        @ 13,10 SAY 'CALENDAR     CASES      CASES       '
               +'  OPEN     OPEN      OPEN      TREND'
        @ 14,10 SAY '   YEAR   RECEIVED       CLOSED       '
               +' CASES     CASES     CASES          '

        @ 18,13 SAY BW:OYEAR
        STORE BW:OREC+BW:ORECC TO BW:TOREC
        @ 18,18 SAY BW:TOREC
        @ 18,30 SAY BW:ORECC
        @ 18,40 SAY BW:OSPCC
        @ 18,50 SAY BW:O9COG
        @ 18,60 SAY BW:OTOT
        @ 18,70 SAY BW:OTRD
        @ 18,80 SAY BW:OLABEL

        @ 20,13 SAY BW:PYEAR
        STORE BW:PREC+BW:PRECC TO BW:TPREC
        @ 20,18 SAY BW:TPREC
        @ 20,30 SAY BW:PRECC
        @ 20,40 SAY BW:PSPCC
        @ 20,50 SAY BW:P9COG
        @ 20,60 SAY BW:PTOT
        @ 20,70 SAY BW:PTRD
        @ 20,80 SAY BW:PLABEL

        @ 22,13 SAY BW:CYEAR
        STORE BW:CREC+BW:CRECC TO BW:TCREC
        @ 22,18 SAY BW:TCREC
        @ 22,30 SAY BW:CRECC
        @ 22,40 SAY BW:CSPCC
        @ 22,50 SAY BW:C9COG
        @ 22,60 SAY BW:CTOT
        @ 22,70 SAY BW:CTRD
        @ 22,80 SAY BW:CLABEL

        @ 36,24 SAY '             CASE INPUT COMPARISON'
        @ 40,25 SAY   BW:PYEAR
        @ 40,40 SAY   BW:CYEAR
        @ 40,55 SAY 'TREND'
        STORE BW:PREC+BW:PRECC TO BW:TPREC
        @ 42,18 SAY BW:TPREC
        @ 42,32 SAY BW:CREC
        STORE '      ' TO BW:TLABEL
        IF BW:TPREC > BW:CREC
            STORE 'DOWN' TO BW:TLABEL
        ENDIF
        IF BW:TPREC < BW:CREC
            STORE 'UP' TO BW:TLABEL
        ENDIF
        STORE BW:CREC-BW:TPREC TO BW:TTRD
        @ 42,48 SAY BW:TTRD
        @ 42,59 SAY BW:TLABEL
EJECT

***** PAGE TWO
```

```
          STORE BW:CREC+BW:PREC+BW:OREC TO BW:TREC
          STORE BW:CRECC+BW:PRECC+BW:ORECC TO BW:TRECC

          @ 2,30 SAY '      CODE 9142 TECHNICAL BRANCH'
          @ 4,30 SAY '      QUALITY ASSURANCE SECTION'
          @ 6,30 SAY '        BIWEEKLY STATUS REPORT '
          @ 8,30 SAY '                 THRU'
          @ 8,47 SAY $(BW:EDATE,1,2)+'/'+$(BW:EDATE,3,2);
                 +'/'+$(BW:EDATE,5,2)
          @ 10,33 SAY '      JULIAN DATE'
          @ 10,52 SAY BW:CURR

          @ 14,25 SAY 'TOTAL RECORDS ON OPEN FILE:'
          @ 14,70 SAY BW:TREC
          @ 16,25 SAY 'TOTAL RECORDS ON CLOSED FILES:'
          @ 16,70 SAY BW:TRECC
          @ 18,25 SAY 'RECORDS WITH INVALID DATES,OPEN FILE:'
          @ 18,69 SAY BW:OPERR - 1
          @ 20,25 SAY 'RECORDS WITH INVALID DATES,CLOSED '
                 +'FILE:'
          @ 20,70 SAY BW:TERROR
          @ 28,40 SAY 'END OF REPORT'

EJECT
SET FORMAT TO SCREEN

***** STUFF NEW COUNTS INTO THE BIWKSTAT DATABASE

          USE D:BIWKSTAT.DBF
          REPLACE TOTALS WITH BW:CTRD
          SKIP
          REPLACE TOTALS WITH BW:PTRD
          SKIP
          REPLACE TOTALS WITH BW:OTRD

          RELEASE ALL LIKE BW:*
ERASE
RETURN

***** END OF PROGRAM
```

XVII. MONTHLY STATISTICS REPORT MODULE

```
**********************************************************
**                                                      **
**   DATE:  8 JANUARY 1984                              **
**   VERSION: 1.0                                       **
**   MODULE NAME: XXMNSTAT                              **
**   MODULE PURPOSE: CALCULATE MONTHLY STATISTICS REPORT **
**   MODULE INTERFACE DEFINITION                        **
**      INPUTS:  C:WHC, C:JULIAN                        **
**      OUTPUTS: NONE                                   **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:           **
**                                                      **
**        ACCEPTS THE ENDING DATE AND THEN CALCULATES THE **
**        JULIAN DATE FOR THIS YEAR AND THE PRIOR TWO    **
**        YEARS.  THE OPEN AND CLOSE DATA BASES ARE      **
**        SEARCHED SEQUENTIALLY TO FIND THE STATUS OF    **
**        EACH CASE IN THE DESIGNATED TIME PERIODS AND   **
**        COUNTS ARE SUMMARIZED INTO MEMORY VARIABLES.   **
**        AFTER PROCESSING, THE REPORTS ARE GENERATED TO **
**        THE PRINTER.  THIS INCLUDES THE MONTHLY STATUS **
**        REPORT BY YEAR, COMMAND KEY INDICATORS FOR     **
**        CURRENT YEAR, AND THE SUMMARY REPORT FOR THE   **
**        CURRENT YEAR.  THIS SHOULD BE DONE 'OFF' TIME  **
**        AND WHEN THE SYSTEM IS NOT BEING USED. OUTPUT  **
**        IS DIRECTED TO THE PRINTER.                    **
**        ERROR LISTING CAN BE RETREIVED IN D:MSBAD.TXT  **
**        BY 'TYPING' USING THE OPERATING SYSTEM.        **
**                                                      **
**   SUPERORDINATE MODULES: SUPRPTS                     **
**   SUBORDINATE MODULES: NONE                          **
**   AUTHOR: J.G. BOYNTON                               **
**                                                      **
**********************************************************

SET ALTERNATE TO D:MSEAD
STORE 1 TO MS:ROW

***** INITIALIZATION OF VARIABLES

STORE 0 TO MS:CRCVD
STORE 0 TO MS:OPTOT
STORE 0 TO MS:CLTOT
STORE 0 TO MS:OPERR
STORE 0 TO MS:CLERR


***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS
***** FOR INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** C:JULIAN.  MS:LLIMIT= YEAR MINUS TWO YEARS
***** MS:ULIMIT = YEAR PLUS ONE YEAR

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO MS:LLIMIT
STORE STR(ULMT,2) TO MS:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT

***** INPUT OF REPORT CLOSING DATE
```

```
          STORE '      ' TO MS:EDATE
          STORE T TO MS:CHOOSE
          ERASE
          DO WHILE MS:CHOOSE
               @ 10,20 SAY 'PLEASE ENTER THE CLOSING DATE'
               @ 11,20 SAY '   FOR THIS MONTHLY REPORT   '
               @ 12,20 SAY '          <MMDDYY>          '
               @ 14,31 GET MS:EDATE PICTURE '999999'
               READ
               IF $(MS:EDATE,1,2) < '01' ;
                  .OR. $(MS:EDATE,1,2) >'12' ;
                  .OR. $(MS:EDATE,3,2) < '01' ;
                  .OR. $(MS:EDATE,3,2) >'31' ;
                  .OR. $(MS:EDATE,5,2) < MS:LLIMIT ;
                  .OR.$(MS:EDATE,5,2)>MS:ULIMIT
                       @ 23,30 SAY ' DATE OUT OF RANGE'
               ELSE
                    STORE F TO MS:CHOOSE
               ENDIF
          ENDDO <MS:CHOOSE>
          @ 23,30 SAY '                                '
          RELEASE MS:CHOOSE,MS:LLIMIT,MS:ULIMIT

***** CALCULATE DATES TO BE SEARCHED FOR AND ASSIGNS THEM
***** TO VARIABLES


***** ENTER THE CALL TO C:OJULIAN TO CHANGE MMDDYY TO
***** JULIAN FORMAT

          STORE VAL($(MS:EDATE,1,2)) TO V:MM
          STORE VAL($(MS:EDATE,3,2)) TO V:DD
          STORE VAL($(MS:EDATE,5,2)) TO V:YY
          DO C:OJULIAN
          STORE V:JULDATE TO MS:CJUL


***** THIS CALCULATES THE JULIAN DATE OF THE FIRST DAY
***** OF THE MONTH OF INTEREST

          STORE VAL('01') TO V:DD
          DO C:OJULIAN
          STORE V:JULDATE TO MS:CJUL1

          STORE $(MS:CJUL,1,2) TO MS:TYR
          STORE VAL(MS:TYR) TO MS:TYR3
          STORE MS:TYR3-1 TO MS:TYR1
          STORE MS:TYR3-2 TO MS:TYR2
          STORE STR(MS:TYR1,2) TO MS:PREVT
          STORE STR(MS:TYR2,2) TO MS:OLDT
***** CALCULATE THE CALENDAR AND JULIAN DATES FOR THE
***** PREVIOUS YEAR

          STORE VAL($(MS:EDATE,1,2)) TO V:MM
          STORE VAL($(MS:EDATE,3,2)) TO V:DD
          STORE VAL(MS:PREVT) TO V:YY
          DO C:OJULIAN
          STORE V:JULDATE TO MS:PJUL

**** CALCULATES FIRST DAY OF MONTH IN PREVIOUS YEAR

          STORE VAL('01') TO V:DD
          DO C:OJULIAN
          STORE V:JULDATE TO MS:PJUL1

***** CALCULATES ENDDATE OF MONTH IN OLDEST YEAR

          STORE VAL($(MS:EDATE,1,2)) TO V:MM
```

```
          STORE VAL($(MS:EDATE,3,2)) TO V:DD
          STORE VAL(MS:OLDT) TO V:YY
          DO C:OJULIAN
          STORE V:JULDATE TO MS:OJUL

***** CALCULATES FIRST DAY OF MONTH IN OLDEST YEAR

          STORE VAL('01') TO V:DD
          DO C:OJULIAN
          STORE V:JULDATE TO MS:OJUL1

          RELEASE MS:PREVT,MS:OLDT,MS:TYR,MS:TYR1,MS:TYR2;
                  MS:TYR3
          RELEASE ALL LIKE V:*


          ERASE
          @ 12,20 SAY ' MONTHLY STATUS REPORT IS BEING ;
                  +'PROCESSED'
          @ 14,20 SAY '                PLEASE STANDBY       '
          @ 23,20 SAY '**** DO NOT INTERRUPT WHILE ;
                  +'PROCESSING ****'

***** END DATE CHANGE AND ASSIGNMENT HERE

***** SEARCH THE OPEN DATABASE

          STORE 0 TO MS:CO1
          STORE 0 TO MS:CO2
          STORE 0 TO MS:CO3
          STORE 0 TO MS:CO4
          STORE 0 TO MS:PO1
          STORE 0 TO MS:PO2
          STORE 0 TO MS:PO3
          STORE 0 TO MS:PO4
          STORE 0 TO MS:OO1
          STORE 0 TO MS:OO2
          STORE 0 TO MS:OO3
          STORE 0 TO MS:OO4
          STORE 0 TO MS:PTOT
          STORE 0 TO MS:OTOT

          USE D:OPEN1

          DO WHILE .NOT. EOF
             STORE DATES TO M:DATES

             STORE $(M:DATES,11,5) TO MS:ODAT
             STORE $(M:DATES,36,5) TO MS:CDAT
***** IF CASE IS IN CURRENT YEAR

             IF $(MS:CDAT,1,2) = $(MS:CJUL,1,2)

                IF MS:CDAT > MS:CJUL1 .AND. MS:ODAT<MS:CJUL
                   STORE MS:CRCVD + 1 TO MS:CRCVD

***** IF CASE IS STILL OPEN IT SHOULD BE IN THIS FILE

                      IF MS:CDAT =  '     '
                         STORE VAL($(MS:CJUL,3,3)) TO V:CDAT
                         STORE VAL($(MS:ODAT,3,3)) TO V:CDAT
                         STORE V:CDAT - V:ODAT TO V:TIMEN
                         STORE STR(V:TIMEN,3) TO MS:TIME
                         RELEASE ALL LIKE V:*

                         DO CASE
                            CASE MS:TIME < '61'
```

```
                                STORE MS:CO1 + 1 TO MS:CO1
                            CASE MS:TIME < '121'
                                STORE MS:CO2 + 1 TO MS:CO2
                            CASE MS:TIME < '181'
                                STORE MS:CO3 + 1 TO MS:CO3
                            CASE MS:TIME > '180'
                                STORE MS:CO4 + 1 TO MS:CO4
                        ENDCASE
                    ENDIF
                ENDIF
            ENDIF < CASE OPENED IN THE CURRENT YEAR >


***** IF CASE IS IN PREVIOUS YEAR

            IF $(MS:CDAT,1,2) = $(MS:PJUL,1,2)

                IF MS:ODAT > MS:PJUL1 .AND. MS:ODAT<MS:PJUL
                    STORE MS:PTOT + 1 TO MS:PTOT

***** IF CASE IS STILL OPEN IT SHOULD BE IN THIS FILE

                    IF MS:CDAT =  '      '
                        STORE VAL($(MS:PJUL,3,3)) TO V:CDAT
                        STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                        STORE V:CDAT - V:ODAT TO V:TIMEN
                        STORE STR(V:TIMEN,3) TO MS:TIME
                        RELEASE ALL LIKE V:*

