Y2K SCAN TOOL

User and Operations Guide

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1. INTRODUCTION

1.1 IDENTIFICATION

This document is the User and Operations Guide (UOG) for the National Aeronautics and Space Administration (NASA) Y2K Scan Tool. The UOG includes documentation of the Online and Batch processes. This document is identified as the Y2K User and Operations Guide, Y2K-UOG-1.

1.2 PURPOSE

The UOG serves as an instruction and reference manual for technical users operations. Brief instructions for the technical user to facilitate use of this tool Online and Batch are also included. This is a Commercial-Off-The-Shelf (COTS) package. This tool is provided to assist with your site's evaluation of ADABAS/NATURAL software.

1.3 SCOPE

The Y2K tool offers features for Conversion that have **NOT** been converted to operate in NASA's environment. The Conversion processes may be used at a later date, but will **NOT FUNCTION** correctly at this time. Should you choose to operate these functions travel at your own risk. The tool has been supplied to the agency as a scan tool and the Conversion portions are not supported and are not included in this documentation.

2. OPERATIONAL DESCRIPTION

Y2K Scan tool is **NOT** a Sustaining Engineering Support for Agencywide Administrative Systems (SESAAS) maintained product but is being used in the SESAAS environment to assist in the Year 2000 analysis. SESAAS support personnel will answer questions regarding installation of the product; however, ongoing maintenance support is currently not envisioned.

The Online Processing function in Y2K consists of eight (8) major components. Each component performs separate processing functions.
Processing functions within the system include:

- Scanning
- Building tables for ADABAS Files
  - Extract values
  - Reserved Words
  - Conversion Rules
- Findings Report
- Error Report

Look functions.

The Scanning Component provides the technical user the ability to scan NATURAL libraries. The technician can request a scan, update a scan, delete a scan, and perform a scan.

The Building tables for ADABAS Files provides the technical user a pre-defined list of date field data elements that are known. The tables for the core PREDICT files and their date fields have been provided for NEMS. The other applications will provide data through documentation changes for the centers to use when they are defined. The technician may add data elements to these table entries through this process for files used in applications other than Agencywide, and for site fields that have been appended to core files.

The Extract Values table building provides the technical user a list of wild card names, or partial names used in naming date fields. Table entries have been provided for NEMS, NEMS Inventory, and NEMS PCM. These tables are the core of the scan tools logic. The results of the scan are greatly affected by the entries made. The SESAAS team will provide table entries for all of the Agencywide systems through documentation changes as they are determined. The SESAAS team will **NOT** support the tools operations if these tables are changed. This is a very powerful process and will have a major effect on the results of the scan provided by the tool. SESAAS will only support the core Agencywide applications table entries.

The Reserved Words table building provides entry of reserved words used by NATURAL syntax. The table has been pre-loaded and changes to this table are **NOT** supported by SESAAS.

The Conversion Rules table building provides entries that are **NOT** supported by the SESAAS team at this time.

The Findings Report provides a listing report of the scan results in the order that the scan was processed.

The Error Report provides an Online log of the errors that were encountered with the scan. This feature allows the deletion of the error log generated.

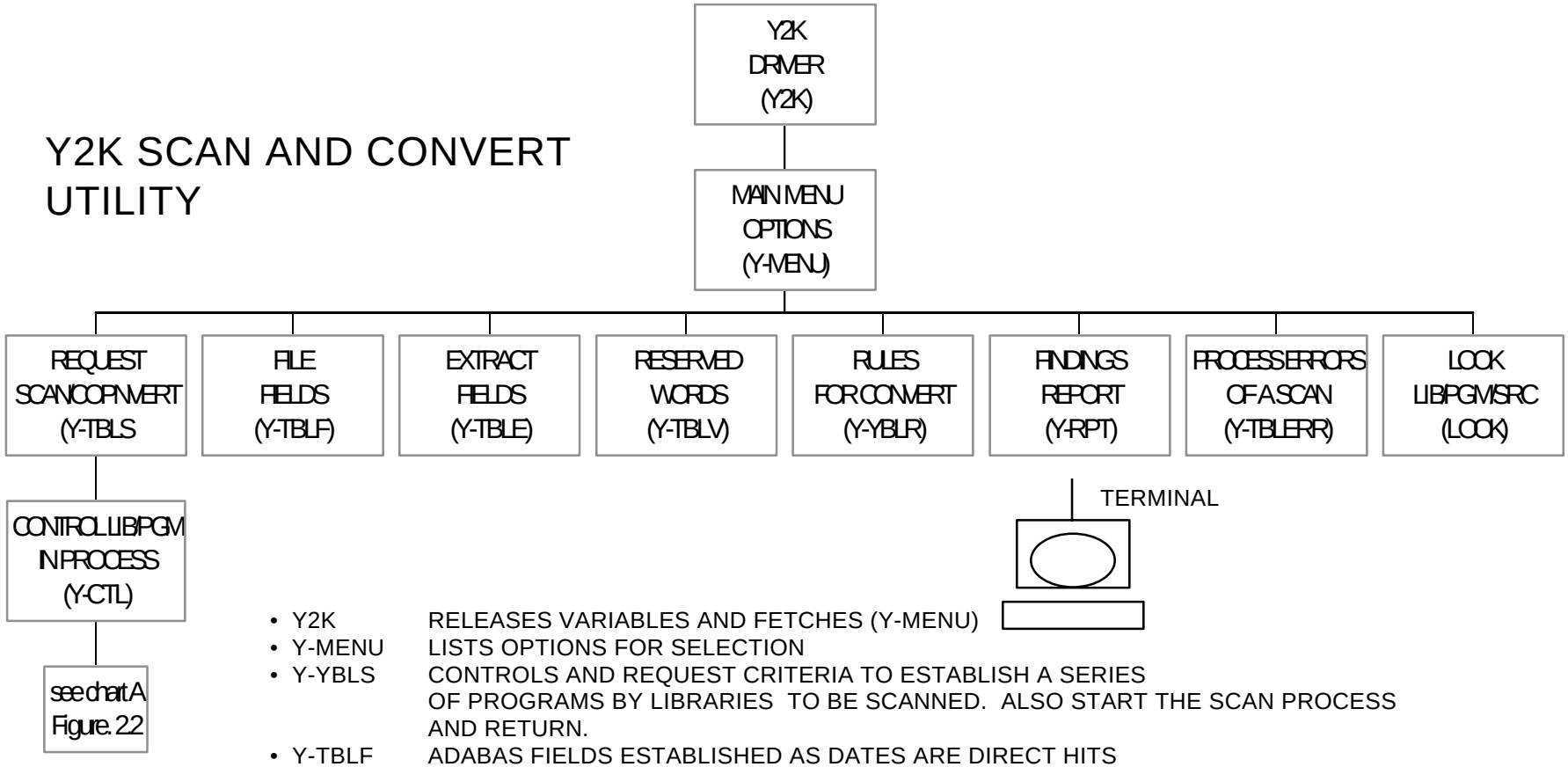
The Look Function provides the technician the following browse functions: List of Library Names, List of Programs, Browse through program code, Browse through program code with access commands highlighted, Scan program code for up to 20 input values, Find a module in the system, What files contain a field, and Help.

The batch processing available involves running adhoc reports against the flat file that the scan creates. Basic JCL will be provided to use the batch process. Also included with the documentation is JCL and programs used to create

partitioned data sets (PDS), that can be used with ISPF editor scans which are provided with the documentation.

2.1 SYSTEM HIERARCHY

Figure 2.1 and 2.2 provide flow charts of the Y2K tool.



- Y2K RELEASES VARIABLES AND FETCHES (Y-MENU)
- Y-MENU LISTS OPTIONS FOR SELECTION
- Y-YBLS CONTROLS AND REQUEST CRITERIA TO ESTABLISH A SERIES OF PROGRAMS BY LIBRARIES TO BE SCANNED. ALSO START THE SCAN PROCESS AND RETURN.
- Y-TBLF ADABAS FIELDS ESTABLISHED AS DATES ARE DIRECT HITS
- Y-TBLE VALUES USED IN FIELDS TO HELP DEFINE THE FIELD AS A DATE
- Y-TBLV NATURAL RESERVED WORDS USED TO ELIMINATE OR TARGET A FIELD FOR PROCESS
- Y-TBLR RULES USED TO AID IN THE CONVERT PROCESS
- Y-RPT CREATES A FINDINGS REPORT FOR ONLINE
- Y-TBLERR CAPTURES ADABAS/NATURAL ERRORS DURING THE CREATION OF A SCAN PROCESS
- Y-WRK READS Y2K-FILE, CREATES A WORK FILE
- LOOK SCAN UTILITY OF LIBRARIES & PROGRAMS WITH CRITERIA