                        DO CASE
                            CASE MS:TIME < '61'
                                STORE MS:PO1 + 1 TO MS:PO1
                            CASE MS:TIME < '121'
                                STORE MS:PO2 + 1 TO MS:PO2
                            CASE MS:TIME < '181'
                                STORE MS:PO3 + 1 TO MS:PO3
                            CASE MS:TIME > '180'
                                STORE MS:PO4 + 1 TO MS:PO4
                        ENDCASE
                    ENDIF
                ENDIF
            ENDIF < CASE OPENED IN THE PREVIOUS YEAR >

***** IF CASE IS IN CIDEST YEAR

            IF $(MS:CDAT,1,2) = $(MS:OJUL,1,2)

                IF MS:ODAT > MS:OJUL1 .AND. MS:ODAT<MS:OJUL
                    STORE MS:OTOT + 1 TO MS:OTOT

***** IF CASE IS STILL OPEN IT SHOULD BE IN THIS FILE

                    IF MS:CDAT =  '      '
                        STORE VAL($(MS:OJUL,3,3)) TO V:CDAT
                        STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                        STORE V:CDAT - V:ODAT TO V:TIMEN
                        STORE STR(V:TIMEN,3) TO MS:TIME
                        RELEASE ALL LIKE V:*

                        DO CASE
                            CASE MS:TIME < '61'
                                STORE MS:OO1 + 1 TO MS:CO1
                            CASE MS:TIME < '121'
                                STORE MS:OO2 + 1 TO MS:CO2
                            CASE MS:TIME < '181'
                                STORE MS:OO3 + 1 TO MS:CO3
                            CASE MS:TIME > '160'
                                STORE MS:OO4 + 1 TO MS:CO4
```

```
                    ENDCASE
                ENDIF
            ENDIF
        ENDIF < CASE OPENED IN THE OLDEST YEAR >

        IF $(MS:CDAT,1,2)<>$(MS:CJUL,1,2) .AND.;
           $(MS:CDAT,1,2)<>$(MS:PJUL,1,2) .AND.;
           $(MS:CDAT,1,2)<>$(MS:OJUL,1,2)
              STORE MS:OPERR + 1 TO MS:OPERR
              STORE CASE TO MS:CASE
              SET ALTERNATE ON
              ? MS:ROW,10 SAY 'OCASE'
              ? MS:ROW,18 SAY MS:CASE
              ? MS:ROW,30 SAY $(MS:ODAT,1,2)+'/';
                +$(MS:CDAT,3,2)+'/'+$(MS:ODAT,5,2)
              ? MS:ROW,40 SAY $(MS:CDAT,1,2)+'/'+;
                $(MS:CDAT,3,2)+'/'+$(MS:CDAT,5,2)
              STORE MS:ROW + 1 TO MS:ROW
              SET ALTERNATE OFF
        ENDIF

        STORE MS:CPTOT + 1 TO MS:OPTOT
        SKIP

    ENDDO < WHILE NOT EOF IN OPEN FILE >

***** START THE SEARCH AND COUNT IN THE CLOSED DATABASE

***** INITIALIZATION OF VARIABLES FOR CLOSED FILE

    STORE 0 TO MS:OCL1
    STORE 0 TO MS:OCL2
    STORE 0 TO MS:OCL3
    STORE 0 TO MS:OCL4
    STORE 0 TO MS:PCL1
    STORE 0 TO MS:PCL2
    STORE 0 TO MS:PCL3
    STORE 0 TO MS:PCL4
    STORE 0 TO MS:CCL1
    STORE 0 TO MS:CCL2
    STORE 0 TO MS:CCL3
    STORE 0 TO MS:CCL4

    USE D:CLOSE1

    DO WHILE .NOT. EOF
       STORE DATES TO M:DATES

       STORE $(M:DATES,11,5) TO MS:ODAT
       STORE $(M:DATES,36,5) TO MS:CDAT

       IF $(MS:CDAT,1,2) = $(MS:CJUL,1,2)

            IF MS:CDAT > MS:CJUL1 .AND. MS:CDAT<MS:CJUL
               STORE MS:CRCVD + 1 TO MS:CRCVD


               IF MS:CDAT <>  '     '
                  STORE VAL($(MS:CDAT,3,3)) TO V:CDAT
                  STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                  STORE V:CDAT - V:ODAT TO V:TIMEN
                  STORE STR(V:TIMEN,3) TO MS:TIME
                  RELEASE ALL LIKE V:*

                  DO CASE
                     CASE MS:TIME < '61'
                          STORE MS:CCL1 + 1 TO MS:CCL1
                     CASE MS:TIME < '121'
```

```
                                    STORE MS:CCL2 + 1 TO MS:CCL2
                                CASE MS:TIME < '181'
                                    STORE MS:CCL3 + 1 TO MS:CCL3
                                CASE MS:TIME > '180'
                                    STORE MS:CCL4 + 1 TO MS:CCL4
                            ENDCASE
                        ENDIF
                    ENDIF
                ENDIF < CASE OPENED IN THE CURRENT YEAR >


***** IF CASE IS IN PREVIOUS YEAR

                IF $(MS:CDAT,1,2) = $(MS:PJUL,1,2)

                    IF MS:CDAT > MS:PJUL1 .AND. MS:CDAT<MS:PJUL
                        STORE MS:PTOT + 1 TO MS:PTOT


                        IF MS:CDAT <>  '      '
                            STORE VAL($(MS:CDAT,3,3)) TO V:CDAT
                            STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                            STORE V:CDAT - V:ODAT TO V:TIMEN
                            STORE STR(V:TIMEN,3) TO MS:TIME
                            RELEASE ALL LIKE V:*

                            DO CASE
                                CASE MS:TIME < '61'
                                    STORE MS:PCL1 + 1 TO MS:PCL1
                                CASE MS:TIME < '121'
                                    STORE MS:PCL2 + 1 TO MS:PCL2
                                CASE MS:TIME < '181'
                                    STORE MS:PCL3 + 1 TO MS:PCL3
                                CASE MS:TIME > '180'
                                    STORE MS:PCL4 + 1 TO MS:PCL4
                            ENDCASE
                        ENDIF
                    ENDIF
                ENDIF < CASE CLOSED IN THE PREVIOUS YEAR >

***** IF CASE IS IN OLDEST YEAR

                IF $(MS:CDAT,1,2) = $(MS:OJUL,1,2)

                    IF MS:CDAT > MS:OJUL1 .AND. MS:CDAT<MS:CJUL
                        STORE MS:OTOT + 1 TO MS:OTOT

***** IF CASE IS CLOSED < IT SHOULD BE TO BE IN THIS FILE >

                        IF MS:CDAT <>  '      '
                            STORE VAL($(MS:CDAT,3,3)) TO V:CDAT
                            STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                            STORE V:CDAT - V:ODAT TO V:TIMEN
                            STORE STR(V:TIMEN,3) TO MS:TIME
                            RELEASE ALL LIKE V:*

                            DO CASE
                                CASE MS:TIME < '61'
                                    STORE MS:OCL1 + 1 TO MS:OCL1
                                CASE MS:TIME < '121'
                                    STORE MS:OCL2 + 1 TO MS:OCL2
                                CASE MS:TIME < '181'
                                    STORE MS:OCL3 + 1 TO MS:OCL3
                                CASE MS:TIME > '180'
                                    STORE MS:OCL4 + 1 TO MS:OCL4
                            ENDCASE
                        ENDIF
                    ENDIF
```

```
            ENDIF < CASE CLOSED IN TH

            IF $(MS:CDAT,1,2)<>$(MS:C
               $(MS:CDAT,1,2)<>$(MS:P
               $(MS:CDAT,1,2)<>$(MS:C
                  STORE MS:CLERR + 1
                  STORE CASE TO MS:CA
                   SET ALTERNATE ON
                   ? MS:ROW,10 SAY 'C
                   ? MS:ROW,18 SAY MS
                   ? MS:ROW,30 SAY $(
                     +$(MS:ODAT,3,2) +
                   ? MS:ROW,40 SAY $(
                     $(MS:CDAT,3,2) +'
                   STORE MS:ROW + 1 T
                   SET ALTERNATE OFF

            ENDIF
            STORE MS:CLTOT + 1 TO MS:(

            SKIP

         ENDDO < SEARCH FOR CASE IN T
         RELEASE MS:CJUL1,MS:PJUL1,MS

***** DETERMINE WHICH MONTH IT IS FOR

         DO CASE
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'JANUARY' TO M
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'FEBRUARY' TO
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'MARCH' TO MS:
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'APRIL' TO MS:
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'MAY' TO MS:MO
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'JUNE' TO MS:M
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'JULY' TO MS:M
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'AUGUST' TO MS
            CASE $(MS:EDATE,1,2) = '0
                 STORE 'SEPTEMBER' TO
            CASE $(MS:EDATE,1,2) = '1
                 STORE 'OCTOBER' TO M
            CASE $(MS:EDATE,1,2) = '1
                 STORE 'NOVEMBER' TO
            CASE $(MS:EDATE,1,2) = '1
                 STORE 'DECEMBER' TO
         ENDCASE

         STORE '19' + $(MS:OJUL,1,2)
         STORE '19' + $(MS:PJUL,1,2)
         STORE '19' + $(MS:CJUL,1,2)

         STORE MS:OCL1+MS:OCL2+MS:OCL
         STORE MS:OO1 + MS:OO2 + MS:O
         STORE MS:OO5+MS:OCL5 TO MS:O

         STORE MS:PCL1+MS:PCL2+MS:PCL
         STORE MS:PO1 + MS:PO2 + MS:P
         STORE MS:PO5+MS:PCL5 TO MS:P
```

```
          STORE  MS:CCL1+MS:CCL2+MS:CCL3+MS:CCL4 TO MS:
          STORE  MS:CO1 + MS:CO2 + MS:CO3 + MS:CO4 TO
          STORE  MS:CO5+MS:CCL5 TO MS:CCASE

          STORE  '0 TO 60 DAYS' TO MS:LBL1
          STORE  '61 TO 120 DAYS' TO MS:LBL2
          STORE  '121 TO 180 DAYS' TO MS:LBL3
          STORE  '181 DAYS OR OVER' TO MS:LBL4
          STORE  '          TOTALS:' TO MS:LBL5

SET FORMAT TO PRINT

          @ 2,25 SAY '     CODE 9142 TECHNICAL BRANCH'
          @ 3,25 SAY '     QUALITY DEFICIENT MATERIAL'
          @ 4,25 SAY '       MONTHLY STATUS REPORT  '
          @ 5,25 SAY '            THRU'
          @ 5,42 SAY $(MS:EDATE,1,2)+'/'+$(MS:EDATE,3,
                 +'/'+$(MS:EDATE,5,2)
          @ 7,28 SAY '       JULIAN DATE  '
          @ 7,48 SAY MS:CJUL
          @ 9,27 SAY '         MONTH OF'
          @ 9,44 SAY MS:MONTH
          @ 10,42 SAY MS:OYR
          @ 11,25 SAY 'TOTAL CASES'
          @ 11,40 SAY MS:OCASE
          @ 13,10 SAY '                                        C
                 +'          OPEN'
          @ 15,15 SAY MS:LBL1
          @ 15,33 SAY MS:OCL1
          @ 15,48 SAY MS:O01
          @ 17,15 SAY MS:LBL2
          @ 17,33 SAY MS:OCL2
          @ 17,48 SAY MS:O02
          @ 19,15 SAY MS:LBL3
          @ 19,33 SAY MS:OCL3
          @ 19,48 SAY MS:O03
          @ 21,15 SAY MS:LBL4
          @ 21,33 SAY MS:OCL4
          @ 21,48 SAY MS:O04
          @ 22,15 SAY MS:LBL5
          @ 22,33 SAY MS:OCL5
          @ 22,48 SAY MS:O05

***** DATA FOR THE SECOND YEAR OUTPUT

          @ 25,42 SAY MS:PYR
          @ 27,25 SAY 'TOTAL CASES'
          @ 27,40 SAY MS:PCASE
          @ 29,10 SAY '                                        C
                 +'          OPEN'
          @ 31,15 SAY MS:LBL1
          @ 31,33 SAY MS:PCL1
          @ 31,48 SAY MS:PO1
          @ 33,15 SAY MS:LBL2
          @ 33,33 SAY MS:PCL2
          @ 33,48 SAY MS:PO2
          @ 35,15 SAY MS:LBL3
          @ 35,33 SAY MS:PCL3
          @ 35,48 SAY MS:PO3
          @ 37,15 SAY MS:LBL4
          @ 37,33 SAY MS:PCL4
          @ 37,48 SAY MS:PO4
          @ 39,15 SAY MS:LBL5
          @ 39,33 SAY MS:PCL5
          @ 39,48 SAY MS:PO5

***** DATA FOR THE CURRENT YEAR OUTPUT
```

```
          @ 42,42 SAY MS:CYR
          @ 44,25 SAY 'TOTAL CASES'
          @ 44,40 SAY MS:TCASE
          @ 46,10 SAY '                                        CLOSED';
                    +'          OPEN'
          @ 48,15 SAY MS:LBL1
          @ 48,33 SAY MS:CCL1
          @ 48,48 SAY MS:CO1
          @ 50,15 SAY MS:LBL2
          @ 50,33 SAY MS:CCL2
          @ 50,48 SAY MS:CO2
          @ 52,15 SAY MS:LBL3
          @ 52,33 SAY MS:CCL3
          @ 52,48 SAY MS:CO3
          @ 54,15 SAY MS:LBL4
          @ 54,33 SAY MS:CCL4
          @ 54,48 SAY MS:CO4
          @ 56,15 SAY MS:LBL5
          @ 56,33 SAY MS:CCL5
          @ 56,48 SAY MS:CO5
EJECT
***** SECOND PAGE OF REPORT

          @ 2,25 SAY '      CODE 9142 TECHNICAL BRANCH'
          @ 4,25 SAY '      QUALITY DEFICIENT MATERIAL'
          @ 6,25 SAY '        COMMAND KEY INDICATORS '
          @ 8,25 SAY '           AS OF'
          @ 8,42 SAY $(MS:EDATE,1,2)+'/'+$(MS:EDATE,3,2)+;
                    '/'+$(MS:EDATE,5,2)
          @ 10,25 SAY 'CASES RECEIVED IN'
          @ 10,44 SAY MS:MONTH
          @ 10,62 SAY MS:CYR +':'
          @ 10,72 SAY MS:CRCVD
          @ 12,10 SAY '                                        CLOSED';
                    +'          OPEN'
          @ 14,15 SAY MS:LBL1
          @ 14,33 SAY MS:CCL1
          @ 14,48 SAY MS:CO1
          @ 16,15 SAY MS:LBL2
          @ 16,33 SAY MS:CCL2
          @ 16,48 SAY MS:CO2
          @ 18,15 SAY MS:LBL3
          @ 18,33 SAY MS:CCL3
          @ 18,48 SAY MS:CO3
          @ 20,15 SAY MS:LBL4
          @ 20,33 SAY MS:CCL4
          @ 20,48 SAY MS:CO4
          @ 22,15 SAY MS:LBL5
          @ 22,33 SAY MS:CCL5
          @ 22,48 SAY MS:CO5

EJECT

***** THIRD PAGE OF REPORT

          @ 2,25 SAY '      CODE 9142 TECHNICAL BRANCH'
          @ 3,25 SAY '      QUALITY DEFICIENT MATERIAL'
          @ 4,25 SAY '        MONTHLY STATUS REPORT  '
          @ 5,25 SAY '             THRU'
          @ 5,42 SAY $(MS:EDATE,1,2)+'/'+$(MS:EDATE,3,2)+;
                    '/'+$(MS:EDATE,5,2)
          @ 7,28 SAY '        JULIAN DATE  '
          @ 7,48 SAY MS:CJUL
          @ 9,27 SAY '          MONTH OF'
          @ 9,44 SAY MS:MONTH
          @ 12,20 SAY 'TOTAL RECORDS ON OPEN FILE:'
          @ 12,64 SAY MS:OPTOT - 1
          @ 14,20 SAY 'TOTAL RECORDS ON CLOSED FILES:'
          @ 14,65 SAY MS:CLTOT
```

```
        @ 16,20 SAY 'RECORDS WITH INVALID DATES, OPEN ';
                +'FILE:'
        @ 16,64 SAY MS:OPERR - 1
        @ 18,20 SAY 'RECORDS WITH INVALID DATES, CLOSED';
                +' FILE:'
        @ 18,65 SAY MS:CLERR
        @ 22,35 SAY 'END OF REPORT'
        SET ALTERNATE OFF
        SET ALTERNATE TO

EJECT
SET FORMAT TO SCREEN

        RELEASE ALL LIKE MS:*

ERASE
RETURN

***** END OF PROGRAM
```

XVIII. SCRTED LISTING REPORT MENU

```
*************************************************************
**                                                         **
**   DATE: 22 JANUARY 1984                                 **
**   VERSION: 1.0                                          **
**   MODULE NAME: SUPRPT2                                  **
**   MCDUIE PURPOSE: PROVIDE MENU OF SORTED LISTING        **
**                   REPORTS FOR THE SUPERVISOR            **
**                                                         **
**   MODULE INTERFACE DEFINITION                           **
**      INPUTS: C:WHO, C:JULIAN                            **
**      OUTPUTS: NONE                                      **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:              **
**                                                         **
**       DISPLAYS MENU FOR SUPERVISOR TO CHOOSE DESIRED    **
**       REPORT. CAUSES REINDEXING OF APPROPRIATE FILE     **
**       TC PRODUCE CURRENT VALUES FOR REPORT GENERATION   **
**       RESULTS ARE STORED ON D: DRIVE AS A 'TXT' FILE    **
**       FOR LATER ACCESS. REPORT MAY BE PRINTED BY USING  **
**       'TYPE' FUNCTICN OF OPERATING SYSTEM.              **
**       PROCESSING SHCULD BE ACCOMPLISHED DURING 'OFF'    **
**       TIME PERIOD.                                      **
**                                                         **
**   SUPERORDINATE MODULES: SUPMENU1                       **
**   SUBORDINATE MODULES: SUPRPT1,SUPRPT2,SUPRPT3,SUPRPT4  **
**   AUTHCR: J.G. BCYNTON                                  **
**                                                         **
*************************************************************

STORE T TO C:TRUE
DO WHILE C:TRUE
ERASE
*
STORE ' ' TC V:CHOICE
TEXT

            *****    SORTED LISTING REPORTS AVAILABLE     *****


                     1 - OPEN FILE BY CASE AND ANALYST
                     2 - OPEN FILE BY ITEM MGR AND ANALYST
                     3 - OPEN FILE BY COG, SMIC, OPEN DATE
                     4 - CLOSED FILE BY CREDIT CODE, CASE
                     5 - EXIT


ENDTEXT
@ 19,40 GET V:CHOICE
READ
*
    IF V:CHOICE >='1' .AND. V:CHOICE < '5'
        ERASE
        @ 12,20  SAY ' THESE REPORTS WILL TAKE SOME TIME TO'
        @ 13,20  SAY ' GENERATE. IF YOU DECIDE TO CONTINUE'
        @ 14,20  SAY ' THE TERMINAL MAY NOT BE USED FOR ANY'
        @ 15,20  SAY ' OTHER PROCESSING UNTIL AFTER ';
                 +'COMPLETION '
        @ 23,15  SAY 'PRESS  1 - TO ABORT, ANY OTHER KEY TC';
                 +'      CONTINUE'
        WAIT TO V:BAIL
```

```
        IF V:BAIL ='1'
            RELEASE ALL LIKE V:*
            RELEASE C:TRUE
            RETURN
        ENDIF
    DO CASE
        CASE V:CHOICE = '1'
***** FILE D:SUPRPT1.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT1.NDX IS INDEXED ON WHO+CASE
              RELEASE ALL LIKE V:*
              USE D:OPEN1 INDEX D:SUPRPT1
              REINDEX
              GOTO TOP
              SKIP
              SET TALK OFF
              STORE 0 TO P:COUNT
              STORE 0 TO P:TOTAL
              SET FORMAT TO SCREEN
              ERASE
              SET ALTERNATE TO D:SUPRPT1
              SET ALTERNATE ON
              ?      'DATE: ',DATE()
              ?
              ?      '                                            ';
              +'                                  *****        ';
              +'QDR OPEN FILE BY ANALYST & CASE       ***** '
              ?
              ?      '                               NSN / PART';
              +'                                        UNIT';
              +'     QTY            EXT     9              D';
              +'                            OPEN     SCREENING'
              ?      '   CASE';
              +' COG   SM  FSC NATO FIIN ';
              +'                 CAT    NOMEN       UIC      ';
              +' UI        PRICE                    DEFNT    ';
              +'        PRICE      Q   ORG      DF   C       ';
              +'         CONTRACT NUMBER     DATE   CODE/DATE '
              ?
              STORE 0 TO P:PAGE
              STORE 5 TO ROW
              DO WHILE  .NOT. EOF
                  STORE P:TOTAL+1 TO P:TOTAL
                      ? ' ',CASE,' ',COG,' ',SM,' ',NSN,' ';
                      ,CAT,' ',$(NOMEN,1,9),' ',UIC,' ',UI,;
                      ' ',UPRC,' ',QTYDEF,' ',EPRC,' ',09Q;
                      ,' ',ORG,' ',DEF,' ',DOC,' ',NUM,' ',;
                      $(DATES,11,5),' ',SCR,'/',$(DATES,21,5)
                      STORE ROW+1 TO ROW
                      SKIP
                      STORE P:COUNT+1 TO P:COUNT
                      IF ROW > 60
                          ERASE
                          ? CHR(12)
                          STORE 0 TO ROW
                          STORE P:PAGE+1 TO P:PAGE
                          ?
                          ?
                          ? '      PAGE  ',P:PAGE
                          ?
                          ?     '                               ';
                          +' NSN / PART';
                          +'                                 ';
                          +'                UNIT             ';
                          +'QTY                              ';
                          +'           EXT     9             ';
                          +'                                 ';
                          +' D                      OPEN     ';
                          +'SCREENING'
                          ?      '     CASE';
```

```
                    +'                  COG    SM   ';
                    +' FSC                               ';
                    +'NATO FIIN   CAT      NOMEN         ';
                    +'UIC                               ';
                    +'UI         PRICE         DEFNT     ';
                    +'                                   ';
                    +'PRICE      Q    ORG      DF     C  ';
                    +'CONTRACT NUMBER     DATE    CODE';
                    +'/DATE '
                    ?
                    STORE ROW+4 TO ROW
                ENDIF <PAGE IS FULL>
            ENDDO
            ?
            ?
            ?
            ?
            ?   '      TOTAL CASES:',P:TOTAL
            ?
            ?
            ?   '  ***************************        ';
            +'END CF OPEN FILE REPORT BY ANALYST & CASE';
            +'    *******************************'
            ? CHR(12)
            SET ALTERNATE TO
            ? CHR(7)
            ? CHR(7)
            ERASE
            @ 12,20 SAY '  YOU MAY RECEIVE YOUR COG,OPEN';
                      +'  FILE REPORT ON'
            @ 13,20 SAY '              D:SUPRPT1.TXT  '
            @ 20,20 SAY '      PRESS ANY KEY TO CONTINUE'
            WAIT
        CASE V:CHOICE = '2'

***** FILE D:SUPRPT2.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT2.NDX IS INDEXED ON ACTPT+WHO

            RELEASE ALL LIKE V:*
            USE D:OPEN1 INDEX D:SUPRPT2
            REINDEX
            GOTO TOP
            SKIP
            SET TALK OFF
            STORE 0 TO P:COUNT
            STORE 0 TO P:TOTAL
            SET FORMAT TO SCREEN
            ERASE
            SET ALTERNATE TO D:SUPRPT2
            SET ALTERNATE ON
            ?      'DATE: ',DATE()
            ?
            ?      '                                   ';
            +'                       *****      CDR';
            +' OPEN FILE BY          ITEM MANAGER &';
            +' ANALYST      ***** '
            ?
            ?      '                          NSN / PART';
            +'                                       ';
            +'                          -            ';
            +'         UNIT                     QTY ';
            +'          EXT    9          D         ';
            +'                         OPEN        ';
            +'SCREENING'
            ?      '   CASE';
            +'            COG    SM   FSC NATO FIIN ';
            +'               CAT     NOMEN     UIC     ';
            +'UI         PRICE            DEFNT        ';
            +'    PRICE     Q    ORG     DF    C       ';
```

```
+'     CCNTRACT NUMBER      DATE    CODE/DATE '
?
STORE 0 TO P:PAGE
STORE 5 TO ROW
DO WHILE .NOT. EOF
    STORE P:TOTAL+1 TO P:TOTAL
          ? '   ',CASE,' ',COG,' ',SM,' ',NCM;
          ' ',CAT,' ',$(NOMEN,1,9),' ',UIC,;
          ' ',UI,' ',UPRC,'  ',QTYDEF,' ',;
          EPRC,' ',O9Q,' ',ORG,' ',DEF,' ',DOC,;
          ' ',NUM,' ',$(DATES,11,5),' ',SCR,'/';
          ,$(DATES,21,5)
          STORE ROW+1 TO ROW
          SKIP
          STORE P:COUNT+1 TO P:COUNT
          IF ROW > 60
                ERASE
                ? CHR(12)
                STORE 0 TO ROW
                STORE P:PAGE+1 TO P:PAGE
                ?
                ?
                ? '       PAGE  ',P:PAGE
                ?
                ?      '                          ';
                +' NSN / PART';
                +'                            ';
                +'                   UNIT          Q';
                +'TY                               ';
                +'          EXT     9              ';
                +'                           D     ';
                +'             OPEN   SCREENING'
                ?      '    CASE';
                +'                        COG    SM  ';
                +'FSC      NATO FIIN  CAT    NCM';
                +'EN          UIC                  ';
                +' UI          PRICE         DEFNT  ';
                +'   PRICE      Q    ORG        DF  ';
                +'C  CONTRACT NUMBER     DATE      ';
                +'CODE/DATE '
                ?
                STORE ROW+4 TO ROW
          ENDIF <PAGE IS FULL>
ENDDO
?
?
?
?
?    '       TOTAL CASES:',P:TOTAL
?
?
?    '   ****************************       ';
+'END OF OPEN FILE REPORT BY ITEM MANAGER &';
+'ANALYST  **********************************'
? CHR(12)
SET ALTERNATE TO
? CHR(7)
? CHR(7)
ERASE
@ 12,20 SAY '  YOU MAY RECEIVE YOUR COG,OPEN';
        +'  FILE REPORT ON'
@ 13,20 SAY '                D:SUPRPT2.TXT  '
@ 20,20 SAY '      PRESS ANY KEY TO CONTINUE'
WAIT
CASE V:CHOICE = '3'

***** FILE D:SUPRPT3.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT3.NDX IS INDEXED ON COG+SM+$(DATES,11,5)+CASE
```