Figure 2.1

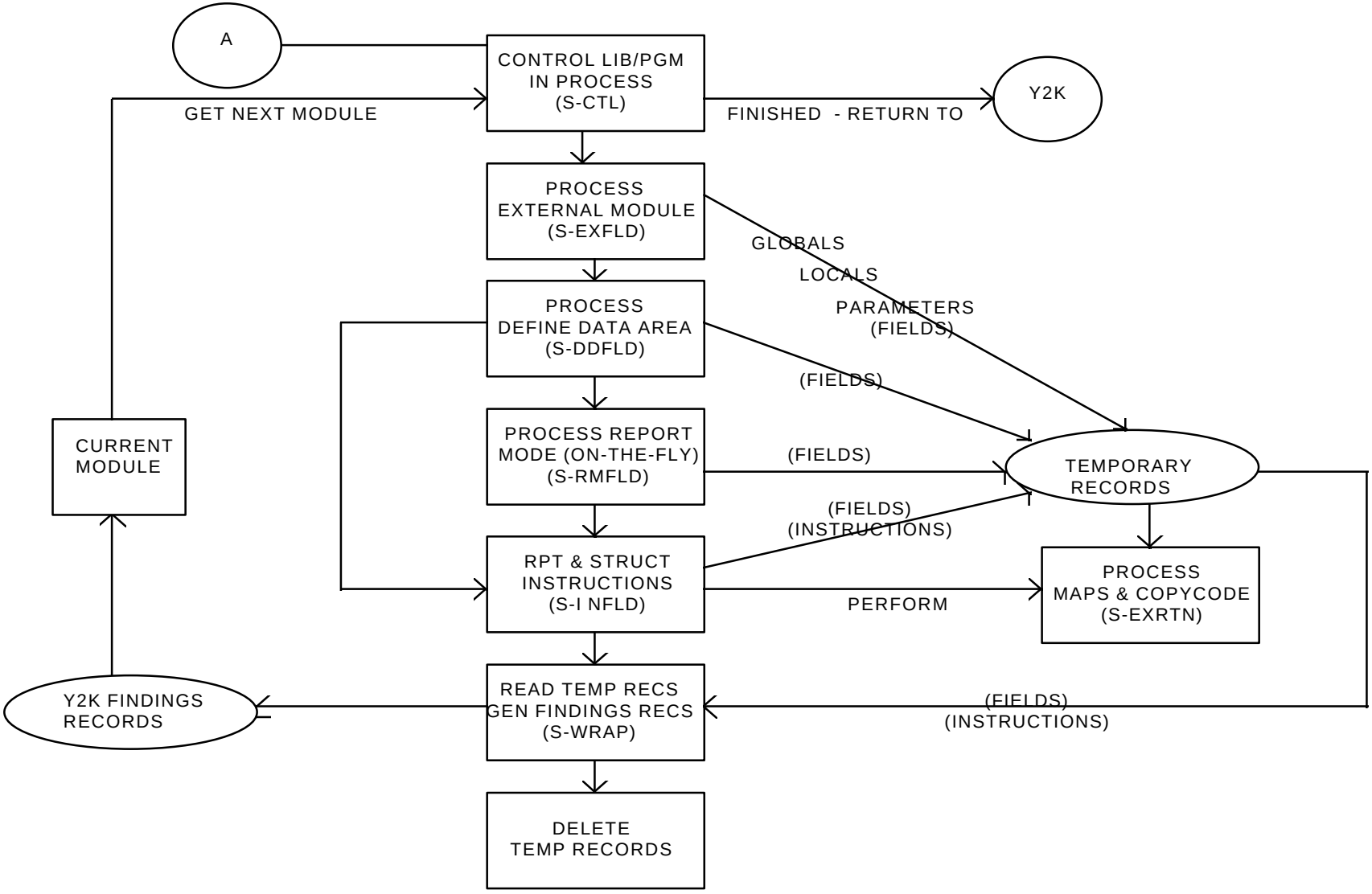

A
CONTROL LIB/PGM
IN PROCESS
(S-CTL)
Y2K
GET NEXT MODULE
FINISHED - RETURN TO
PROCESS
EXTERNAL MODULE
(S-EXFLD)
GLOBALS
LOCALS
PARAMETERS
(FIELDS)
PROCESS
DEFINE DATA AREA
(S-DDFLD)
(FIELDS)
CURRENT
MODULE
PROCESS REPORT
MODE (ON-THE-FLY)
(S-RMFLD)
(FIELDS)
TEMPORARY
RECORDS
(FIELDS)
(INSTRUCTIONS)
RPT & STRUCT
INSTRUCTIONS
(S-I NFLD)
PROCESS
MAPS & COPYCODE
(S-EXRTN)
PERFORM
Y2K FINDINGS
RECORDS
READ TEMP RECS
GEN FINDINGS RECS
(S-WRAP)
(FIELDS)
(INSTRUCTIONS)
DELETE
TEMP RECORDS

Figure 2.2

3. USER INTERFACE

The Y2K Scan Tool is a COTS software package and will not require any Sustaining Engineering. Help for the Y2K Scan Tool is provided through the Consolidation Center (CC) located at Marshall Space Flight Center (MSFC). Questions regarding the function and/or the technical aspects as well as the installation of this release should be directed to:

The NACC Technical Services Center (use following Key Words: SESAAS and NPDMS or NEMS).

Telephone: (205) 544-6673

Email: jim.crowell@msfc.nasa.gov

FAX: (205) 544-1836

Y2K File layout with remarks

T	L	DB	NAME	F	LENG	S	D	REMARKS
	1	AA	LIBRARY-NAME	A	8	N		
	1	AB	NEW-LIBRARY-NAME	A	8	N		
	1	AC	STATUS-LIB-MDL	A	1	N		S = Scan / C = Convert
	1	AD	MODULE-NAME	A	8	N	D	Program Name
	1	AE	SER-NO	A	3	N		Multiple records for one program
	1	AF	MODULE-TYPE	A	1	N		F = Program / N = Subprogram / S = Subroutine
	1	AG	SAVE-DATE	T	12	N		EM = YYYYMMDDHHIISS
	1	AH	SAVE-USERID	A	8	N		User who last saved module
	1	AI	Y2K-KEY	A	20	N	S	Library-Name (A8) / Status-Lib-Mdl (A1) / Module-Name (A8) / Ser-No (A3)
P	1	AJ	FIELD-GROUP					
	2	AK	FIELD-NAME	A	32	N		
	2	AL	FIELD-FORMAT	A	6	N		
	2	AM	FIELD-LINE-NO	A	4	N		

	2	AN	FIELD-STATUS	A	1	N		
	2	AO	FIELD-XREF	A	100	N		
	2	AP	FIELD-FILE-NO	A	3	N		
	2	AQ	FIELD-MODULE	A	8	N		
	2	AR	FIELD-MISC	A	5	N		first character = 'D' (Define) or 'I' (Instruction) second character = Passed 'C' (Conditional) (A6) format only; 'B' (Between) found in extract table; 'D' (Date) found in field table; 'P' (Parsed) field used with original field third character = Mode type 'C' (Copy Code); 'M' (Map); 'F' (Fetch); 'S' (Perform); 'N' (Callnat); 'G' (Global); 'L' (Local); 'P' (Parameter) fifth and sixth character = blank
	2	AS	FIELD-RULE	A	3	N		Code representing the NATURAL command used with field. REA = Read; FIN = Find; COM = Compare; MOV = Move; (:=) = Move; RES = Reset; CAL = Calculate; IFC = If with Calculate; CLL = Call; CLN = Callnat; WRI = Print/Write; INP = Input; IF = If; SOR = Sort; GRP = Group Field;
	1	AT	TABLE-TYPE	A	1	N		
	1	AU	TABLE-ARGUMENT	A	50	N		
	1	AV	TABLE-FUNCTION	A	50	N	D	

	1	AW	TABLE-FORMAT	A	6	N		
	1	AX	TABLE-XREF	A	50	N	D	
	1	AY	TABLE-KEY	A	101	N	S	

3.1 INSTALLATION INSTRUCTIONS

3.1.1 Copy Source Code

Define library Y2K and load the Y2K source into Y2K library from dataset AIMS.Y2K.PROD.REL100.REL0497.SRC. The source programs were unloaded using the NATURAL utility NATUNLD. The programs will be loaded to the application library Y2K, replacing any existing programs of the same name. The source module counts included in this release are listed below:

NATURAL Source Modules By Type

GLOBAL DATA AREA	1
LOCAL/PARAM DATA AREA	0
MAPS	3
HELP ROUTINES	0
SUBROUTINES	1
SUBPROGRAMS	0
PROGRAMS	35
COPYCODE	1
TEXT	2
PROCESS	0
MISCELLANEOUS OBJECTS	0
Total:	**43**

3.1.2 List of Source Code Modifications

The following are the modules added.

Added Modules

FIND	Program
FND	Program
FND-CC	Copycode
FTBL	Program
INITIAL	Program
INT	Program
LOOK	Program
NUM	Program
REL	Program
RPT-TEST	Program
S-CTL	Program
S-DDFLD	Program
S-DIS	Program
S-ERR	Program
S-EXFLD	Program
S-EXRTN	Subroutine
S-GLOB	Global
S-INFLD	Program
S-RMFLD	Program
S-WRAP	Program
TBL	Program

TBLERR	Program
TTBL	Program
Y-ACTE	Map
Y-ACTH	Map
Y-KEYTXT	Text
Y-MENU	Program
Y-RPT	Program
Y-RPT-N	Program
Y-RPT1	Program
Y-RPT2	Program
Y-RPT3	Program
Y-SKEL	Program
Y-TBLE	Program
Y-TBLF	Program
Y-TBLR	Program
Y-TBLS	Program
Y-TBLSH	Map
Y-TBLV	Program
Y-WRK	Program
Y-WRK2	Program
Y-WRKTXT	Text
Y2K	Program

Three other files are used. SYSDIC-FI and SYSDIC-EL are used for getting PREDICT information and their definition is supplied by SAG. A user view called FUSER2 is used to get source program information. FUSER2 is based on the FUSER definition which is supplied by SAG. The FUSER2 view uses two fields:

SOURCE-PROGRAM-IDENT (ADABAS field LJ) and SOURCE-CODE (ADABAS field LK, an MU occurring 60 times). If your center does not have an FUSER2 definition or wants to use FUSER user view instead, you will need to modify the NATURAL modules which reference FUSER2.

The Y2K-FILE should be update linked to the Y2K application and the other files (SYSDIC-EL, SYSDIC-FI and FUSER2) should be read-linked.

3.1.3 Install PREDICT

Use SYSDICBE to load all PREDICT data from the dataset AIMS.Y2K.PROD.REL100.REL0497.PRD. The object types and inventory listed below represent a comprehensive count of the PREDICT object modules for this release.

PREDICT Objects by Type

Keyword	1
Standard Files	0
Physical Files	1
User views	0
Data Elements	25
Program Descriptions	0

3.1.4 Physical File Changes

The following file changes must be made for this release. Generate ADAWAN cards and generate all Data Definition Modules (DDMs) with Line Comment = N, General Comment = N, and Short Comment = 0.