```
RELEASE ALL LIKE V:*
USE D:OPEN1 INDEX D:SUPRPT3
REINDEX
GOTO TOP
SKIP
SET TALK OFF
STORE 0 TO P:COUNT
STORE 0 TO P:TOTAL
SET FORMAT TO SCREEN
ERASE
SET ALTERNATE TO D:SUPRPT3
SET ALTERNATE ON
?       'DATE: ',DATE()
?
?       '                                                    ';
+'              *****           QDR OPEN FILE BY ';
+'COG,SMIC,OPEN DATE & CASE            ***** '
?
?       '                                        NSN / PART';
+'                                                   ';
+'                                                 UNIT';
+'          QTY                 EXT      9           ';
+'   D    OPEN       SCREENING'
?       '    CASE';
+'                        COG     SM   FSC NATO FIIN ';
+'   CAT       NOMEN          UIC      UI          PRIC';
+'E          DEFNT             PRICE      Q    ORG   ';
+'  DF     C CONTRACT NUMBER          DATE     CODE/';
+'DATE '
?
STORE 0 TO P:PAGE
STORE 5 TO ROW
DO WHILE  .NOT. EOF
     STORE P:TOTAL+1 TO P:TOTAL
          ? '  ',CASE,' ',COG,' ',SM,' ',NSN,;
          ' ',CAT,' ',$(NOMEN,1,9),'  ',UIC,' ';
          ,UI,' ',UPRC,' . ',QTYDEF,'  ',EPRC,;
          ' ',09Q,' ',ORG,' ',DEF,' ',DOC,' ';
          ,NUM,' ',$(DATES,11,5),' ',SCR,'/',;
          $(DATES,21,5)
          STORE ROW+1 TO ROW
          SKIP
          STORE P:COUNT+1 TO P:COUNT
          IF ROW > 60
                ERASE
                ? CHR(12)
                STORE 0 TO ROW
                STORE P:PAGE+1 TO P:PAGE
                ?
                ?
                ? '        PAGE  ',P:PAGE
                ?
                ?       '                                   ';
                +'NSN / PART';
                +'                                        ';
                +'                         UNIT           ';
                +'   QTY                  EXT      9      ';
                +'                  D                     ';
                +'       OPEN     SCREENING'
                ?       '    CASE';
                +'                           COG     SM    FS';
                +'C NATO FIIN  CAT      NOMEN            ';
                +'  UIC        UI        PRICE           ';
                +'DEFNT               PRICE       Q    OR';
                +'G         DF              C  CONTRAC';
                +'T  NUMBER      DATE     CODE/DATE '
                ?
                STORE ROW+4 TO ROW
          ENDIF <PAGE IS FULL>
```

```
                ENDDO
                ?
                ?
                ?
                ?
                ?    '      TOTAL CASES:',P:TOTAL
                ?
                ?
                ?    '    ****************************    E';
                +'ND OF OPEN FILE REPORT BY COG,SMIC,OPEN ';
                +'DATE & CASE   ******************************';
                +'*****'
                ? CHR(12)
                SET ALTERNATE TO
                ? CHR(7)
                ? CHR(7)
                ERASE
                @ 12,20 SAY ' YOU MAY RECEIVE YOUR COG,OPEN';
                +'FILE REPORT ON'
                @ 13,20 SAY '               D:SUPRPT3.TXT   '
                @ 20,20 SAY '     PRESS ANY KEY TO CONTINUE'
                WAIT

        CASE V:CHOICE = '4'

***** FILE D:SUPRPT4.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT4.NDX IS INDEXED ON CR+CASE

                RELEASE ALL LIKE V:*
                USE D:CLOSE1 INDEX D:SUPRPT4
                REINDEX
                GOTO TOP
                SKIP
                SET TALK OFF
                STORE 0 TO P:COUNT
                STORE 0 TO P:TOTAL
                SET FORMAT TO SCREEN
                ERASE
                SET ALTERNATE TO D:SUPRPT4
                SET ALTERNATE ON
                ?      'DATE: ',DATE()
                ?
                ?      '
                           *****        QDR CLOSED FILE BY ';
                +'CREDIT CODE & CASE      ***** '
                ?
                ?      '                          NSN / PART';
                +'                                           ';
                +'                                        UNIT';
                +'       QTY             EXT     9           ';
                +'  D    OPEN     SCREENING'
                ?      '    CASECOG    SM   FSC NATO FIIN   ';
                +'  CAT     NOMEN         UIC      UI       PRIC';
                +'E         DEFNT          PRICE      Q    CRG   ';
                +'  DF    C CONTRACT NUMBER      DATE     CODE/';
                +'DATE '
                ?
                STORE 0 TO P:PAGE
                STORE 5 TO ROW
                DO WHILE  .NOT. EOF
                    STORE P:TOTAL+1 TO P:TOTAL
                        ? '  ',CASE,' ',COG,' ',SM,' ',NSN,;
                        ' ',CAT,' ',$(NOMEN,1,9),'  ',UIC,' ';
                        ,UI,' ',UPRC,' ',QTYDEF,'  ',EPRC,;
                        ' ',O9Q,' ',ORG,' ',DEF,' ',DOC,' ';
                        ,NUM,' ',$(DATES,11,5),' ',SCR,'/',;
                        $(DATES,21,5)
                        STORE ROW+1 TO ROW
                        SKIP
```

```
                      STORE P:COUNT+1 TO P:COUNT
                      IF ROW > 60
                          ERASE
                          ? CHR(12)
                          STORE 0 TO ROW
                          STORE P:PAGE+1 TO P:PAGE
                          ?
                          ?
                          ? '       PAGE  ',P:PAGE
                          ?
                          ?     '                          ';
                          +'NSN / PART';
                          +'                              ';
                          +'                   UNIT       ';
                          +'  QTY             EXT    9    ';
                          +'            D                 ';
                          +'     OPEN   SCREENING'
                          ?     '   CASE  COG    SM   FS';
                          +'C NATO FIIN  CAT     NOMEN    ';
                          +'  UIC      UI        PRICE    ';
                          +'DEFNT            PRICE    C   OR';
                          +'G      DF               C  CONTRAC';
                          +'T  NUMBER     DATE   CODE/DATE '
                          ?
                          STORE ROW+4 TO ROW
                      ENDIF <PAGE IS FULL>
              ENDDO
              ?
              ?
              ?
              ?
              ?   '      TOTAL CASES:',P:TOTAL
              ?
              ?
              ?   '   ******************************  ';
              +' END OF CLOSED FILE REPORT BY CREDIT CODE';
              +' & CASE  *********************************'
              ? CHR(12)
              SET ALTERNATE TO
              ? CHR(7)
              ? CHR(7)
              ERASE
              @ 12,20 SAY ' YOU MAY RECEIVE YOUR REPORT BY';
                      +'   CREDIT CODE & CASE ON'
              @ 13,20 SAY '             D:SUPRPT4.TXT  '
              @ 20,20 SAY '      PRESS ANY KEY TO CONTINUE'
              WAIT
       CASE V:CHOICE = '5'
            RELEASE ALL LIKE V:*
            RELEASE C:TRUE
            RETURN
    ERASE
    ENDCASE

ELSE
    IF V:CHOICE='5'
        RELEASE ALL LIKE V:*
        RELEASE C:TRUE
        RETURN
    ELSE

        ?  '                PLEASE ANSWER WITH A 1 - 5 ONLY'
        ?
        ? '                   PRESS ANY KEY TO CONTINUE'
        ?
        WAIT
    ENDIF
ENDIF <V:CHOICE>
ENDDO <C:TRUE>
```

```
RELEASE ALL LIKE V:*
RELEASE C:TRUE
RETURN

***** END OF PROGRAM
```

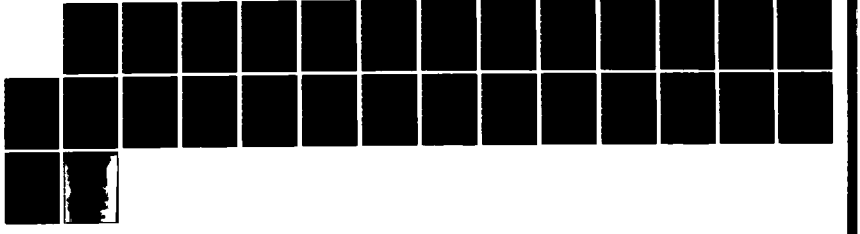
XIX. CASE REASIGNMENT MODULE

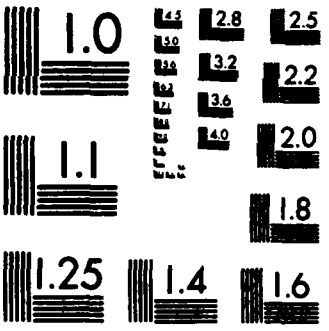
```
*****************************************************************
**                                                             **
**   DATE: 22 JANUARY 1984                                     **
**   VERSION: 1.0                                              **
**   MODULE NAME: C-REASGN                                     **
**   MODULE PURPOSE: REASSIGN CASE FROM ONE ANALYST TO         **
**                   ANOTHER                                   **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: C:WHO, C:JULIAN                                **
**      OUTPUTS:                                               **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**      RECEIVES THE CASE NUMBER AND TWO ANALYSTS TO BE        **
**      INVOLVED IN THE TRANSFER. BEFORE TRANSFERING CASE      **
**      THE DATABASE IS CHECKED TO INSURE UPDATE OF            **
**      ANALYST STATISTICS. RETURNS FOR ANOTHER CASE TO        **
**      BE ASSIGNED OF FOR TERMINATION OF PROGRAM.             **
**                                                             **
**   SUPERORDINATE MODULES: UTILMENU                           **
**   SUBORDINATE MODULES: XDBHNDLR                             **
**   AUTHOR: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************

STORE T TO R:CONTINUE
DO WHILE R:CONTINUE
   ERASE
   @ 6,24 SAY '***** CASE RE-ASSIGNMENT PROCESSING *****'
   @ 9,28 SAY '1 - RE-ASSIGN CASE TO ANOTHER ANALYST'
   @ 10,28 SAY '2 - RETURN TO UTILITY MENU'
   STORE ' ' TO R:REPLY
   @ 15,40 GET R:REPLY
   READ
   DO WHILE R:REPLY < '1' .OR. R:REPLY > '2'
      @ 23,32 SAY 'ENTER 1 - 2 ONLY' + CHR(7)
      @ 15,40 GET R:REPLY
      READ
   ENDDO
   DO CASE
      CASE R:REPLY = '2'
         RELEASE ALL LIKE R:*
         RETURN
      CASE R:REPLY = '1'
         STORE '      ' TO R:CASE
         ERASE
         @ 6,24 SAY 'ENTER DATA FOR CASE BEING RE-ASSIGNED'
         @ 9,32 SAY 'CASE NUMBER ' GET R:CASE ;
                PICTURE '999999X'
         READ
         STORE !(R:CASE) TO R:CASE
         STORE R:CASE TO M:KEY
         STORE '1E' TO M:TYPE
         DO XDBHNDLR.PRG
         IF M:TYPE ='1'
            @ 20,20 SAY 'CASE IS CURRENTLY LOCKED' + CHR(7)
            @ 22,20 SAY ' PRESS ANY KEY TO CONTINUE'
            WAIT
         ENDIF
         IF M:TYPE<> '1'
            IF M:TYPE = '9'
               @ 22,14 SAY 'CASE DOES NOT EXIST IN OPEN';
```

```
                    +'FILE - STRIKE ANY KEY TO CONTINUE';
                      + CHR(7)
                WAIT
            ELSE
                STORE '    ' TO R:NEW
                STORE ' ' TO R:REPLY
                DO WHILE R:REPLY
                    @ 11,10 SAY 'CASE NUMBER  '+  M:CASE
                    @ 11,32 SAY 'NSN   ' + $(M:NSN,1,4)+'-';
                            +$(M:NSN,5,2)+'-'+$(M:NSN,7,3);
                            +'-'+$(M:NSN,10,4)
                    @ 11,55 SAY 'COG ' + M:COG
                    @ 11,62 SAY 'CAT  ' + M:CAT
                    @ 14,10 SAY 'CURRENTLY ASSIGNED TO ' :
                            + M:WHO
                    @ 15,10 SAY 'RE-ASSIGN TO          ';
                            GET R:NEW
                    READ
                    STORE ' ' TO R:REPLY
                    DO WHILE R:REPLY <'1' .OR. R:REPLY >'3'
                        @ 21,20 SAY '1 - RE-ASSIGN ';
                                +' 2 - CHANGE  3 - EXIT'
                        @ 23,20 SAY '                ';
                                GET R:REPLY
                        READ
                    ENDDO
                    IF R:REPLY ='3'
                        STORE '1G' TO M:TYPE
                        DO XDBHNDLR.PRG
                        RELEASE ALL EXCEPT C:*
                        RETURN
                    ENDIF
                    IF $(M:DATES,46,1)='*'
*                       DO STATISTICS UPDATE PROGRAM
                    ENDIF
                    IF R:REPLY='1'
                        ERASE
                        @ 10,20 SAY '***** PLEASE ';
                                +'STANDBY *****'
                        @ 12,20 SAY 'CASE NUMBER  ' + M:CASE
                        @ 13,20 SAY 'IS BEING RE-ASSIGNED '
                        @ 15,20 SAY ' FROM  ' + M:WHO
                        @ 16,20 SAY ' TO    ' + R:NEW
                        @ 22,18 SAY ' *****  DO NOT ';
                                +'INTERRUPT *****'
                        USE D:OPEN1 INDEX D:OCASE1,D:ONSN
                        STORE R:NEW TO M:WHO
                        STORE '1C' TO M:TYPE
                        DO XDBHNDLR.PRG
                        STORE M:CASE TO R:CASE
                        RELEASE ALL LIKE M:*
                        STORE R:CASE TO M:KEY
                        STORE '2E' TO M:TYPE
                        DO XDBHNDLR.PRG
                        STORE '2C'TO M:TYPE
                        STORE R:NEW TO M:WHO
                        DO XDBHNDLR.PRG
                        RELEASE ALL LIKE M:*
                        ERASE
                        STORE F TO R:REPLY
                    ENDIF
                ENDDO <R:REPLY>
            ENDIF
        ENDCASE
    ENDDO <CONTINUE>

    ***** END OF PROGRAM
```

AD-A143 875 THE CREATION OF A CENTRAL DATABASE ON A MICROCOMPUTER NETWORK(U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA J G BOYNTON ET AL. MAR 84 3/3

UNCLASSIFIED F/G 9/2 NL





XX. ITEM MANAGER FILE UPDATE

```
**********************************************************
**                                                      **
**   DATE: 12 JAN 84                                    **
**   VERSION: 1.0                                       **
**   MODULE NAME: ADDRUPDT                              **
**   MODULE PURPOSE: ADD, UPDATE, OR DELETE ITEM MANAGER **
**                   ADDRESS RECORDS                    **
**                                                      **
**   MODULE INTERFACE DEFINITION                        **
**      INPUTS: NONE                                    **
**      OUTPUTS: NONE                                   **
**                                                      **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:           **
**                                                      **
**         ALLOWS THE ADDITION, DELETION, OR UPDATING   **
**         OF ITEM MANAGER ADDRESS RECORDS.  ACCEPTS THE **
**         ITEM MANAGER CODE, VALIDATES THE EXISTENCE OF **
**         AN IM WHEN CREATING NEW RECORDS, ALLOWS THE   **
**         RECALL OF PREVIOUSLY DELETED RECORDS DURING   **
**         UPDATE, AND VERIFIES THAT NO ACTIVE COGS      **
**         ARE ASSIGNED TO A RECORD BEING DELETED.      **
**                                                      **
**   SUPERORDINATE MODULES: UTILMENU                    **
**   SUBORDINATE MODULES: NONE                          **
**   AUTHOR: R. G. NICHOLS                              **
**                                                      **
**********************************************************

STORE T TO A:CONTINUE
DO WHILE A:CONTINUE

*****  DISPLAY SELECTION OPTIONS AND ACCEPT CHOICE
   ERASE
   @  6,18 SAY '***** ITEM MANAGER ADDRESS PROCESSING *****'
   @  9,28 SAY '1 - ADD ADDRESS'
   @ 10,28 SAY '2 - UPDATE ADDRESS'
   @ 11,28 SAY '3 - DELETE ADDRESS'
   @ 12,28 SAY '4 - RETURN TO UTILITY MENU'
   STORE ' ' TO A:REPLY
   @ 15,40 GET A:REPLY PICTURE '9'
   READ

*****  VALIDATE RESPONSE

   DO WHILE A:REPLY < '1' .OR. A:REPLY > '4'
      @ 23,32 SAY 'ENTER 1 - 4 ONLY' + CHR(7)
      @ 15,40 GET A:REPLY PICTURE '9'
      READ
   ENDDO
   DO CASE

*****  IF CHOICE IS QUIT, RELEASE ALL LOCAL MEMORY VARIABLES
*****  AND RETURN TO CALLING PROGRAM

      CASE A:REPLY = '4'
         RELEASE ALL LIKE A:*
         RETURN

*****  IF CHOICE IS ADD, PROMPT FOR ITEM MANAGER BEING ADDED

      CASE A:REPLY = '1'
```

```
         STORE '        ' TO A:IM
         ERASE
         @ 6,20 SAY 'ENTER DATA FOR ITEM MANGER BEING ADDED'
         @ 9,32 SAY 'ITEM MANAGER ' GET A:IM
         READ
         STORE !(A:IM) TO A:IM
         SELECT PRIMARY
         USE D:ADDRESS INDEX D:IM

*****    CHECK FOR EXISTING IM RECORD

         FIND &A:IM
         IF # <> 0
            @ 22,14 SAY 'RECORD CURRENTLY EXISTS -';
                  + 'STRIKE ANY KEY TO CONTINUE' + CHR(7)
            WAIT
         ELSE
            STORE '                    ' TO A:TITLE
            STORE '                                ';
                  + '           ' TO A:COMMAND
            STORE '                                ';
                  + '           ' TO A:COMMAND2
            STORE '                    ' TO A:ATTN
            STORE '                        ' TO A:STREET
            STORE '                        ' TO A:CITY
            STORE '  ' TO A:STATE
            STORE '     ' TO A:ZIP

*****    PROMPT FOR AND ACCEPT NEW IM DATA

            @ 14,16 SAY 'TITLE      ' GET A:TITLE
            @ 15,16 SAY 'COMMAND    ' GET A:COMMAND
            @ 16,16 SAY 'COMMAND 2  ' GET A:COMMAND2
            @ 17,16 SAY 'ATTN       ' GET A:ATTN
            @ 18,16 SAY 'STREET     ' GET A:STREET
            @ 19,16 SAY 'CITY ' GET A:CITY
            @ 19,44 SAY ' STATE ' GET A:STATE
            @ 19,56 SAY 'ZIP CODE ' GET A:ZIP ;
                              PICTURE '99999'
            READ

*****    VERIFY POST OR EXIT

            @ 21,20 SAY '1 - POST NEW RECORD           ';
                  +'   2 - EXIT'
            STORE ' ' TO A:REPLY3
            @ 23,40 GET A:REPLY3 PICTURE '9'
            READ
            DO WHILE A:REPLY3 < '1' .OR. A:REPLY3 > '2'
               @ 23,40 GET A:REPLY3
               READ
            ENDDO

*****    CREATE NEW IM RECORD

            IF A:REPLY3 = '1'
               APPEND BLANK
               REPLACE IM WITH !(A:IM),TITLE WITH ;
!(A:TITLE),COMMAND WITH !(A:COMMAND),COMMAND2 WITH;
 !(A:COMMAND2),ATTN WITH !(A:ATTN),STREET WITH !(A:STREET),;
CITY WITH !(A:CITY),STATE WITH !(A:STATE),ZIP WITH A:ZIP
            ENDIF
         ENDIF

*****    IF CHOICE IS UPDATE

      CASE A:REPLY = '2'
         STORE '        ' TO A:IM
```

```
*****  REQUEST FOR AND ACCEPT IM TO BE UPDATED
         ERASE
         @ 6,19 SAY 'ENTER DATA FOR ITEM MANGER BEING ';
                + 'UPDATED'
         @ 9,32 SAY 'ITEM MANAGER ' GET A:IM
         READ
         STORE !(A:IM) TO A:IM
         SELECT PRIMARY

*****  RETREIVE IM RECORD BEING UPDATED

         USE D:ADDRESS INDEX D:IM
         FIND &A:IM
         IF # <> 0
            @ 22,17 SAY 'RECORD NOT FOUND ';
                    + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
            WAIT
         ELSE
            STORE T TO A:PROCESS

*****  IF RECORD DELETED, PROMPT FOR REACTIVATION OPTION

            IF *
               STORE ' ' TO A:REPLY2
               @ 18,22 SAY 'RECORD HAS BEEN MARKED FOR ';
                       + 'DELETION'
               @ 19,17 SAY 'DO YOU WANT THIS RECORD ';
                       + 'REACTIVATED <Y OR N>'
               @ 21,40 GET A:REPLY2 PICTURE 'A'
               READ
               DO WHILE A:REPLY2<>'Y' .AND. A:REPLY2<>'N'
                  @ 23,31 SAY 'ENTER Y OR N ONLY' +CHR(7)
                  @ 21,40 GET A:REPLY2 PICTURE 'A'
                  READ
               ENDDO

*****  IF REACTIVATION REQUESTED

               IF !(A:REPLY2) = 'Y'
                  @ 18,22 SAY '                          ';
                          + '                            '
                  @ 19,17 SAY '                          ';
                          + '                            '
                  @ 21,40 SAY ' '
                  RECALL
               ELSE
                  STORE F TO A:PROCESS
               ENDIF
            ENDIF

*****  PROMPT FOR AND ACCEPT UPDATE INFORMATION

            DO WHILE A:PROCESS
               STORE TITLE TO A:TITLE
               STORE COMMAND TO A:COMMAND
               STORE COMMAND2 TO A:COMMAND2
               STORE ATTN TO A:ATTN
               STORE STREET TO A:STREET
               STORE CITY TO A:CITY
               STORE STATE TO A:STATE
               STORE ZIP TO A:ZIP
               @ 14,16 SAY 'TITLE     ' GET TITLE
               @ 15,16 SAY 'COMMAND   ' GET COMMAND
               @ 16,16 SAY 'COMMAND2  ' GET COMMAND2
               @ 17,16 SAY 'ATTN      ' GET ATTN
               @ 18,16 SAY 'STREET    ' GET STREET
               @ 19,16 SAY 'CITY ' GET CITY
               @ 19,44 SAY ' STATE ' GET STATE
               @ 19,56 SAY 'ZIP CODE ' GET ZIP ;
```

```
                              PICTURE '99999'
                  READ
                  @ 21,20 SAY '1 - POST UPDATED RECORD ';
                     +                2 - EXIT'
                  STORE ' ' TO A:REPLY3
                  @ 23,40 GET A:REPLY3 PICTURE '9'

*****   PROVIDE UPDATE/EXIT OPTION

                  READ
                  DO WHILE A:REPLY3 < '1' .OR. A:REPLY3 > '2'
                     @ 23,40 GET A:REPLY3
                     READ
                  ENDDO

*****   IF UPDATE

                  IF A:REPLY3 <> '1'
                     REPLACE IM WITH !(A:IM),TITLE WITH :
!(A:TITLE),COMMAND WITH !(A:COMMAND),COMMAND2 WITH :
!(A:COMMAND2),ATTN WITH !(A:ATTN),STREET WITH !(A:STREET),:
 CITY WITH !(A:CITY), ZIP WITH A:ZIP
                     ENDIF
                     STORE F TO A:PROCESS
               ENDDO
            ENDIF

*****   IF CHOICE IS DELETE

         CASE A:REPLY = '3'
            STORE '          ' TO A:IM

*****   PROMPT FOR AND ACCEPT IM BEING DELETED

            ERASE
            @ 6,19 SAY 'ENTER DATA FOR ITEM MANGER BEING ';
                   + 'DELETED'
            @ 9,32 SAY 'ITEM MANAGER ' GET A:IM
            READ
            STORE !(A:IM) TO A:IM
            SELECT PRIMARY
            USE D:ADDRESS INDEX D:IM

*****   RETRIEVE RECORD BEING DELETED

            FIND &A:IM
            IF # <> 0
               @ 22,17 SAY 'RECORD NOT FOUND ';
                       + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
               WAIT
            ELSE

*****   IF ACTIVE COGS ARE ASSIGNED, DO NOT ALLOW DELETE

               IF COUNT > 0
                  @ 11,16 SAY 'TITLE      ' + TITLE
                  @ 12,16 SAY 'COMMAND    ' + COMMAND
                  @ 13,16 SAY 'COMMAND 2  ' + COMMAND2
                  @ 14,16 SAY 'ATTN       ' + ATTN
                  @ 15,16 SAY 'STREET     ' + STREET
                  @ 16,16 SAY 'CITY '+CITY-' STATE '+STATE+;
                              '  '+'ZIP CODE ' + ZIP
                  @ 18,20 SAY 'ACTIVE COGS EXIST FOR THIS ';
                         + 'ITEM MANAGER'
                  @ 19,15 SAY 'ALL ACTIVE COGS MUST BE ';
                         + 'REASSIGNED TO ANOTHER I.M.'
                  @ 20,21 SAY 'BEFORE DELETE ACTION CAN BE';
                         + ' COMPLETED'
                  @ 22,27 SAY 'STRIKE ANY KEY TO CONTINUE';
```

```
                                + CHR(7)
                WAIT
            ELSE

*****   IF PREVIOUSLY DELETED, NOTIFY OPERATOR

                IF *
                    @ 23,13 SAY 'RECORD PREVIOUSLY DELETED ';
                    + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
                    WAIT
                ELSE
                    @ 11,16 SAY 'TITLE      ' + TITLE
                    @ 12,16 SAY 'COMMAND    ' + COMMAND
                    @ 13,16 SAY 'COMMAND 2  ' + COMMAND2
                    @ 14,16 SAY 'ATTN       ' + ATTN
                    @ 15,16 SAY 'STREET     ' + STREET
                    @ 16,16 SAY 'CITY '+CITY-' STATE '+STATE;
                                -'  '+'ZIP CODE ' + ZIP
                    @ 19,20 SAY '1 - DELETE THIS ITEM MANAGER
                              + '      2 - EXIT'
                    STORE ' ' TO A:REPLY2
                    @ 21,40 GET A:REPLY2 PICTURE '9'

*****   ACCEPT DELETE/EXIT OPTION

                    READ
                    DO WHILE A:REPLY2 < '1' .OR. A:REPLY2 > '2'
                        @ 23,40 GET A:REPLY2
                        READ
                    ENDDO

*****   IF DELETE REQUESTED

                    IF A:REPLY2 = '1'
                        DELETE
                    ENDIF
                ENDIF
            ENDIF
        ENDIF
    ENDCASE
    USE
ENDDO