3.1.5 Y2K required JCL Examples

```
****** ***************************** TOP OF DATA ******************************
 000001 //IRY2KWK  JOB (MSIRMNPDM004,4201),'Y2K WORK',CLASS=D,
 000002 //        NOTIFY=XXXXX,MSGLEVEL=(1,1),MSGCLASS=I
 000003 //* ************************************************************
 000004 //* CREATES WORK FILE OF Y2K RECORDS - EXTRACTS ALL LIBRARIES
 000005 //* ************************************************************
 000006 //DVNPDMS  EXEC N04Z
 000007 //CMPRINT  DD SYSOUT=(I,P3103102)
 000008 //CMWKF01  DD DSN=MSIRM.NEMSDD.XXX.RPT.FILE,
 000009 //          DISP=(,CATLG,DELETE),
 000010 //          UNIT=SYSDA,
 000011 //          SPACE=(CYL,(2,1),RLSE),
 000012 //          DCB=(RECFM=FB,LRECL=438,BLKSIZE=26280)
 000013 //CMSYNIN  DD *
 000014 Y2KLIB,XXXXX
 000015 %*
 000016 XXXXX
 000017 R Y-WRK
 000018 FIN
 000019 /*
 000020 //
 ****** **************************** BOTTOM OF DATA ****************************
```

```
****** ***************************** TOP OF DATA ****************************
000001 //IRY2WRK2 JOB (MSIRMNPDM004,4201),'Y2K WORK2',CLASS=D,
000002 //        NOTIFY=XXXXX,MSGLEVEL=(1,1),MSGCLASS=A
000003 //* ************************************************************
000004 //* CREATES WORK FILE OF Y2K RECORDS FOR A SINGLE LIBRARY.
000005 //* ************************************************************
000006 //DVNPDMS  EXEC N04Z
000007 //CMPRINT  DD SYSOUT=(A,P3103102)
000008 //CMWKF01  DD DSN=MSIRM.NEMSDD.XXX.RPT.FILE,
000009 //          DISP=OLD,
000010 //          UNIT=SYSDA,
000011 //          SPACE=(CYL,(2,1),RLSE),
000012 //          DCB=(RECFM=FB,LRECL=438,BLKSIZE=26280)
000013 //CMSYNIN  DD *
000014 Y2KLIB,XXXXX
000015 %*
000016 XXXXX
000017 Y-WRK2
000018 // ** ENTER THE LIBRARY NAME BELOW **
000019 NIBASE
000020 FIN
000021 /*
000022 //
****** **************************** BOTTOM OF DATA ****************************
```

```
****** ***************************** TOP OF DATA ****************************
000001 //IRY2RPT  JOB (MSIRMNPDM004,4201),'Y2K REPORT',CLASS=D,
000002 //         NOTIFY=XXXXX,MSGLEVEL=(1,1),MSGCLASS=I
000003 //* ************************************************************
000004 //* CREATES THE FINDINGS REPORT - BATCH VERSION OF ONLINE REPORT.
000005 //* ************************************************************
000006 //DVNPDMS  EXEC N04Z
000007 //CMPRINT  DD SYSOUT=(I,P3103102)
000008 //CMSYNIN  DD *
000009 Y2KLIB,XXXXX
000010 %*
000011 XXXXX
000012 Y-RPT
000013 FIN
000014 /*
000015 //
****** **************************** BOTTOM OF DATA ****************************
```

```
****** ***************************** TOP OF DATA ****************************
000001 //IRY2RPT1 JOB (MSIRMNPDM004,4201),'Y2K REPORT 1',CLASS=D,
000002 //        NOTIFY=XXXXX,MSGLEVEL=(1,1),MSGCLASS=I
000003 //* ************************************************************
000004 //* CREATES ORIGINAL Y2K REPORT OF 100 RECORDS ONLY
000005 //* ************************************************************
000006 //DVNPDMS  EXEC N04Z
000007 //CMPRINT  DD SYSOUT=(I,P3103102)
000008 //CMWKF01  DD DSN=MSIRM.NEMSDD.NKY.RPT.FILE,
000009 //           DISP=SHR
000010 //*          DISP=(,CATLG,DELETE),
000011 //*          UNIT=SYSDA,
000012 //*          SPACE=(CYL,(2,1),RLSE),
000013 //*          DCB=(RECFM=FB,LRECL=438,BLKSIZE=26280)
000014 //CMSYNIN  DD *
000015 Y2KLIB,XXXXX
000016 %*
000017 XXXXX
000018 GLOBALS LS=132
000019 R Y-RPT1
000020 FIN
000021 /*
000023 //
****** **************************** BOTTOM OF DATA ****************************
```

```
****** ***************************** TOP OF DATA ****************************
000001 //IRY2RPT2 JOB (MSIRMNPDM004,4201),'Y2K REPORT 2',CLASS=D,
000002 //        NOTIFY=XXXXX,MSGLEVEL=(1,1),MSGCLASS=A
000003 /*JOBPARM LINES=2000
000004 //* ******************************************************************
000005 //* CREATES Y2K REPORT 2 THAT LISTS IMPACTED SOURCE LINES PER MODULE
000006 //* ******************************************************************
000007 //DVNPDMS  EXEC N04Z
000008 //CMPRINT  DD SYSOUT=(A,P3103102)
000009 //CMWKF01  DD DSN=MSIRM.NEMSDD.XXX.RPT.FILE,
000010 //           DISP=SHR
000011 //*          DISP=(,CATLG,DELETE),
000012 //*          UNIT=SYSDA,
000013 //*          SPACE=(CYL,(2,1),RLSE),
000014 //*          DCB=(RECFM=FB,LRECL=438,BLKSIZE=26280)
000015 //CMSYNIN  DD *
000016 Y2KLIB,XXXXX
000017 %*
000018 XXXXX
000019 GLOBALS LS=132
000020 Y-RPT2
000021 FIN
000022 /*
000023 //
****** **************************** BOTTOM OF DATA ****************************
```

```
****** ***************************** TOP OF DATA ****************************
000001 //IRY2RPT3 JOB (MSIRMNPDM004,4201),'Y2K REPORT 3',CLASS=D,
000002 //        NOTIFY=XXXXX,MSGLEVEL=(1,1),MSGCLASS=A
000003 /*JOBPARM LINES=2000
000004 //* ************************************************************
000005 //* CREATES Y2K REPORT 3 OF SOURCE LINE CALCULATIONS
000006 //* ************************************************************
000007 //DVNPDMS  EXEC N04Z
000008 //CMPRINT  DD SYSOUT=(A,P3103102)
000009 //CMWKF01  DD DSN=MSIRM.NEMSDD.CAL.RPT.FILE,
000010 //           DISP=SHR
000011 //*          DISP=(,CATLG,DELETE),
000012 //*          UNIT=SYSDA,
000013 //*          SPACE=(CYL,(2,1),RLSE),
000014 //*          DCB=(RECFM=FB,LRECL=438,BLKSIZE=26280)
000015 //CMSYNIN  DD *
000016 Y2KLIB,XXXXX
000017 %*
000018 XXXXX
000019 GLOBALS LS=132
000020 Y-RPT3
000021 FIN
000022 /*
000023 //
****** ***************************** BOTTOM OF DATA *****************************
```

3.1.6 Partitioned Data Set JCL and Program Examples

Instructions for Creating PDS of NATURAL Programs and Running the ISPF Scan in Batch.

1. Type in the source code for OBJ1 and PLATPRG1 in the library you will be loading into the partitioned dataset. Stow each program.

2. Create the JCL that executes PLATPRG1 and OBJ1 as defined in example. Create datasets needed for the job. Refer to the DCB info for the PDS used in the last step of the job.

3. After creating all of the datasets, execute the job to load your NATURAL modules into the PDS.

4. Create JCL for the batch ISPF scan job as defined in the example. (The scan can be run Online under ISPF utilities; however, the number of strings for which you can search is limited. The batch job allows many more strings than the Online feature.)

5. Submit the ISPF scan job and review output.

3.1.6.1 + Program PLATPRG1 Lib NEMSINV (example)

```
0010 *
0020 *
0030 *
0040 *    t u r n   o n   l o w e r   c a s e     %I
0050 *
0060 *
0070 *
0080 *  THIS READS A SEQ. FILE CONTAINING LISTINGS OF NATURAL SOURCE
0090 *  CODE AND PREPARES PARAMETERS FOR THE IGM UTILITY "IEBUPDTE"
0100 *  IN ORDER TO WRITE EACH PROGRAM INTO A PDS AS A
0110 *  SEPARATE MEMBER.
0120 *  THIS LEAVES THE 4 DIGIT NATURAL SOURCE SEQUENCE NUMBER
0130 *  AT THE BEGINNING OF EACH RECORD.
0140 *
0150 *  THIS PUTS THE 8 DIGIT IEBUPDTE SEQUENCE NUMBER AT THE
0160 *  END OF EACH RECORD.
0170 *
0180 *  THIS ELIMINATES COMMENTS FROM THE SOURCE CODE.
0190 *
0200 *  THIS IS WRITTEN TO WORK WITH NATURAL 2.2.6.
0210 *  IT MAY NOT WORK UNDER NATURAL 2.2.8 AND
0220 *  MAY HAVE TO BE MODIFIED AFTER THE CONVERSION TO 2.2.8.
0230 *
0240 *
0250 *
0260 *
0270 DEFINE DATA
0280 LOCAL
```

```
0290 01 #IN              (A133)
0300 01 REDEFINE #IN
0310   02 FILLER          1X
0320   02 #SEQ            (A4)
0330   02 FILLER          1X
0340   02 #SOURCE         (A72)
0350   02 REDEFINE #SOURCE
0360     03 #COMMENT      (A1)
0370     03 FILLER        20X
0380     03 #OBJ-NAME     (A8)
0390     03 FILLER        5X
0400     03 #LIT-LIB      (A8)
0410     03 #LIBRARY      (A8)
0420 01 #OUT-REC          (A80)
0430 01 #HOLD-NAME        (A8)
0440 01 #CNT-OBJ          (P5)
0450 01 #CNT-SRC          (P7)
0460 END-DEFINE
0470 READ WORK FILE 1 #IN
0480   AT END OF DATA
0490     ASSIGN #OUT-REC = './ ENDUP'
0500     WRITE WORK FILE 2 #OUT-REC
0510     WRITE 2X #CNT-OBJ 'OBJECTS WRITTEN' / #CNT-SRC 'LINES OF CODE'
0520     TERMINATE
0530   END-ENDDATA
0540   IF #LIT-LIB = 'Library'
0550     EXAMINE FULL #OBJ-NAME FOR '-' REPLACE '$'
0560     EXAMINE FULL #OBJ-NAME FOR '_' REPLACE '$'
0570     REJECT IF #OBJ-NAME = #HOLD-NAME
0580     ADD 1 TO #CNT-OBJ
```

```
0590    ASSIGN #HOLD-NAME = #OBJ-NAME
0600    COMPRESS './ ADD NAME=' #OBJ-NAME INTO #OUT-REC LEAVING NO
0610    WRITE WORK FILE 2 #OUT-REC
0620    ASSIGN #OUT-REC = './ NUMBER NEW1=10,INCR=10'
0630    WRITE WORK FILE 2 #OUT-REC
0640    COMPRESS '*  THIS OBJECT IS  ' #OBJ-NAME INTO #OUT-REC
0650    WRITE WORK FILE 2 #OUT-REC
0660    ESCAPE TOP
0670   END-IF
0680   IF #SEQ IS (N4)
0690    REJECT IF #COMMENT = '*'
0700    ADD 1 TO #CNT-SRC
0710    COMPRESS #SEQ #SOURCE INTO #OUT-REC
0720    WRITE WORK FILE 2 #OUT-REC
0730   END-IF
0740 END-WORK
0750 END
```

3.1.6.2 + Program OBJ1 Lib NEMSINV (example)

```
0010 *
0020 *
0030 *
0040 *  JCL:  LISTOBJS + OTHER MISC JOBS
0050 *  WORKS WITH NAT. 2.2.3, 2.2.5, 2.2.6
0060 *
0070 *          T U R N    O N    %L
0080 *
0090 *
0100 *
0110 *   THIS CREATES LIST COMMANDS FOR OBJECTS SELECTED AND
0120 *   PUTS THEM IN A CMPRINT FILE.
0130 *
0140 *
0150 *
0160 *
0170 *
0180 *
0190 *
0200 *
0210 DEFINE DATA
0220 LOCAL
0230 01 #IN              (A133)
0240 01 REDEFINE #IN
0250   02 #FILLER1       (A1)
0260   02 #BASE          (A4)
0270   02 REDEFINE #BASE
0280     03 #NUM-BASE     (A1)
```

```
0290   02 FILLER3        (A2)
0300   02 #ACCEPT        (A4)
0310 01 REDEFINE #IN
0320   02 #FILLER2       (A1)
0330   02 #DATA          (A8)
0340 01 REDEFINE #IN
0350   02 #FILLER4       (A6)
0360   02 #LOGON         (A14)
0370   02 REDEFINE #LOGON
0380     03 #LOG         (A5)
0390 01 #LIST-OBJ        (A10)
0400 01 #CNT             (P5)
0410 01 #IND             (A1)
0420 01 #NO-LIST         (A33) INIT <'CANNOT LIST OBJECT WITH THIS NAME'>
0430 END-DEFINE
0440 FORMAT PS=60
0450 WRITE TITLE LEFT JUSTIFIED 5X
0460   'THE FOLLOWING LIST COMMANDS HAVE BEEN CREATED' 15X *PAGE-NUMBER
0470 READ WORK FILE 1 #IN
0480   AT END OF DATA
0490     WRITE '********' #CNT 'OBJECTS TO FOLLOW ********'
0500   END-ENDDATA
0510   RESET #NO-LIST
0520   IF #BASE = 'NEXT' OR #BASE = 'Next' AND #LOG = 'LOGON'
0530     STACK COMMAND #LOGON              /* ALLOWS FOR LOGON
0540 *                                     /* COMMANDS MIDSTREAM
0550   END-IF
0560   IF #BASE = 'NEXT' OR #BASE = 'Next' OR
0570     #ACCEPT = 'ACCE' OR #ACCEPT = 'Acce'
0580     ASSIGN #IND = 'X'
```

```
0590    ESCAPE TOP
0600   END-IF
0610   REJECT IF #IND NE 'X' OR #NUM-BASE IS (N1)
0620    OR #BASE = 'Next' OR #BASE = 'Sour' OR #BASE = 'User'
0630    OR #BASE = 'NEXT' OR #BASE = 'SOUR' OR #BASE = 'USER'
0640    OR #BASE = 'Name' OR #BASE = 'Obje'
0650    OR #BASE = 'NAME' OR #BASE = 'OBJE' OR #BASE = 'NAT9'
0660    OR #BASE = '    ' OR #BASE = '****' OR #BASE = '----'
0670    OR #BASE = 'Logo' OR #BASE = 'LOGO'
0680    OR #ACCEPT = 'ACCE' OR #ACCEPT = 'ACCE' OR #BASE = 'X   '
0690   IF #DATA NE 'COUNT' AND #DATA NE 'DIR'
0700    COMPRESS 'L' #DATA INTO #LIST-OBJ
0710    STACK COMMAND #LIST-OBJ
0720    ADD 1 TO #CNT
0730   ELSE
0740    RESET INITIAL #NO-LIST
0750    ASSIGN #LIST-OBJ = #DATA
0760   END-IF
0770   WRITE NOTITLE NOHDR 10X #LIST-OBJ #NO-LIST
0780 END-WORK

0790 END
```