***** END OF PROGRAM
```

XXI. COG FILE UPDATE MODULE

```
*****************************************************************
**                                                             **
**   DATE: 18 JAN 1984                                         **
**   VERSION: 1.0                                              **
**   MODULE NAME: COGUPDT                                      **
**   MODULE PURPOSE: ALLOWS ADDITION, DELETION, OR             **
**                   UPDATING OF COG FILE                      **
**                                                             **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: NONE                                           **
**      OUTPUTS: NONE                                          **
**                                                             **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**         ACCEPTS NEW COG DATA, VERIFIES THAT THE NEW         **
**         COG IS NOT A DUPLICATE, AND VERIFIES THE            **
**         EXISTENCE OF AN ITEM MANAGER RECORD.  ACCEPTS       **
**         UPDATE INFORMATION ON COG-ITEM MANAGER ASSIGN-      **
**         MENTS, VALIDATES THE EXISTENCE OF AN ITEM           **
**         MANAGER RECORD, AND UPDATES THE COG FILE.           **
**         PREVIOUSLY DELETED COGS MAY BE REACTIVATED          **
**         WITH THE UPDATE OPTION.  ACCEPTS THE COG TO         **
**         BE DELETED, VERIFIES THE RECORDS EXISTENCE,         **
**         AND VERIFIES THAT NO ACTIVE CASES EXIST FOR         **
**         THIS COG.                                           **
**                                                             **
**   SUPERORDINATE MODULES: UTILMENU                           **
**   SUBORDINATE MODULES: NONE                                 **
**   AUTHOR: R. G. NICHOLS                                     **
**                                                             **
*****************************************************************

* COGUPDT.PRG
* LAST UPDATE 18 JAN 84
*
STORE T TO G:CONTINUE
DO WHILE G:CONTINUE

*****  DISPLAY OPTIONS AND ACCEPT CHOICE

   ERASE
   @ 6,24 SAY '***** COG FILE PROCESSING *****'
   @ 9,28 SAY '1 - ADD COG'
   @ 10,28 SAY '2 - UPDATE COG'
   @ 11,28 SAY '3 - DELETE COG'
   @ 12,28 SAY '4 - RETURN TO UTILITY MENU'
   STORE ' ' TO G:REPLY
   @ 15,40 GET G:REPLY
   READ
   DO WHILE G:REPLY < '1' .OR. G:REPLY > '4'
      @ 23,32 SAY 'ENTER 1 - 4 ONLY' + CHR(7)
      @ 15,40 GET G:REPLY
      READ
   ENDDO
   DO CASE

*****  IF CHOICE IS TO QUIT, RELEASE LOCAL MEMORY VARIABLES
*****  AND RETURN TO CALLING PROGRAM

      CASE G:REPLY = '4'
         RELEASE ALL LIKE G:*
```

```
         RETURN

*****  IF CHOICE IS TO ADD, PROMPT FOR AND ACCEPT INPUT

      CASE G:REPLY = '1'
         STORE '        ' TO G:IM
         STORE '   ' TO G:COG
         ERASE
         @ 6,24 SAY 'ENTER DATA FOR COG BEING ADDED'
         @ 9,32 SAY 'COG           ' GET G:COG PICTURE '9A'
         READ
         STORE !(G:COG) TO G:COG
         SELECT PRIMARY

*****  CHECK FOR DUPLICATE RECORD

         USE D:COG INDEX D:COGS
         FIND &G:COG
         IF # <> 0
            @ 22,14 SAY 'RECORD CURRENTLY EXISTS ';
               + '- STRIKE ANY KEY TO CONTINUE'+ CHR(7)
            WAIT
         ELSE
            STORE T TO G:GETIM
            DO WHILE G:GETIM

*****  PROMPT FOR AND ACCEPT ITEM MANAGER

               @ 10,32 SAY 'ITEM MANAGER ' GET G:IM
               SELECT SECONDARY
               USE D:ADDRESS INDEX D:IM
               READ
               STORE !(G:IM) TO G:IM

*****  CHECK TO SEE IF IM RECORD EXISTS

               FIND &G:IM
               IF # <> 0
                  STORE F TO G:GETIM
                  SELECT PRIMARY
                  APPEND BLANK
                  REPLACE COG WITH G:COG, IM WITH G:IM
               ELSE

*****  IF ITEM MANAGER NOT ON FILE PROVIDE OPTION TO
*****  CORRECT IM CODE, ADD THE IM RECORD OR EXIT WITHOUT
*****  UPDATE

                  @ 16,27 SAY 'ITEM MANAGER NOT ON FILE'
                  @ 18,30 SAY '1 - CHANGE I.M. CODE'
                  @ 19,30 SAY '2 - ADD ITEM MANAGER'
                  @ 20,30 SAY '3 - EXIT' + CHR(7)
                  STORE ' ' TO G:REPLY2
                  @ 23,40 GET G:REPLY2 PICTURE '9'
                  READ
                  DO WHILE G:REPLY2<'1' .OR. G:REPLY2>'3'
                     @ 23,40 GET G:REPLY2
                     READ
                  ENDDO
                  DO CASE
                     CASE G:REPLY2 = '1'
                        @ 16,27 SAY '                    ';
                           + '      '
                        @ 18,30 SAY '                    '
                        @ 19,30 SAY '                    '
                        @ 20,30 SAY '        '
                        @ 23,40 SAY ' '
                     CASE G:REPLY2 = '2'
                        STORE F TO G:GETIM
```

```
                        STORE '                    ';
                             TO G:TITLE
                        STORE '                    ';
                          + '                  ' TO G:COMMAND
                        STORE '                  ' TO;
                               G:TITLE
                        STORE '                    ';
                          + '       .         ' TO G:COMMAND2
                        STORE '                  ' TO G:ATTN
                        STORE '                    ';
                            TO G:STREET
                        STORE '                    ';
                            TO G:CITY
                        STORE '  ' TO G:STATE
                        STORE '     ' TO G:ZIP
                        @ 16,27 SAY '                 ';
                                  + '      '
                        @ 18,30 SAY '                 '
                        @ 19,30 SAY '                 '
                        @ 20,30 SAY '        '
                        @ 23,40 SAY ' '
                        @ 14,16 SAY 'TITLE      ' GET G:TITLE
                        @ 15,16 SAY 'COMMAND    ' GET ;
                                    G:COMMAND
                        @ 16,16 SAY 'COMMAND 2 ' GET ;
                                    G:COMMAND2
                        @ 17,16 SAY 'ATTN      ' GET ;
                                    G:ATTN
                        @ 18,16 SAY 'STREET    ' GET ;
                                    G:STREET
                        @ 19,16 SAY 'CITY ' GET G:CITY
                        @ 19,44 SAY ' STATE ' GET G:STATE
                        @ 19,56 SAY 'ZIP CODE ' GET G:ZIP;
                                    PICTURE '99999'
                        READ

*****  ACCEPT NEW IM DATA AND PROMPT FOR CREATE/EXIT OPTION

                        @ 21,20 SAY '1 - POST NEW RECORD';
                          + '              2 - EXIT'
                        STORE ' ' TO G:REPLY3
                        @ 23,40 GET G:REPLY3 PICTURE '9'
                        READ
                        DO WHILE G:REPLY3 < '1' .OR.;
                                 G:REPLY3 > '2'
                           @ 23,40 GET G:REPLY3
                           READ
                        ENDDO

*****  CREATE A NEW RECORD

                        IF G:REPLY3 = '1'
                           SELECT PRIMARY
                           APPEND BLANK
                           REPLACE COG WITH G:COG,;
                                   IM WITH G:IM
                           SELECT SECONDARY
                           APPEND BLANK
                           REPLACE IM WITH !(G:IM),TITLE;
 WITH !(G:TITLE),COMMAND WITH !(G:COMMAND),COMMAND2 WITH;
 !(G:COMMAND2),ATTN WITH !(G:ATTN),STREET WITH !(G:STREET),;
CITY WITH !(G:CITY), ZIP WITH G:ZIP
                        ELSE
                           STORE F TO G:GETIM
                        ENDIF

*****  EXIT WITHOUT CREATING RECORD

                     CASE G:REPLY2 = '3'
```

```
                        STORE F TO G:GETIM
                    ENDCASE
                ENDIF
            ENDDO
        ENDIF

*****   IF CHOICE IS TC UPDATE

      CASE G:REPLY = '2'
         STCRE '      ' TO G:IM
         STCRE '   ' TC G:COG

*****   PROMPT FOR AND ACCEPT COG BEING UPDATED

         ERASE
         @ 6,24 SAY 'ENTER DATA FOR COG BEING UPDATED'
         @ 9,32 SAY 'COG            ' GET G:COG PICTURE '9A'
         READ
         STORE !(G:CCG) TO G:COG
         SELECT PRIMARY

*****   RETREIVE RECORD TO BE UPDATED

         USE D:COG INDEX D:COGS
         FIND &G:COG
         IF # = 0
            @ 22,17 SAY 'RECORD NOT FOUND ';
                  + '- S RIKE ANY KEY TO CONTINUE' + CHR(7)
            WAIT
         ELSE
            STORE T T    :PROCESS

*****   IF RECORD DELETED PROMPT FOR REACTIVATION

            IF *
               STORE ' ' TO G:REPLY3
               @ 18,22 SAY 'RECORD HAS BEEN MARKED FOR';
                        + ' DELETION '
               @ 19,19 SAY 'DO YOU WANT THIS COG ';
                        + 'REACTIVATED <Y OR N>'
               @ 21,40 GET G:REPLY3 PICTURE 'A'
               READ
               DC WHILE !(G:REPLY3) <> 'Y' .AND. !(G:REPLY3) <> 'N'
                  @ 23,31 SAY 'ENTER Y OR N ONLY' + CHR(7)
                  @ 21,40 GET G:REPLY3 PICTURE 'A'
                  REAL
               ENDDO

*****   REACTIVATE RECCRD IF REQUESTED

               IF !(G:REPLY3) = 'Y'
                  @ 18,22 SAY '                    ';
                           + '                    '
                  @ 19,19 SAY '                    ';
                           + '                    '
                  @ 21,40 SAY ' '
                  RECALL
               ELSE
                  STCRE F TC G:PROCESS
               ENDIF
            ENDIF
            DO WHILE G:PROCESS
               STORE IM TO G:IM

*****   PECMPT FOR AND ACCEPT UPDATE INFORMATION

               @ 10,32 SAY 'ITEM MANAGER ' GET IM
               READ
               @ 21,20 SAY '1 - POST UPDATE INFORMATION';
```

```
                    + '     2 - EXIT'
            STORE ' ' TO G:REPLY3
            @ 23,40 GET G:REPLY3 PICTURE '9'

*****   ACCEPT UPDATE/EXIT SELECTION

            READ
            DO WHILE G:REPLY3 < '1' .OR. G:REPLY3 > '2'
               @ 23,40 GET G:REPLY3
               READ
            ENDDO

*****   IF EXIT WITHOUT UPDATE, RESTORE RECORD TO ORIGINAL
*****   VALUE

            IF G:REPLY3 <> '1'
               REPLACE IM WITH G:IM
            ENDIF
            USE
            STORE F TO G:PROCESS
         ENDDO
      ENDIF

*****   IF CHOICE IS TO DELETE

    CASE G:REPLY = '3'
      STORE '          ' TO G:IM
      STORE '   ' TO G:COG

*****   PROMPT FOR AND ACCEPT COG BEING DELETED

      ERASE
      @ 6,28 SAY 'ENTER COG BEING DELETED'
      @ 9,32 SAY 'COG             ' GET G:COG PICTURE '9A'
      READ
      STORE !(G:COG) TO G:COG
      SELECT PRIMARY
      USE D:COG INDEX D:COGS

*****   VERIFY COGS EXISTENCE

      FIND &G:COG
      IF # = 0
         @ 22,17 SAY 'RECORD NOT FOUND ';
                 + '- STRIKE ANY KEY TO CONTINUE' + CHR(7)
         WAIT
      ELSE

*****   VERIFY THAT NO ACTIVE CASES ARE ASSIGNED TO THIS COG

         IF COUNT > 0
            @ 10,32 SAY 'ITEM MANAGER ' + IM
            @ 13,25 SAY 'ACTIVE CASES EXIST FOR THIS COG'
            @ 14,15 SAY 'ALL ACTIVE CASES MUST BE ';
                    + 'REASSIGNED TO ANOTHER COG'
            @ 15,21 SAY 'BEFORE DELETE ACTION CAN BE ';
                    + 'COMPLETED'
            @ 18,27 SAY 'STRIKE ANY KEY TO CONTINUE' ;
                    + CHR(7)
            WAIT
         ELSE

*****   NOTIFY OPERATOR THAT RECORD PREVIOUSLY DELETED

            IF *
               @ 23,13 SAY 'RECORD PREVIOUSLY DELETED - ';
                       + 'STRIKE ANY KEY TO CONTINUE'
               WAIT
            ELSE
```

```
                        @ 10,32 SAY 'ITEM MANAGER ' + IM
                        @ 17,20 SAY '1 - DELETE THIS COG';
                              + '                 2 - EXIT'
                        STORE ' ' TO G:REPLY3
                        @ 19,40 GET G:REPLY3 PICTURE '9'

*****   ACCEPT DELETE/EXIT SELECTION

                        READ
                        DO WHILE G:REPLY3 < '1' .OR. G:REPLY3 > '2'
                           @ 23,32 SAY 'ENTER 1 - 2 ONLY' + CHR(7)
                           @ 19,40 GET G:REPLY3
                           READ
                        ENDDO
                        IF G:REPLY3 = '1'
                           DELETE
                           USE
                        ENDIF
                     ENDIF
                  ENDIF
               ENDIF
      ENDCASE
      USE
ENDDO