3.1.6.3 DATA SET NAME: MSIRM.NEMS.NEMSMOV (example)

GENERAL DATA		CURRENT ALLOCATION:
Management class:		Allocated cylinders: 13
Storage class:	TSUCLAS	Allocated extents: 1
Volume:	STZ011	
Device type:	3390	

```
Data class:                          CURRENT UTILIZATION:
Organization:           PO           Used cylinders:  5
Record format:          FB           Used extents:    1
Record length:          80
Block size:             23440
1st extent cylinders:   13
Secondary cylinders:    1
Data set name type:     PDS

Creation date:          1997/04/22
Expiration date:        ***NONE***
```

3.1.6.4 JCL to Create PDS Members

```
****** ***************************** TOP OF DATA ******************************
 000100 //IRNATPDS JOB (MSIRMNPDM004),'NATURAL PDS',
 000200 //          CLASS=D,MSGCLASS=A,
 000300 //          NOTIFY=XXXXX
 000400 //*********************************************************************
 000500 //*
 000600 //ND01     EXEC N02Z,PRM='IM=D,MT=99999'
 000700 //CMPRINT  DD DSN=MSIRM.NEMS.OBJS,UNIT=SYSDA,
 000800 //        DISP=OLD,SPACE=(CYL,(2,1)),
 000810 //        DCB=(RECFM=FB,LRECL=133,BLKSIZE=23408)
 000900 //CMSYNIN  DD *
 001000 NEMSINV,XXXXX,XXXXX
 001100 L *
 001101 //* L L *
 001102 //* L G *
 001103 //* L H *
```

```
 001104 //* L M *
 001110 //* L P *
 001120 //* L N *
 001130 //* L S *
 001140 //* L C *
001200 FIN
 001300 /*
 001651 //*************************************************************************
 001660 //ND02     EXEC N02Z,PRM='IM=D,MT=99999'
 001670 //CMPRINT  DD DSN=MSIRM.NEMS.SOURCE,UNIT=SYSDA,
 001680 //         DISP=OLD,SPACE=(CYL,(120,10),RLSE),
 001681 //         DCB=(RECFM=FB,LRECL=133,BLKSIZE=23408)
 001690 //CMSYNIN  DD *
 001691 NEMSINV,XXXXX,XXXXX
 001692 OBJ1
 001693 FIN
 001694 /*
 001695 //CMWKF01  DD DSN=MSIRM.NEMS.OBJS,DISP=OLD
 002160 //*************************************************************
 002170 //ND03     EXEC N02Z,PRM='IM=D,MT=99999'
 002180 //CMPRINT  DD SYSOUT=A
 002191 //CMSYNIN  DD *
 002192 NEMSINV,XXXXX,XXXXX
 002193 PLATPRG1
 002194 FIN
 002195 /*
 002196 //CMWKF01  DD DSN=MSIRM.NEMS.SOURCE,DISP=OLD
 002197 //CMWKF02  DD DSN=MSIRM.NEMS.TEMP,UNIT=3390,
 002198 //         DISP=OLD,SPACE=(CYL,(120,10),RLSE),
 002199 //         DCB=(RECFM=FB,LRECL=80,BLKSIZE=24000)
```

```
002200 //*************************************************************
002210 //ND04     EXEC PGM=IEBUPDTE
002220 //SYSPRINT DD DUMMY
002280 //SYSUT1   DD DSN=MSIRM.NEMS.NEMSMOV,DISP=OLD
002281 //SYSUT2   DD DSN=MSIRM.NEMS.NEMSMOV,DISP=OLD
002290 //SYSIN    DD DSN=MSIRM.NEMS.TEMP,DISP=OLD
002300 //
****** **************************** BOTTOM OF DATA ****************************
```

3.1.7 TSO/ISPF batch scan facility examples of JCL

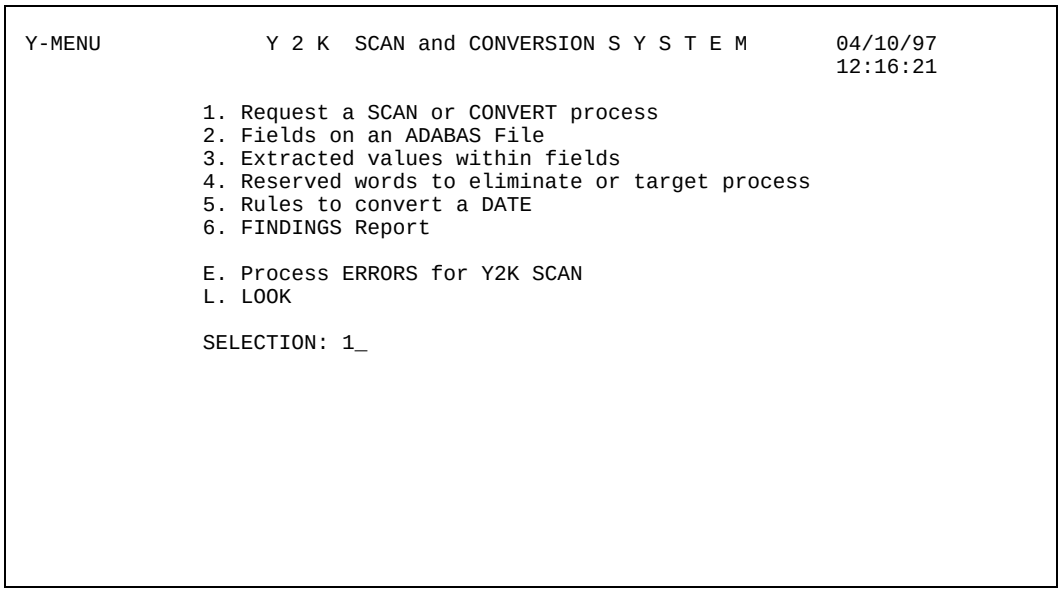
```
****** **************************** TOP OF DATA ******************************
000100 //IRISPFSC JOB (MSIRMNPDM004),'ISPF SEARCH',MSGCLASS=A,CLASS=D
000120 /*JOBPARM LINES=2000
000200 //SEARCH EXEC PGM=ISRSUPC,
000300 //          PARM=(SRCHCMP,
000400 //          'ANYC')
000500 //NEWDD  DD DSN=MSIRM.NEMS.NEMSMOV,VOL=SER=STZ002,
000600 //         DISP=SHR
000700 //OUTDD  DD SYSOUT=A
000800 //SYSIN  DD *
001000 SRCHFOR '*DAT'
001100 SRCHFOR '-CC'
001200 SRCHFOR '-CC-'
001300 SRCHFOR '_CC'
001400 SRCHFOR '_CC_'
001500 SRCHFOR 'ANNIV-'
001600 SRCHFOR 'CALEND'
001700 SRCHFOR 'CALND
001800 SRCHFOR 'CENT'
```

```
001900 SRCHFOR 'CNTRY'
002000 SRCHFOR 'DAT'
002100 SRCHFOR 'DT'
002200 SRCHFOR 'DTE'
002300 SRCHFOR 'DYM'
002400 SRCHFOR 'GREG'
002500 SRCHFOR 'JUL'
002600 SRCHFOR 'MDY'
002700 SRCHFOR 'MMDDY'
002800 SRCHFOR 'MY'
002900 SRCHFOR 'URY'
003000 SRCHFOR 'YDM'
003100 SRCHFOR 'YEAR'
003200 SRCHFOR 'YM'
003300 SRCHFOR 'YR'
003310 SRCHFOR 'YY'
003400 /*
****** ********************************* BOTTOM OF DATA *****************************
```

4. FUNCTIONS

4.1 SCREENS

4.1.1 Main Menu - Request Scan (Y-MENU option 1)



Purpose: List system functions

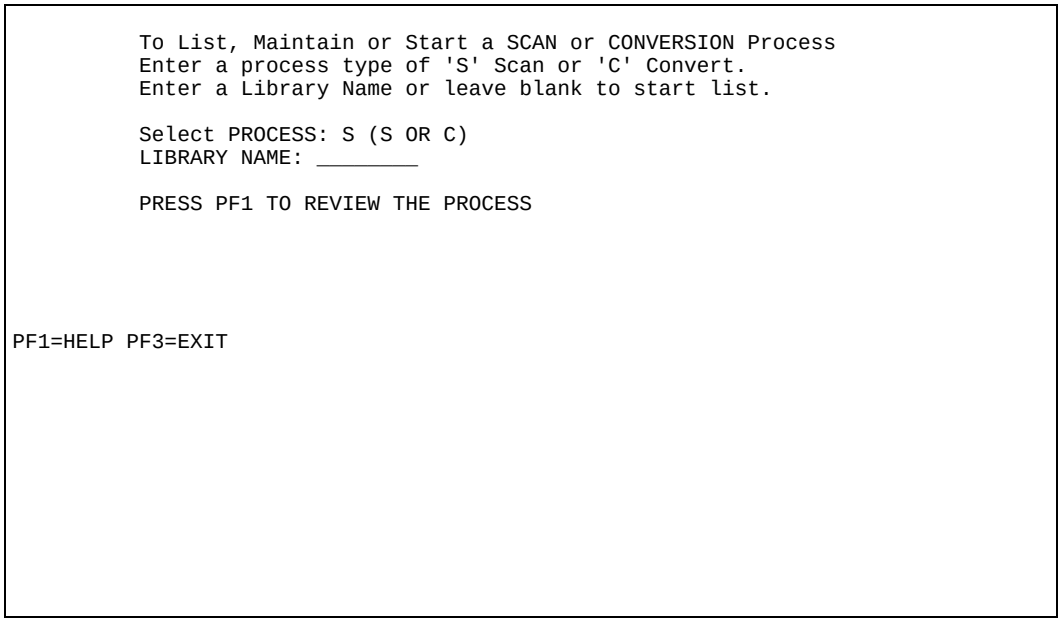
Called from Screen: N/A

Calls Screens: Option Screen
- 1 - Y-TBLS
- 2 - Y-TBLF
- 3 - Y-TBLE
- 4 - Y-TBLV
- 5 - Y-TBLR
- 6 - Y-RPT
- E - TBLERR
- L - LOOK

Instruction Steps:

INPUT DATA:
- Enter '1' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries)
- Press <ENTER>. The system displays the requested screen

4.1.1.1 Request Scan Library Name



Purpose: To List, Maintain, or Start a SCAN or CONVERSION Process.

Called from Screen: Y-MENU

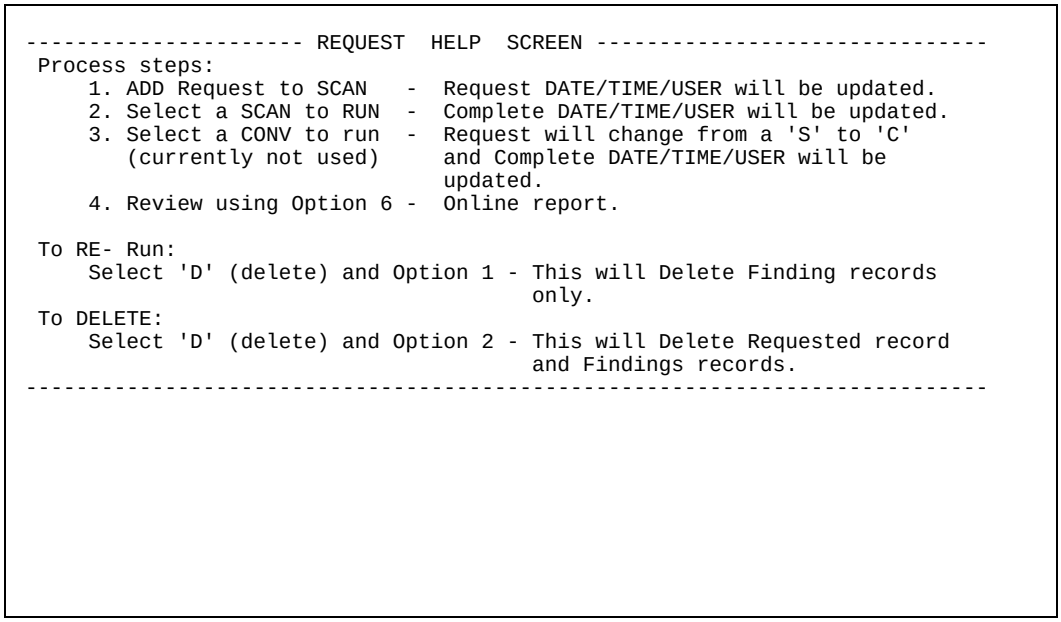
Calls Screen: N/A

Instruction Steps:

INPUT DATA:

- Process Input Value = S (Scan), C(Conversion), or blank
- Enter Library Name
- Press PF3. The system returns to the previous screen.
- Press PF1. The system displays the Request Help Screen
- Press <ENTER> The system displays the requested screen

4.1.1.2 Request Scan Help Screen



```
---------------------- REQUEST  HELP  SCREEN -------------------------------
 Process steps:
     1. ADD Request to SCAN   -  Request DATE/TIME/USER will be updated.
     2. Select a SCAN to RUN  -  Complete DATE/TIME/USER will be updated.
     3. Select a CONV to run  -  Request will change from a 'S' to 'C'
        (currently not used)     and Complete DATE/TIME/USER will be
                                 updated.
     4. Review using Option 6 -  Online report.

 To RE- Run:
     Select 'D' (delete) and Option 1 - This will Delete Finding records
                                        only.
 To DELETE:
     Select 'D' (delete) and Option 2 - This will Delete Requested record
                                        and Findings records.
------------------------------------------------------------------------------
```

Purpose: Provide Help for the Request screens

Called from Screen: Y-MENU

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>. The system returns to the Request Library Name Screen.

4.1.1.3 Request Scan Results Screen

```
 SCAN PROCESS REQUEST LIST.
Y-TBLS                 LIST OF SCAN/CONVERT REQUEST          04/23/97
A P LIBRARY  PGM FR-----TO     MMDD/HHMM-USER  C-MMDD/HHMM-USER     TABLE
_ S NEBASE__ PRM310P1 RPT762P2 042301143 MSBCA_____________________ NEMS
_ S NIBASE__ ACOMMON_ TRNI87P1 042201329 MSJLV_____________________ ____
_ S NMBASE__ ACOMMON_ TRNWRNS4 042201329 MSJLV   0423 1320 MSJLV___ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
_ _ _________ ________ ________ ____________________________________ ____
PF1=HELP PF3=EXIT PF8=FRWD
```

Purpose: Displays the scan results.

Called from Screen: Y-MENU

Calls Screen: N/A

Instruction Steps:

INPUT DATA:

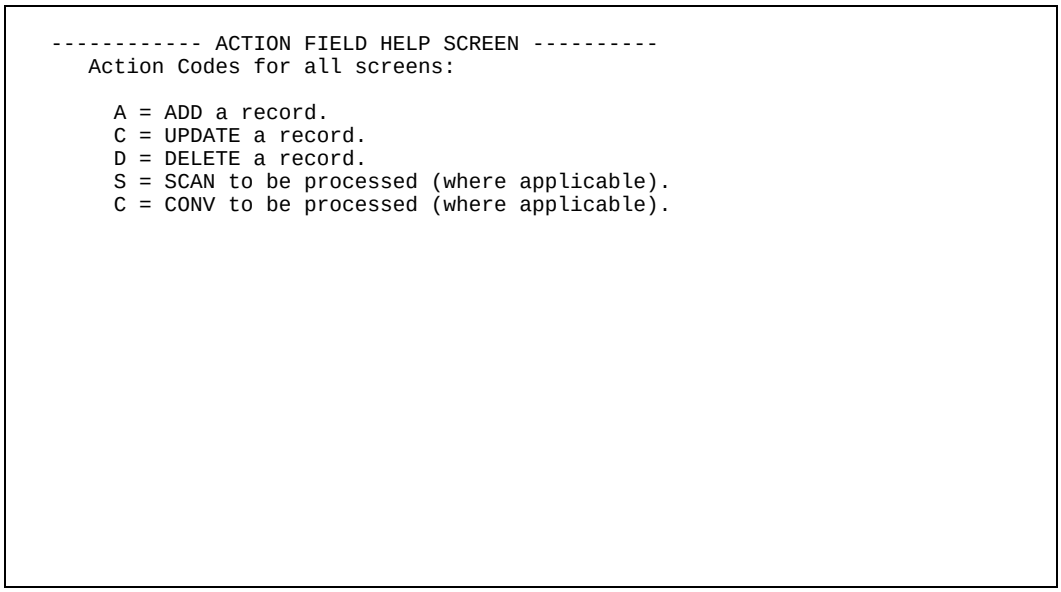
- (Column A) Input values = A (Add), C (Update), or D (Delete)
- Program From To (programs to scan begin and optional end if left blank all programs in library scanned).
- Table name to use for the requested Scan (see 4.1.3 Y2K Main Menu (Y-Menu option 3))
- Press PF1. The system displays the 4.1.1.4 Action Field Help Screen.
- Press PF3. The system returns to the previous screen.
- Press PF8. The List of SCAN/CONVERT Request Screen scrolls forward.
- Press <ENTER>. The system displays the message “Fields have been processed”.

OUTPUT DATA:

- (Column P) Output values = 'C' Conversion or 'S' Scan
- (Library) Output value = (4.1.1.1 Request Scan Library Name Input)
- Output values Date/Time/User Name requesting Scan

- Output values Date/Time/User Name Scan completed

4.1.1.4 ACTION FIELD HELP SCREEN



Purpose: Provides a list of valid action fields for input.

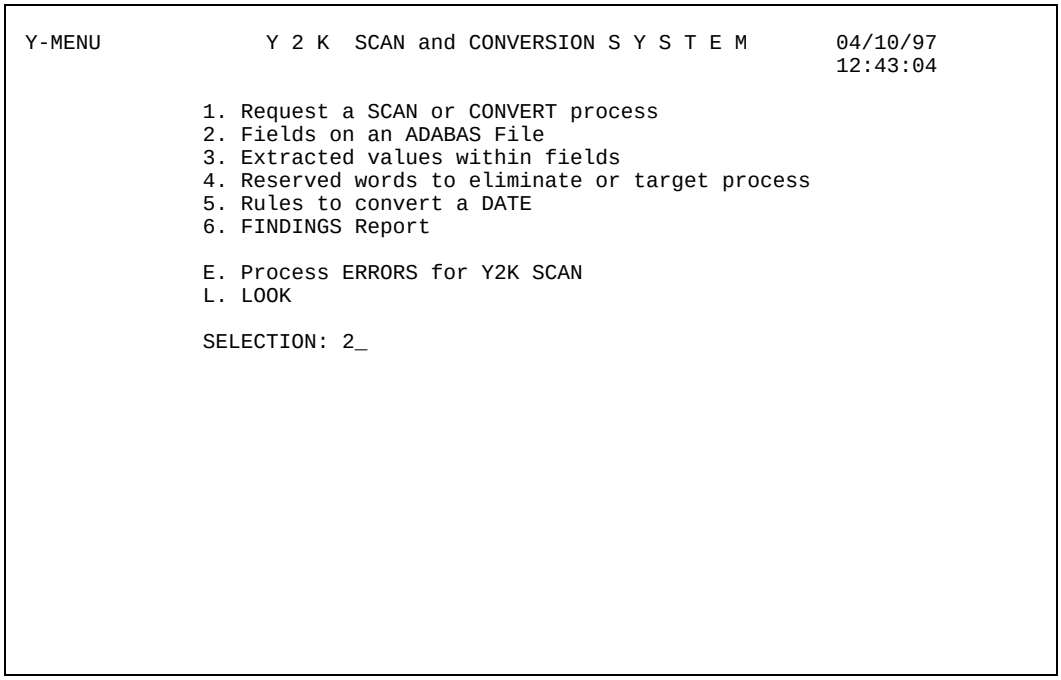
Called from Screen: N/A

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>. The system returns to the Request Scan Results Screen

4.1.2 Main Menu - Fields on ADABAS File (Y-MENU option 2)



Purpose: Builds Y-TBLF table of elements known to be extracted for scan facility to use for a specific file. Each core file will be documented for default tables.

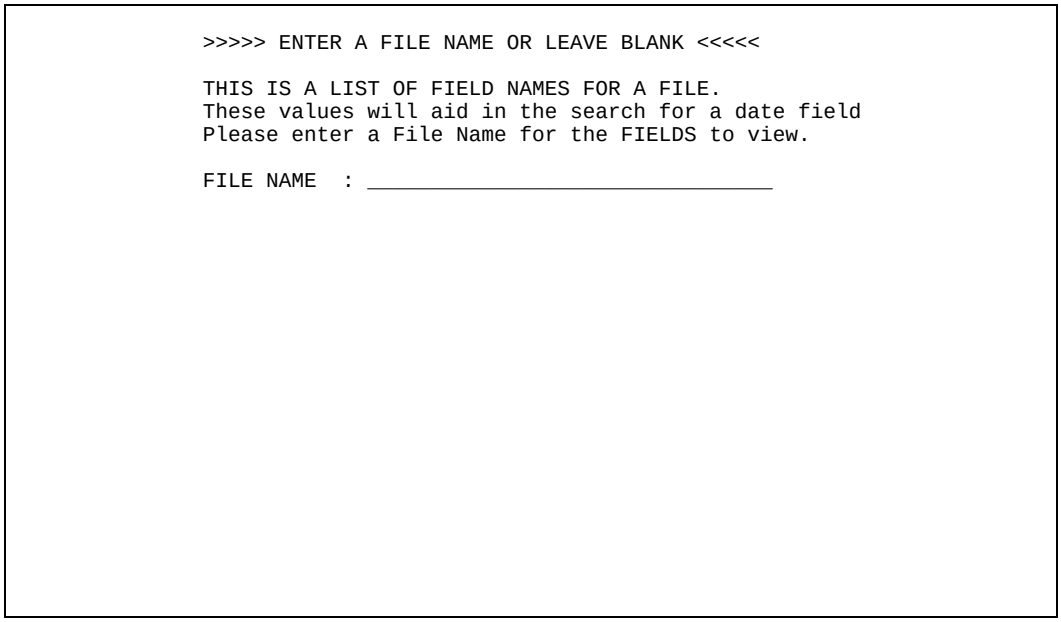
Called from Screen: N/A

Calls Screen: ADABAS File Input Screen

Instruction Steps:

- Enter '2' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries).
- Press <ENTER>. The system displays the requested screen.