***** END OF PROGRAM
```

XXII. DATA BASE PACK MODULE

```
*************************************************************
**                                                         **
**   DATE: 15 JAN 1984                                     **
**   VERSION: 1.0                                          **
**   MODULE NAME: DBPACK                                   **
**   MODULE PURPOSE: PACK THE DATA BASE AND REMOVE         **
**                   RECORDS TAGGED FOR DELETION           **
**                                                         **
**   MODULE INTERFACE DEFINITION                           **
**      INPUTS: C:WHO                                      **
**      OUTPUTS: NONE                                      **
**                                                         **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:              **
**         COMPRESSES THE DATA BASES BY REMOVING RECORDS   **
**         MARKED FOR DELETION.  PRIOR TO EXECUTION, THE   **
**         USERS PASSWORD IS VERIFIED TO ENSURE THAT HE    **
**         IS AUTHORIZED TO PERFORM THE PACK.              **
**                                                         **
**   SUPERORDINATE MODULES: UTILMENU                       **
**   SUBORDINATE MODULES: NONE                             **
**   AUTHOR: R. G. NICHOLS                                 **
**                                                         **
*************************************************************


*****  DISPLAY WARNING MESSAGE

         ERASE
         @  1,25 SAY '***** DATA BASE PACKING *****'
         @  3,24 SAY '* * * * * * * * * * * * * * * * * * * * * '
         @  4,24 SAY '*                                         * '
         @  5,24 SAY '*              WARNING                    * '
         @  6,24 SAY '*                                         * '
         @  7,24 SAY '*     THIS PROGRAM WILL PACK              * '
         @  8,24 SAY '*   ALL DELETED CASES AND THEN            * '
         @  9,24 SAY '*    WILL RE-INDEX THE FILES              * '
         @ 10,24 SAY '*                                         * '
         @ 11,24 SAY '*   IF EXISTING FILES ARE                 * '
         @ 12,24 SAY '*   LARGE, THIS COULD TAKE                * '
         @ 13,24 SAY '*              HOURS                      * '
         @ 14,24 SAY '*                                         * '
         @ 15,24 SAY '* * * * * * * * * * * * * * * * * * * * * '
         @ 17,24 SAY '     ARE YOU SURE YOU WANT TO'
         @ 18,24 SAY '          CONTINUE'
         @ 19,24 SAY '        <ENTER Y OR N>' + CHR(7)
         STORE ' ' TO P:REPLY2
         @ 21,40 GET P:REPLY2

*****  ACCEPT RESPONSE FROM USER

         READ
         DO WHILE !(P:REPLY2)<>'Y' .AND. !(P:REPLY2)<>'N'
            @ 23,32 SAY 'ENTER Y OR N ONLY' + CHR(7)
            @ 21,40 GET P:REPLY2 PICTURE 'A'
            READ
         ENDDO
         @ 23,32 SAY '                    '
         @ 17,40 SAY ' '

***** ACCEPT AND VERIFY PASSWORD PRIOR TO EXECUTION
```

```
         IF P:REPLY2 = 'Y'
            @ 21,30 SAY 'ENTER YOUR PASSWORD '
            STORE '          ' TO P:PASSWORD
            SET CONSCIE OFF
            ACCEPT TO P:PASSWORD
            SET CONSCIE ON
            IF P:PASSWORD <> '          '
               USE D:TECHCODE INDEX D:TECH
               FIND &C:WHO
               IF PSWD = P:PASSWORD .AND. # <> 0

*****   DISPLAY PROCESSING MESSAGE

                  ERASE
                  @ 6,26 SAY ' OPEN DATA BASE BEING PURGED'
                  @ 8,32 SAY 'OF CLOSED CASES'
                  @ 16,29 SAY '***** DO NOT INTERRUPT *****'
                  USE D:OPEN1 INDEX D:OCASE1, D:ONSN
                  PACK
                  USE D:OPEN2 INDEX D:OCASE2
                  PACK
               ELSE
                  @ 23,18 SAY 'REQUEST ABORTED ';
                     + '- STRIKE ANY KEY TO CONTINUE'
                  WAIT
               ENDIF
            ENDIF
         ENDIF
         USE
         RELEASE ALL LIKE P:*
         RETURN

***** END OF PROGRAM
```

XXIII. ANALYST FILE UPDATE MODULE

```
*****************************************************************
**                                                             **
**   DATE: 15 JAN 1984                                         **
**   VERSION: 1.0                                              **
**   MODULE NAME: ANALYST                                      **
**   MODULE PURPOSE: TO ADD, UPDATE, DELETE, AND LIST          **
**                   ANALYST INFORMATION                       **
**                                                             **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: NONE                                           **
**      OUTPUTS: NONE                                          **
**                                                             **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**         PROVIDE CAPABILITY TO ADD NEW ANALYST CODES,        **
**         UPDATE EXISTING ANALYST RECORDS, DELETE             **
**         ANALYST RECORDS, OR DISPLAY ANALYST RECORDS.        **
**         NEW ANALYST IDS ARE VALIDATED TO ENSURE THAT        **
**         DUPLICATE RECORDS ARE NOT CREATED AND THAT NO       **
**         EMBEDDED BLANKS APPEAR IN THE ID.  DELETED          **
**         ANALYST RECORDS MAY BE RECALLED BY UPDATING         **
**         THE RECORD.  PRIOR TO DELETION OF A RECORD,         **
**         THE ANALYST IS VERIFIED TO HAVE NO ACTIVE           **
**         CASES ASSIGNED.                                     **
**                                                             **
**   SUPERORDINATE MODULES: UTILMENU                           **
**   SUBORDINATE MODULES: NONE                                 **
**   AUTHOR: R. G. NICHOLS                                     **
**                                                             **
*****************************************************************

STORE T TO A:CONTINUE
DO WHILE A:CONTINUE

*****  DISPLAY OPTIONS AVAILABLE TO THE USER AND ACCEPT
*****  SELECTION

   ERASE
   @ 6,25 SAY ' ***** ANALYST FILE UPDATE *****'
   @ 9,28 SAY '1 - ADD ANALYST'
   @ 10,28 SAY '2 - UPDATE ANALYST'
   @ 11,28 SAY '3 - DELETE ANALYST'
   @ 12,28 SAY '4 - LIST ANALYST'
   @ 13,28 SAY '5 - RETURN TO UTILITY MENU'
   STORE ' ' TO A:REPLY
   @ 16,40 GET A:REPLY PICTURE '9'
   READ

***** VALIDATE SELECTION

   DO WHILE A:REPLY < '1' .OR. A:REPLY > '5'
      @ 23,32 SAY 'ENTER 1 - 5 ONLY' + CHR(7)
      @ 16,40 GET A:REPLY PICTURE '9'
      READ
   ENDDO
   DO CASE

*****  IF QUIT REQUEST, RELEASE LOCAL MEMORY VARIABLES AND
*****  RETURN TO CALLING PROGRAM

      CASE A:REPLY = '5'
         RELEASE ALL LIKE A:*
```

```
         RETURN

*****  IF ADD NEW ANALYST SELECTED

       CASE A:REPLY = '1'
          STORE '      ' TO A:TECHCODE
          STORE '           ' TO A:PASSWORD
          STORE '                    ' TO A:NAME

*****  CLEAR SCREEN AND PROMPT FOR NEW ANALYST INFORMATION

          ERASE
          @ 6,22 SAY 'ENTER DATA FOR ANALYST BEING ADDED'
          @ 7,22 SAY '   FOLLOW EACH ENTRY WITH A <CR>'
          @ 10,28 SAY 'ANALYST CODE     ' GET A:TECHCODE
          READ

*****  VALIDATE NO EMBEDDED BLANKS

          DO WHILE $(A:TECHCODE,1,1)=' '  .OR.;
             $(A:TECHCODE,2,1)=' '  .OR. $(A:TECHCODE,3,1);
             =' '  .OR. $(A:TECHCODE,4,1)=' '
             @ 23,23 SAY 'ANALYST CODE CANNOT CONTAIN';
                     + ' BLANKS' + CHR(7)
             @ 10,45 GET A:TECHCODE
             READ
          ENDDO
          @ 23,23 SAY '                                    '
          STORE !(A:TECHCODE) TO A:TECHCODE

*****  VALIDATE FOR DUPLICATE USER ID

          USE D:TECHCODE INDEX D:TECH
          FIND &A:TECHCODE
          IF # <> 0
             @ 22,14 SAY 'RECORD CURRENTLY EXISTS ';
                     + '- STRIKE ANY KEY TO CONTINUE'
             WAIT
          ELSE
             @ 12,28 SAY 'ANALYST NAME     ' GET A:NAME
             READ
             SET CONSOLE OFF
             STORE T TO A:ENTERPSW

*****  PROMPT FOR USER PASSWORD AND VERIFICATION OF THE
*****  PASSWORD

             @ 14,28 SAY 'PASSWORD          '
             DO WHILE A:ENTERPSW
                @ 14,44 SAY ' '
                ACCEPT TO A:PASSWORD
                STORE '           ' TO A:VERIFY
                @ 16,28 SAY 'VERIFY PASSWORD '
                ACCEPT TO A:VERIFY
                IF A:PASSWORD <> A:VERIFY
                   @ 23,5 SAY 'VERIFICATION PASSWORD DOES ';
                          + 'NOT MATCH - REENTER PASSWORD';
                          + ' AND REVERIFY' + CHR(7)
                   STORE '           ' TO A:PASSWORD
                ELSE
                   STORE F TO A:ENTERPSW
                ENDIF
             ENDDO
             SET CONSOLE ON

*****  CREATE THE NEW ANALYST RECORD

             APPEND BLANK
             REPLACE TECHCODE WITH !(A:TECHCODE), NAME WITH;
```

```
            !(A:NAME), PSWD WITH A:PASSWORD
         USE
      ENDIF

*****  IF UPDATE ANAIYST SEIECTED

      CASE A:REPLY = '2'
         STORE '                    ' TO A:NAME
         STORE '     ' TO A:TECHCODE

*****  PROMPT FOR AND ACCEPT ANALYST CODE

         ERASE
         @ 6,15 SAY 'ENTER ANALYST CODE FOR RECORD TO BE';
                + ' UPDATED ' GET A:TECHCODE
         READ
         STORE !(A:TECHCODE) TO A:TECHCODE

*****  VALIDATE CODES EXISTENCE

         USE D:TECHCODE INDEX D:TECH
         FIND &A:TECHCODE
         IF # = 0
            @ 22,17 SAY 'RECORD NOT FOUND ';
                    + '- STRIKE ANY KEY TO CONTINUE'
            WAIT
         ELSE
            STORE T TC A:PROCESS

*****  IF MARKED FOR DELETION, SEE IF RECORD SHOULD BE
*****  REACTIVATED

            IF *
               STORE ' ' TO A:REPLY2
               @ 18,22 SAY 'RECORD HAS BEEN MARKED FOR';
                       + ' DELETION'
               @ 19,18 SAY 'DO YOU WANT THIS ANALYST ';
                       + 'REACTIVATED <Y OR N>'
               @ 21,40 GET A:REPLY2 PICTURE 'A'
               READ
               DO WHILE A:REPLY2<>'Y' .AND. A:REPLY2<>'N'
                  @ 23,31 SAY 'ENTER Y OR N ONLY' + CHR(7)
                  @ 21,40 GET A:REPLY2 PICTURE 'A'
                  READ
               ENDDO
               IF !(A:REPLY2) = 'Y'
                  RECALL
                  @ 18,22 SAY '                    ';
                          + '                '
                  @ 19,18 SAY '                    ';
                          + '                '
                  @ 21,40 SAY ' '
               ELSE
                  STORE F TC A:PROCESS
               ENDIF
            ENDIF

*****  PROMPT FOR AND ACCEPT UPDATE INFORMATION

            DO WHILE A:PROCESS
               STORE NAME TO A:NAME
               @ 8,15 SAY 'ENTER NEW NAME DATA  ' GET NAME
               READ
               @ 21,20 SAY '1 - POST UPDATE INFORMATION';
                       + '          2 - EXIT'
               STORE ' ' TO A:REPLY2
               @ 23,40 GET A:REPLY2 PICTURE '9'
*****  ACCEPT UPDATE/EXIT OPTION SELECTION
```

```
                READ
                DO WHILE A:REPLY2 < '1' .OR. A:REPLY2 > '2'
                   @ 23,40 GET A:REPLY2 PICTURE '9'
                   READ
                ENDDO
                IF A:REPLY2 = '1'
                   REPLACE NAME WITH !(NAME)
                ELSE
                   REPLACE NAME WITH A:NAME
                ENDIF
                STORE F TO A:PROCESS
             ENDDO
             USE
          ENDIF

*****  IF DELETE OPTION SELECTED

       CASE A:REPLY = '3'
          STORE '                    ' TO A:NAME
          STORE '     ' TO A:TECHCODE

*****  PROMPT FOR AND ACCEPT ANALYST CODE

          ERASE
          @ 6,15 SAY 'ENTER ANALYST CODE FOR RECORD TO BE DELETED ';
                GET A:TECHCODE
          READ
          STORE !(A:TECHCODE) TO A:TECHCODE
          USE D:TECHCODE INDEX D:TECH
          FIND &A:TECHCODE
          IF # = 0
             @ 22,17 SAY 'RECORD NOT FOUND - STRIKE ANY KEY';
                     + ' TO CONTINUE'
             WAIT
          ELSE

*****  CHECK FOR ACTIVE RECORDS ASSIGNED

             IF ACTIVE>0 .OR. TRANSMIT>0 .OR. RESPOND>0
                @  9,21 SAY 'ACTIVE RECORDS EXIST FOR ';
                        + 'THIS ANALYST'
                @ 10,21 SAY 'ALL ACTIVE RECORDS MUST BE';
                        + ' REASSIGNED'
                @ 11,21 SAY '              PRIOR TO DELETION'
                WAIT
             ELSE