4.1.2.1 ADABAS File Input Screen



Purpose: Screen requires a file name to be entered.

Called from Screen: Y-MENU

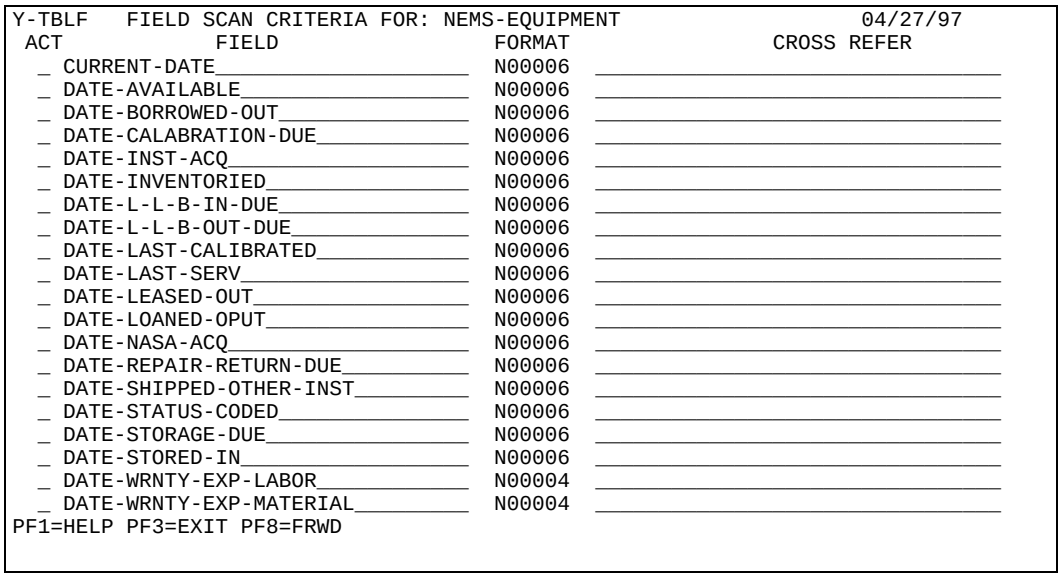
Calls Screen: 4.1.2.2 Fields on ADABAS File Results Screen

Instruction Steps:

INPUT DATA:

- Enter File Name
- Press <ENTER> The system displays Fields on ADABAS File Results Screen

4.1.2.2 Fields on ADABAS File Results Screen



```
Y-TBLF   FIELD SCAN CRITERIA FOR: NEMS-EQUIPMENT                  04/27/97
 ACT            FIELD                   FORMAT                CROSS REFER
  _ CURRENT-DATE_____________________  N00006  ____________________________
  _ DATE-AVAILABLE___________________  N00006  ____________________________
  _ DATE-BORROWED-OUT________________  N00006  ____________________________
  _ DATE-CALABRATION-DUE_____________  N00006  ____________________________
  _ DATE-INST-ACQ____________________  N00006  ____________________________
  _ DATE-INVENTORIED_________________  N00006  ____________________________
  _ DATE-L-L-B-IN-DUE________________  N00006  ____________________________
  _ DATE-L-L-B-OUT-DUE_______________  N00006  ____________________________
  _ DATE-LAST-CALIBRATED_____________  N00006  ____________________________
  _ DATE-LAST-SERV___________________  N00006  ____________________________
  _ DATE-LEASED-OUT__________________  N00006  ____________________________
  _ DATE-LOANED-OPUT_________________  N00006  ____________________________
  _ DATE-NASA-ACQ____________________  N00006  ____________________________
  _ DATE-REPAIR-RETURN-DUE___________  N00006  ____________________________
  _ DATE-SHIPPED-OTHER-INST__________  N00006  ____________________________
  _ DATE-STATUS-CODED________________  N00006  ____________________________
  _ DATE-STORAGE-DUE_________________  N00006  ____________________________
  _ DATE-STORED-IN___________________  N00006  ____________________________
  _ DATE-WRNTY-EXP-LABOR_____________  N00004  ____________________________
  _ DATE-WRNTY-EXP-MATERIAL__________  N00004  ____________________________
PF1=HELP PF3=EXIT PF8=FRWD
```

Purpose: Displays data elements, format and cross reference pre-loaded into the table for a file. Allows user to Add, Update, and Delete elements on the Y-TBLE table.

Called from Screen: N/A

Calls Screen: N/A

Instruction Steps:

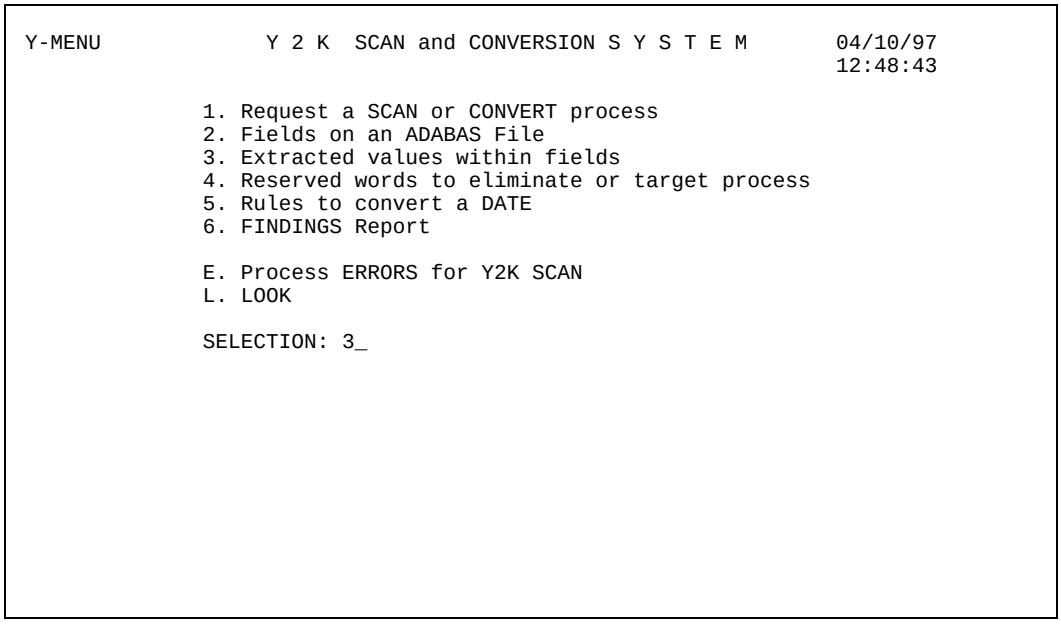
INPUT DATA:

- (ACT) 'A' (Add an element/format/reference) 'C' (Update an element/ format /reference) 'D' Delete an element/format/reference)
- Press PF1. The system displays the 4.1.1.4 Action Field Help Screen.
- Press PF3. The system returns to the previous screen.
- Press PF8. The List of SCAN/CONVERT Request Screen scrolls forward.
- Press <ENTER>. The system displays the message “Fields have been processed”.

OUTPUT DATA:

- Data element/ format/reference

4.1.3 Main Menu - Extract Values within Fields (Y-MENU option 3)



Purpose: Builds Y-TBLE table of data elements wild card naming conventions used to extract fields in the scan, also requires a field format assigned to each. If multiple field formats are applicable multiple table entries are required. Entering a space preceeding the element name instructs the scan to ignore elements found with that name and format.

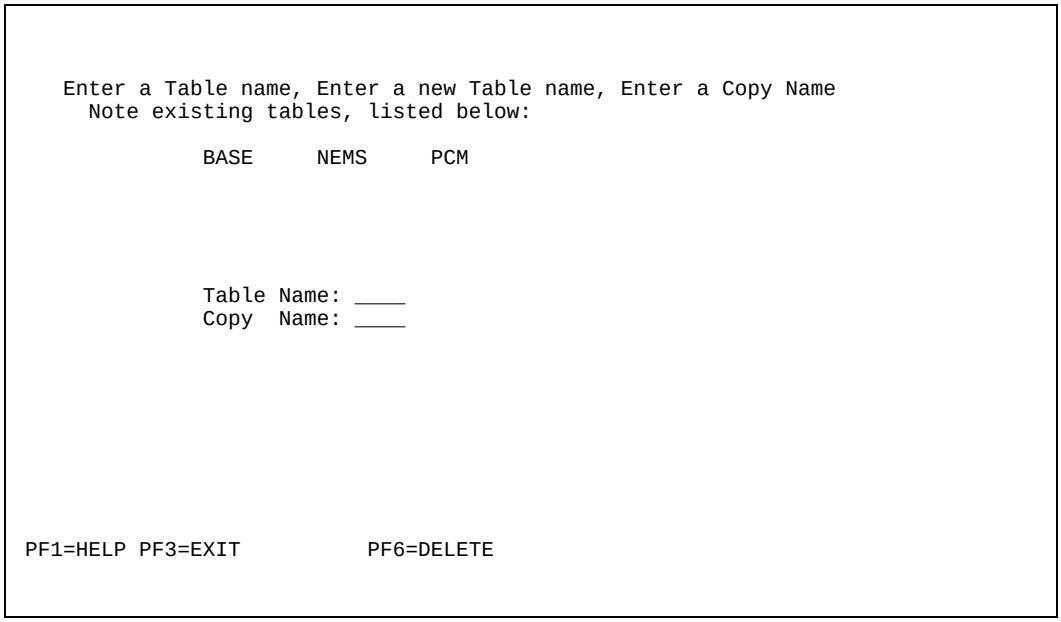
Called from Screen: Y-MENU

Calls Screen: Table Name for Extract Values within Fields

Instruction Steps:

- Enter '3' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries)
- Press <ENTER> The system displays the requested screen

4.1.3.1 Table Name for Extract Values within Fields Screen



Purpose: Process allows input of Table Name.

Called from Screen: Y-MENU

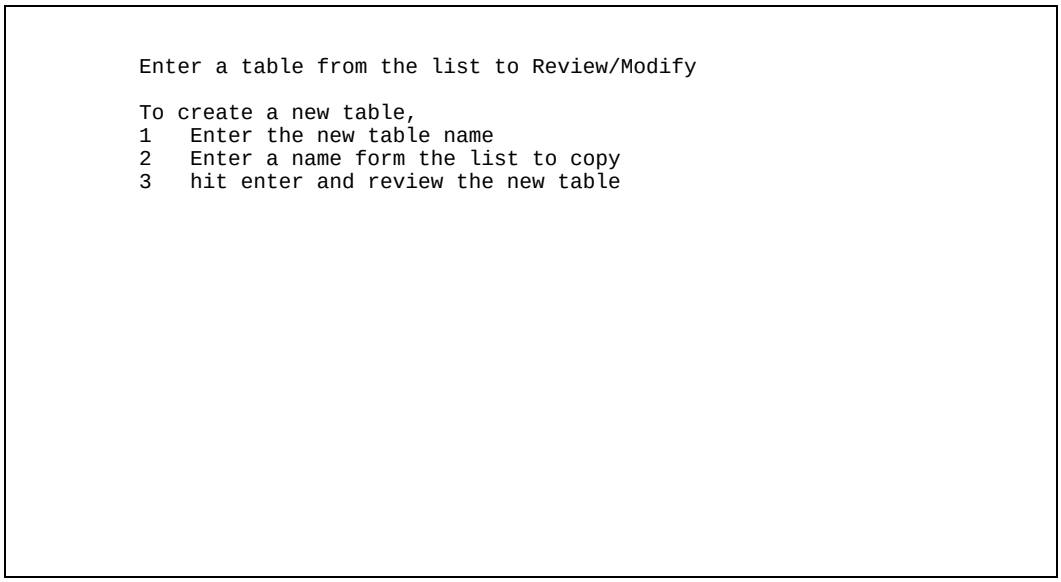
Calls Screen: Extract Values within Fields results screen

Instruction Steps:

INPUT DATA:

- Enter Table Name:
- Enter Table Name to copy from:
- Press PF1. The system displays the Table Name Help Screen (See 4.1.3.2).
- Press PF3. The system returns to the previous screen.
- Press PF6. The Table listed is deleted. **BE CAUTIOUS THIS OPTION DOES NOT GIVE THE USER A WARNING!**
- Press <ENTER>. The system displays the message “Fields have been processed”.

4.1.3.1.1 Table Name for Extract Values within Fields Help Screen



Purpose: Help instructions.

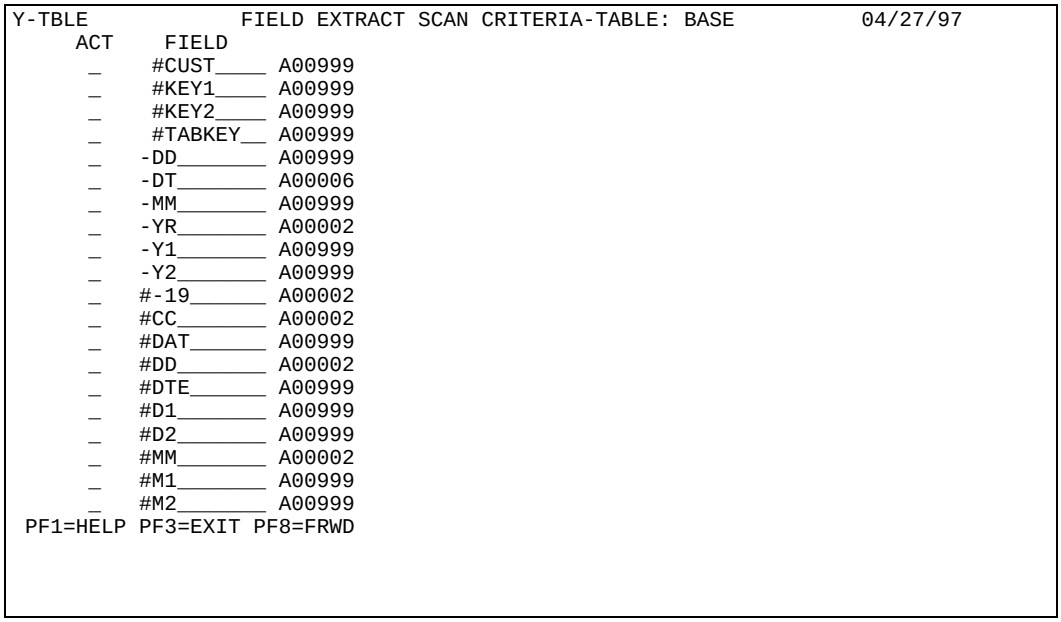
Called from Screen: Table Name for Extract Values within Fields Screen

Calls Screen: N/A

Instruction Steps:

Press <ENTER>. The system re-displays the Table Name for Extract Values within Fields Screen.

4.1.3.2 Table Name for Extract Values within Fields Results Screen



Purpose: Build Allows the user to display, add, update and delete values and format in table.

Called from Screen: Table Name for Extract Values within Fields Screen

Calls Screen: N/A

Instruction Steps:

INPUT DATA:

- ACT Input values = 'A' (Add), 'C' (Update), or 'D' (Delete)
- Press PF1. The system displays the 4.1.1.4 Action Field Help Screen.
- Press PF3. The system returns to the previous screen.
- Press PF8. The table list scrolls forward.
- Press <ENTER>. The system displays the message “Fields have been processed”.

INPUT TABLES PRE-LOADED WITH THE SOFTWARE FOLLOW: (Underscore preceeding an element represents a space (when entering a blank the user must use space bar and not arrow over to the next position), which instructs the software not to report the data element in the report.)

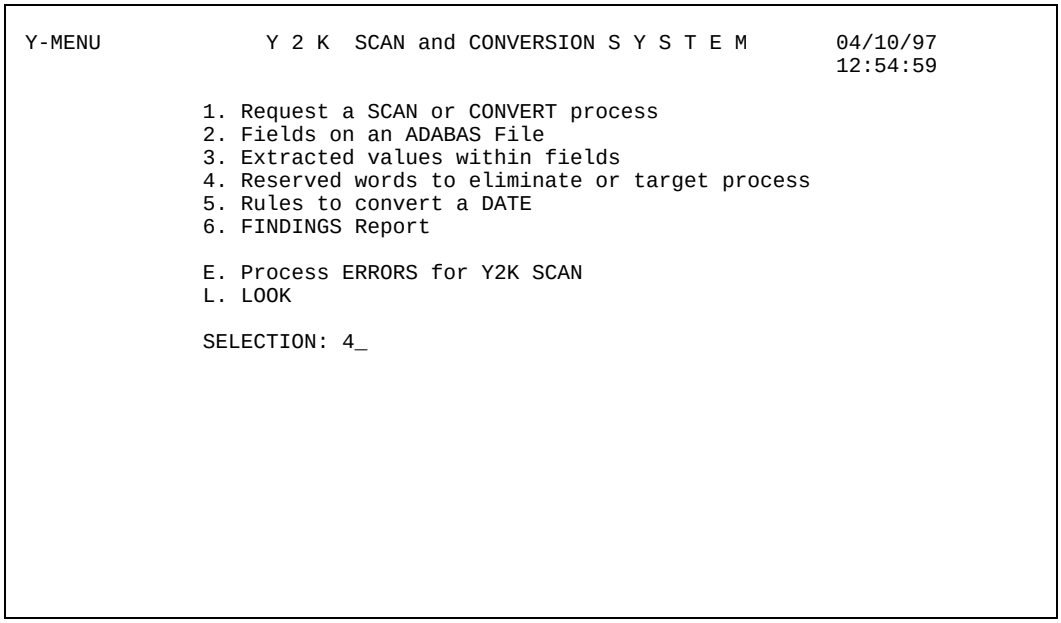
Y-TBLE: BASE	Y-TBLE: BASE	Y-TBLE: BASE	Y-TBLE: BASE	Y-TBLE: BASE	Y-TBLE: BASE
_#CUST	A00999	#START-D	A00006	Y2-	A00999
_#KEY1	A00999	#STOP-D	A00006		
_#KEY2	A00999	CENT-	A00002		
_#TABKEY	A00999	CENTURY	A00002		
-DD	A00999	CENTURY	N00002		
-DT	A00006	DATE	A00006		
-MM	A00999	DATE	A00008		
-YR	A00002	DATE	N00006		
-Y1	A00999	DT-	A00006		
-Y2	A00999	GREG	A00999		
#-19	A00002	JDATE	A00999		
#CC	A00002	JUL	A00999		
#DAT	A00999	MDY	A00999		
#DD	A00002	YEAR	A00002		
#DTE	A00999	YEAR	A00008		
#D1	A00999	YEAR	N00004		
#D2	A00999	YY	A00002		
#MM	A00002	Y1	A00002		
#M1	A00999	Y1-	A00999		
#M2	A00999	Y2	A00002		

Y-TBLE: INV	04/24/97	Y-TBLE: INV	04/24/97	Y-TBLE: INV	04/24/97
_#CUST	A00999	#START-D	A00006	Y2-	A00999
_#KEY1	A00999	#STOP-D	A00006		
_#KEY2	A00999	CENT-	A00002		
_#TABKEY	A00999	CENTURY	A00002		
-DD	A00999	CENTURY	N00002		
-DT	A00006	DATE	A00006		
-MM	A00999	DATE	A00008		
-YR	A00002	DATE	N00006		
-Y1	A00999	DT-	A00006		
-Y2	A00999	GREG	A00999		
#-19	A00002	JDATE	A00999		
#CC	A00002	JUL	A00999		
#DAT	A00999	MDY	A00999		
#DD	A00002	YEAR	A00002		
#DTE	A00999	YEAR	A00008		
#D1	A00999	YEAR	N00004		
#D2	A00999	YY	A00002		
#MM	A00002	Y1	A00002		
#M1	A00999	Y1-	A00999		
#M2	A00999	Y2	A00002		

Y-TBLE: NEMS	04/24/97	Y-TBLE: NEMS	04/24/97	Y-TBLE: NEMS	04/24/97
_#CUST	A00999	#START-D	A00006	Y2-	A00999
_#KEY1	A00999	#STOP-D	A00006		
_#KEY2	A00999	CENT-	A00002		
_#TABKEY	A00999	CENTURY	A00002		
-DD	A00999	CENTURY	N00002		
-DT	A00006	DATE	A00006		
-MM	A00999	DATE	A00008		
-YR	A00002	DATE	N00006		
-Y1	A00999	DT-	A00006		
-Y2	A00999	GREG	A00999		
#-19	A00002	JDATE	A00999		
#CC	A00002	JUL	A00999		
#DAT	A00999	MDY	A00999		
#DD	A00002	YEAR	A00002		
#DTE	A00999	YEAR	A00008		
#D1	A00999	YEAR	N00004		
#D2	A00999	YY	A00002		
#MM	A00002	Y1	A00002		
#M1	A00999	Y1-	A00999		
#M2	A00999	Y2	A00002		

Y-TBLE: PCM	04/24/97	Y-TBLE: PCM	04/24/97
_#CUST	A00999	CENT-	A00002
_#KEY1	A00999	CENTURY	A00002
_#KEY2	A00999	CENTURY	N00002
_#TABKEY	A00999	DATE	A00006
-DD	A00999	DATE	A00008
-DT	A00006	DATE	N00006
-MM	A00999	DT-	A00006
-YR	A00002	GREG	A00999
-Y1	A00999	JDATE	A00999
-Y2	A00999	JUL	A00999
#-19	A00002	MDY	A00999
#CC	A00002	YEAR	A00002
#DAT	A00999	YEAR	A00008
#DD	A00002	YEAR	N00004
#DTE	A00999	YY	A00002
#D1	A00999	Y1	A00002
#D2	A00999	Y1-	A00999
#MM	A00002	Y2	A00002
#M1	A00999	Y2-	A00999
#M2	A00999		

4.1.4 Main Menu - Reserved Words (Y-Menu option 4)



Purpose: Reserved Words used in the scan process. Instructional word represent NATURAL syntax. CHANGE this option at your own risk, support for this option is **NOT** provided.