*****  INDICATE IF RECORD PREVIOUSLY DELETED

                IF *
                   @ 23,13 SAY 'RECORD PREVIOUSLY DELETED ';
                           + '- STRIKE ANY KEY TO CONTINUE'
                   WAIT
                ELSE

*****  PROVIDE OPTION TO DELETE OR EXIT

                   @ 8,32 SAY 'ANALYST ' + NAME
                   @ 17,20 SAY '1 - DELETE THIS ANALYST  ';
                           + '          2 - EXIT'
                   STORE ' ' TO A:REPLY2
                   @ 23,40 GET A:REPLY2 PICTURE '9'
                   READ
                   DO WHILE A:REPLY2 < '1' .OR. A:REPLY2 > '2'
                      @ 23,40 GET A:REPLY2 PICTURE '9'
                      READ
                   ENDDO
                   IF A:REPLY2 = '1'
                      DELETE
```

```
                    ENDIF
                ENDIF
            ENDIF
        ENDIF

*****   IF LIST OPTION

      CASE A:REPLY = '4'
          USE D:TECHCODE INDEX D:TECH
          SET DELETED ON
          ERASE
          DISPLAY ALL FIELD TECHCODE, NAME OFF
          ?
          ?
          ?
          ? '                                STRIKE ANY KEY TO CONTINUE'
          SET DELETED OFF
          WAIT
   ENDCASE
ENDDO

***** END OF PROGRAM
```

XXIV. PASSWORD FILE UPDATE MODULE

```
*****************************************************************
**                                                             **
**   DATE: 15 JAN 1984                                         **
**   VERSION: 1.0                                              **
**   MODULE NAME: PASS                                         **
**   MODULE PURPOSE: PASSWORD UPDATING                         **
**                                                             **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: NONE                                           **
**      OUTPUTS: NONE                                          **
**                                                             **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**         ACCEPTS THE USER ID AS INPUT, REQUESTS THE          **
**         CURRENT PASSWORD, VALIDATES IT, AND REQUESTS        **
**         THE ENTRY AND VALIDATION OF THE NEW PASSWORD.       **
**         AN ILLEGAL USER ID OR AN ILLEGAL PASSWORD WILL      **
**         CAUSE THE PASSWORD UPDATE TO TERMINATE.             **
**                                                             **
**   SUPERORDINATE MODULES: UTILMENU                           **
**   SUBORDINATE MODULES: NONE                                 **
**   AUTHOR: R. G. NICHOLS                                     **
**                                                             **
*****************************************************************

*****  CLEAR SCREEN AND PROMPT FOR USER ID

ERASE
STORE '          ' TO P:PASSWORD
STORE '     ' TO P:TECHCODE
@ 6,21 SAY '***** PASSWORD UPDATE PROCESSING *****'
@ 9,24 SAY 'ENTER DESIRED ANALYST CODE  ' GET P:TECHCODE

*****  ACCEPT AND VALIDATE USER ID

READ
STORE !(P:TECHCODE) TO P:TECHCODE
USE D:TECHCODE INDEX D:TECH
FIND &P:TECHCODE
IF # = 0
   @ 22,14 SAY 'RECORD DOES NOT EXIST ';
           + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
   WAIT
ELSE
   SET CONSOLE OFF
   SET EXACT ON

*****  ACCEPT AND VALIDATE PASSWORD

   @ 11,24 SAY 'ENTER CURRENT PASSWORD '
   ACCEPT  TO P:PASSWORD
   IF P:PASSWORD = '          '
      SET CONSOLE ON
      RELEASE ALL LIKE P:*
      RETURN
   ENDIF
   STORE P:PASSWORD+'          ' TO P:PASSWORD
   IF $(P:PASSWORD,1,8) <> PSWD
      @ 22,8 SAY 'INVALID PASSWORD FOR ANALYST '+P:TECHCODE;
             + ' - STRIKE ANY KEY TO CONTINUE' + CHR(7)
      WAIT
   ELSE
```

```
      STORE T TO P:GETPASWD

*****  ACCEPT NEW PASSWORD AND VALIDATION OF NEW PASSWORD

      DO WHILE P:GETPASWD
         @ 13,24 SAY 'ENTER NEW PASSWORD     '
         ACCEPT TO P:PASSWORD
         @ 15,24 SAY 'VERIFY NEW PASSWORD    '
         ACCEPT TO P:VERIFYPW
         IF P:PASSWORD <> P:VERIFYPW
            @ 23,5 SAY 'VERIFICATION PASSWORD DOES NOT MATCH';
                     + '  - REENTER PASSWORD AND REVERIFY' + CHR(7)
         ELSE
            STORE F TO P:GETPASWD
         ENDIF
      ENDDO
      REPLACE PSWD WITH P:PASSWORD
      USE
   ENDIF
   SET EXACT OFF
   SET CONSOLE ON
ENDIF

*****  RELEASE LOCAL MEMORY VARIABLES AND RETURN TO
*****  CALLING PROGRAM

RELEASE ALL LIKE P:*
RETURN

***** END OF PROGRAM
```

XXV. DATA BASE RE-INDEX MODULE

```
*****************************************************************
**                                                             **
**   DATE: 20 JANUARY 1984                                     **
**   VERSION: 1.0                                              **
**   MODULE NAME: UTILNDX                                      **
**   MODULE PURPOSE: RE-INDEX ALL INDEX FILES                  **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: C:WHO, C:JULIAN                                **
**      OUTPUTS: NONE                                          **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**        A UTILILITY FOR THE SUPERVISOR TO RECONSTITUTE       **
**        THE INDEX FILES WHEN THE SYSTEM DESTROYS THE         **
**        CURRENT INDEXES. AFTER ACCEPTANCE OF THE             **
**        SUPERVISOR'S CHOICE TO PROCEED, EACH INDEX FILE      **
**        IS DELETED AND THEN REBUILT USING THE DATA IN        **
**        ALL OF THE DATABASE FILES.  THIS TAKES A LONG        **
**        TIME TO PROCESS, AND CAN BE ACCOMPLISHED ONLY        **
**        WHEN IT IS THE ONLY PROGRAM RUNNING ON THE           **
**        QDR SYSTEM.                                          **
**                                                             **
**   SUPERORDINATE MODULES: UTILMENU                           **
**   SUBORDINATE MODULES: NONE                                 **
**   AUTHOR: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************

*****  DELETE CURRENT INDICES

DELETE FILE D:OCASE1.NDX
DELETE FILE D:ONSN.NDX
DELETE FILE D:OCASE2.NDX
DELETE FILE D:CCASE1.NDX
DELETE FILE D:CNSN.NDX
DELETE FILE D:CCASE2.NDX

*****  BEGIN REINDEX OF FILES

USE D:OPEN1
INDEX ON CASE TO D:OCASE1
INDEX ON NSN TO D:ONSN

USE D:OPEN2
INDEX ON CASE TO D:OCASE2

USE D:CLOSE1
INDEX ON CASE TO D:CCASE1
INDEX ON NSN TO D:CNSN

USE D:CLOSE2
INDEX ON CASE TO D:CCASE2

USE D:TECHCODE
INDEX ON TECHCODE TO D:TECH

USE D:COG
INDEX ON COG TO D:COGS

USE D:WHEREDIS
INDEX ON CODE TO D:DISCODE
```

```
USE D:ADDRESS
INDEX ON IM TO D:IM

RETURN

***** END OF PROGRAM
```

XXVI. OPEN CASE REPORT

```
*****************************************************************
**                                                             **
**   DATE: 5 JANUARY 1984                                      **
**   VERSION: 1.0                                              **
**   MODULE NAME: OCASERPT                                     **
**   MODULE PURPOSE: PROVIDE ANALYST WITH LISTING OF ALL       **
**                   OF HIS OPEN CASES IN THE DATA BASE.       **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: C:WHO, C:JULIAN                                **
**      OUTPUTS: NONE                                          **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**        ALLOWS THE ANALYST TO CHOOSE BETWEEN RECEIVING       **
**        A LIST OF HIS CURRENTLY OPEN CASES OR TO RETURN      **
**        TO THE MAIN PROCESSING MENU. THE PROGRAM DOES A      **
**        SEQUENTIAL SEARCH OF THE DATA BASE TO IDENTIFY       **
**        THE APPROPRIATE CASES, AND LISTS THEM TO EITHER      **
**        THE SCREEN OR THE PRINTER. LIST SHOULD NOT BE        **
**        SENT TO THE PRINTER IF ANYONE ELSE WILL BE           **
**        USING IT BEFORE THE PROCESS IS COMPLETED.            **
**                                                             **
**   SUPERORDINATE MODULES: MENU1                              **
**   SUBORDINATE MODULES: NONE                                 **
**   AUTHOR: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************
ERASE
STORE ' ' TO V:PRINT
TEXT


                    YOU MAY RECEIVE THE REPORT ON THE SCREEN OR

                                AT THE PRINTER

                                  1 - SCREEN
                                  2 - PRINTER
                                  3 - EXIT


                                < ENTER YOUR CHOICE >
ENDTEXT
@ 22,35 SAY' ' GET V:PRINT
READ

IF V:PRINT = '1'
     ERASE
     USE D:OPEN1
     REPORT FORM OPENCASE FOR WHO = C:WHO
     ? 'PRESS ANY KEY TO CONTINUE'
     WAIT

ELSE
     IF V:PRINT = '2'
          ERASE
```

```
            USE D:OPEN1
            SET PRINT ON
            REPORT FORM OPENCASE FOR WHO = C:WHO
            EJECT
            SET PRINT OFF
            ? 'PRESS ANY KEY TO CONTINUE'
            WAIT
      ENDIF
ENDIF
RELEASE V:PRINT
RETURN

***** END OF PROGRAM
```

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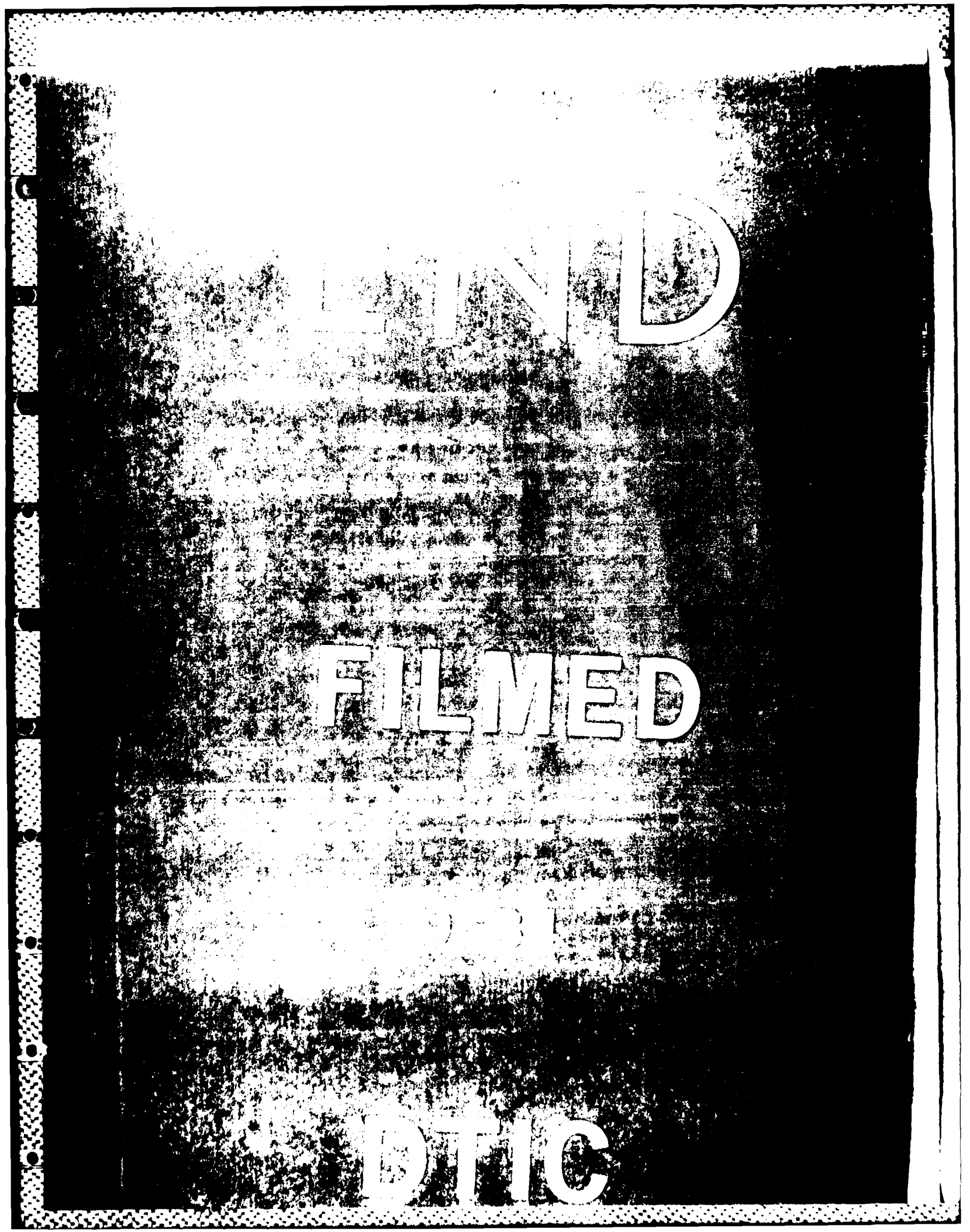
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