Called from Screen: Y-MENU

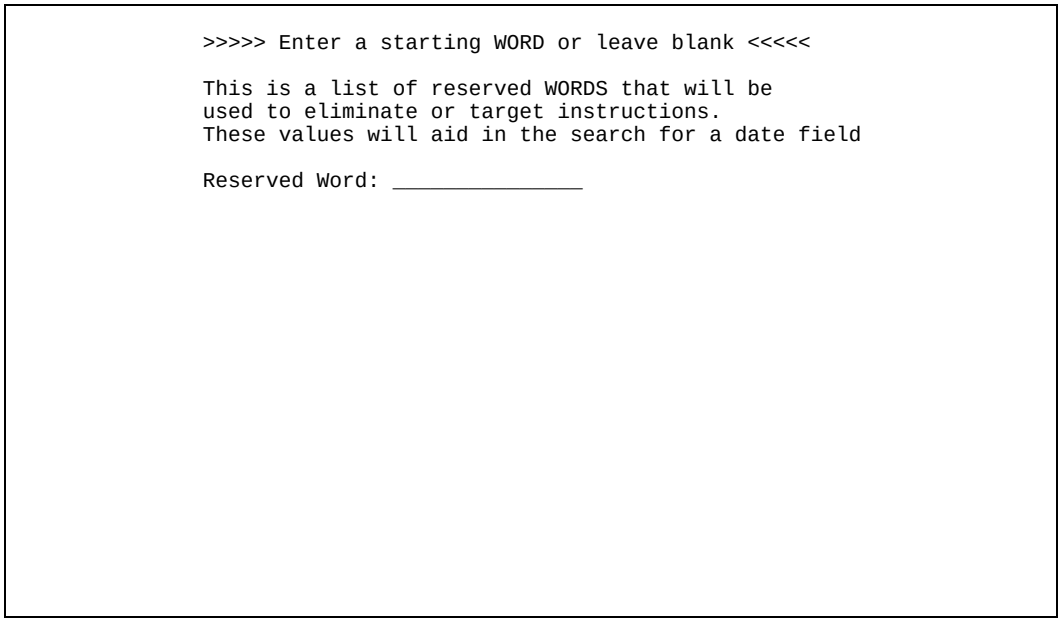
Calls Screen: Enter Reserved Words Screen

Instruction Steps:

INPUT DATA

- Enter '4' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries)
- Press <ENTER> The system displays the requested screen

4.1.4.1 Enter Reserve Word Screen



Purpose: Enter specific word to be added, updated, deleted or leave blank for all of the words.

Called from Screen: Y-MENU

Calls Screen: Reserved Words Results Screen

Instruction Steps:

INPUT DATA:

- Enter specific reserved word or leave blank
- Press <ENTER>. The system displays Reserved Words Results Screen.

4.1.4.2 Reserved Words Results Screen

```
Y-TBLV                RESERVED WORD LIST                  04/10/97
    ACT      WORD      FUNC
     _   :=____________ I
     _   ACCEPT_______ I
     _   ADD__________ I
     _   ALARM________ R
     _   ALL__________ R
     _   AND__________ R
     _   ASSIGN_______ I
     _   AT___________ I
     _   AT___________ R
     _   BACKOUT______ I
     _   BEFORE_______ I
     _   BREAK________ I
     _   BY___________ R
     _   CALL_________ I
     _   CALLNAT______ I
     _   COMPRESS_____ I
     _   COMPUTE______ I
     _   CONTROL______ R
     _   DECIDE_______ I
     _   DEFINE_______ I
PF1=HELP PF3=EXIT PF8=FWRD
```

Purpose: Display entries in Y-TBLV

Called from Screen: Enter Reserve Word Screen

Calls Screen: N/A

Instruction Steps:

INPUT DATA

- ACT Input values = 'A' (Add), 'C' (Update), or 'D' (Delete)
- Press PF1. The system displays the 4.1.1.4 Action Field Help Screen.
- Press PF3. The system returns to the previous screen.
- Press PF8. The table list scrolls forward.
- Press <ENTER>. The system displays the message “Fields have been processed”.

OUTPUT DATA

- Reserve Word and Funtion

INPUT TABLES PRE-LOADED WITH THE SOFTWARE FOLLOW:

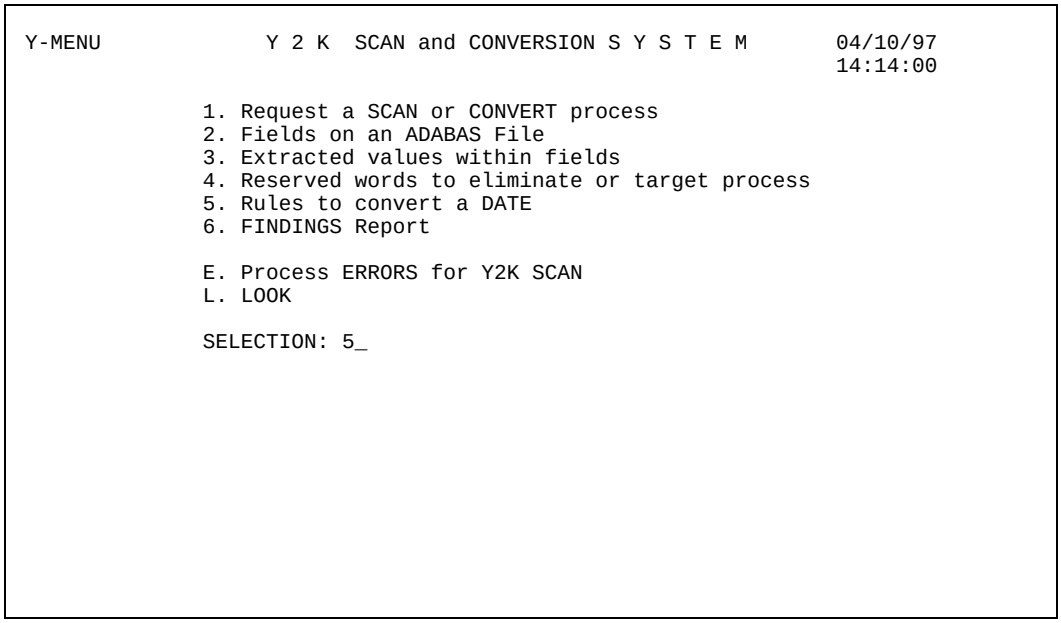
(Function I = Instruction (NATURAL syntax) Function R = Reserved Word)

Word	Func	Word	Func	Word	Func
:=	I	DELETE	I	EXAMINE	I
ACCEPT	I	DELIMITER	R	FALSE	R
ADD	I	DISPLAY	I	FETCH	I
ALARM	R	DIVIDE	I	FILE	R
ALL	R	DO	R	FIND	I
AND	R	DOEND	R	FIRST	R
ASSIGN	I	EDITED	R	FOR	I
AT	I	ELSE	R	FORMAT	I
AT	R	END-FIND	R	GET	I
BACKOUT	I	END-FOR	R	GIVING	R
BEFORE	I	END-HISTOGRAM	R	HISTOGRAM	I
BREAK	I	END-IF	R	IF	I
BY	R	END-READ	R	IGNORE	R
CALL	I	END-REPEAT	R	INDEXED	R
CALLNAT	I	END-START	R	INPUT	I
COMPRESS	I	END-WORK	R	ISN	R
COMPUTE	I	EQ	R	LEAVING	R
CONTROL	R	ERASE	R	LIMIT	I
DECIDE	I	ERROR	R	LOOP	R
DEFINE	I	ESCAPE	I	MARK	R

Word	Func	Word	Func	Word	Func
MOVE	I	PF19	R	REJECT	I
MULTIPLY	I	PF2	R	RELEASE	I
NAMED	R	PF20	R	REMAINDER	R
NEWPAGE	I	PF21	R	REPEAT	I
NO	R	PF22	R	RESET	I
NOHDR	R	PF23	R	RETRY	I
NOT	R	PF24	R	RETURN	I
OBTAIN	I	PF3	R	RUN	I
ON	I	PF4	R	SELECT	I
PERFORM	I	PF5	R	SEPARATE	I
PF1	R	PF6	R	SET	I
PF10	R	PF7	R	SKIP	I
PF11	R	PF8	R	SORT	I
PF12	R	PF9	R	STACK	I
PF13	R	PHYSICAL	R	STARTING	R
PF14	R	PRINT	I	STOP	I
PF15	R	READ	I	STORE	I
PF16	R	RECORD	R	SUBROUTINE	R
PF17	R	REDEFINE	I	SUBSTRING	R
PF18	R	REINPUT	I	SUBTRACT	I

Word	Func
TERMINATE	I
THEN	R
THRU	R
TITLE	R
TOP	R
TOTAL	R
TRANSACTION	R
UPDATE	I
WHERE	R
WINDOW	R
WITH	R
WRITE	I

4.1.5 Main Menu - Rule to Convert a Date (-Menu option 5)



Purpose: This option is **NOT** supported at this time

Called from Screen: Y-MENU

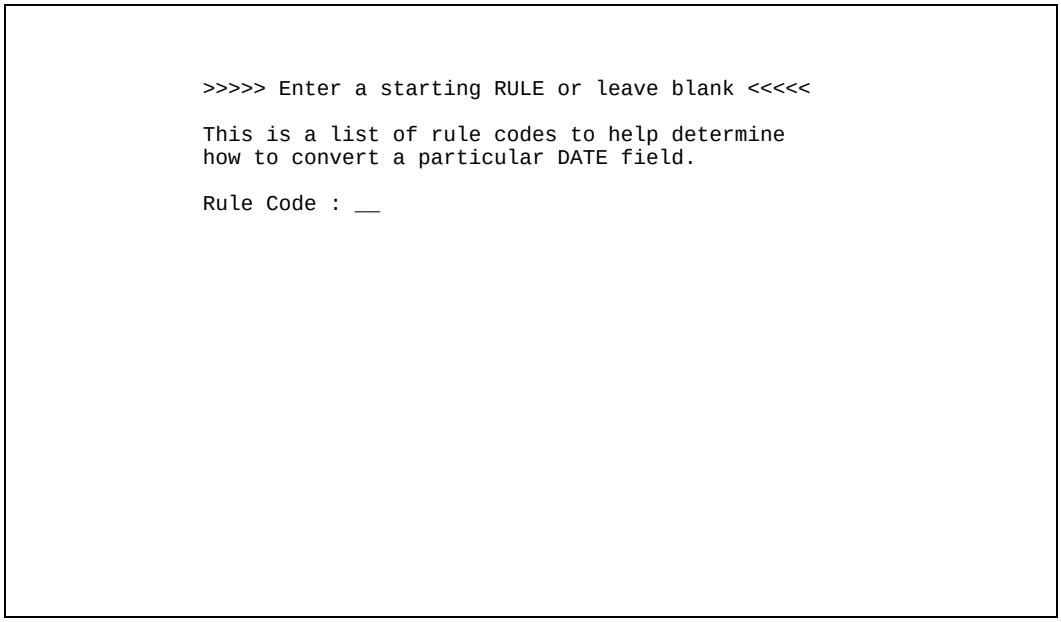
Calls Screen: Enter Rules Code Screen

Instruction Steps:

INPUT DATA

- Enter '5' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries).
- Press <ENTER>. The system displays the requested screen.

4.1.5.1 Rule to Convert - Rule Code Screen



Purpose: Enter specific rule to be added, updated, deleted or leave blank for all of the words.

Called from Screen: Main Menu - Rules to Convert

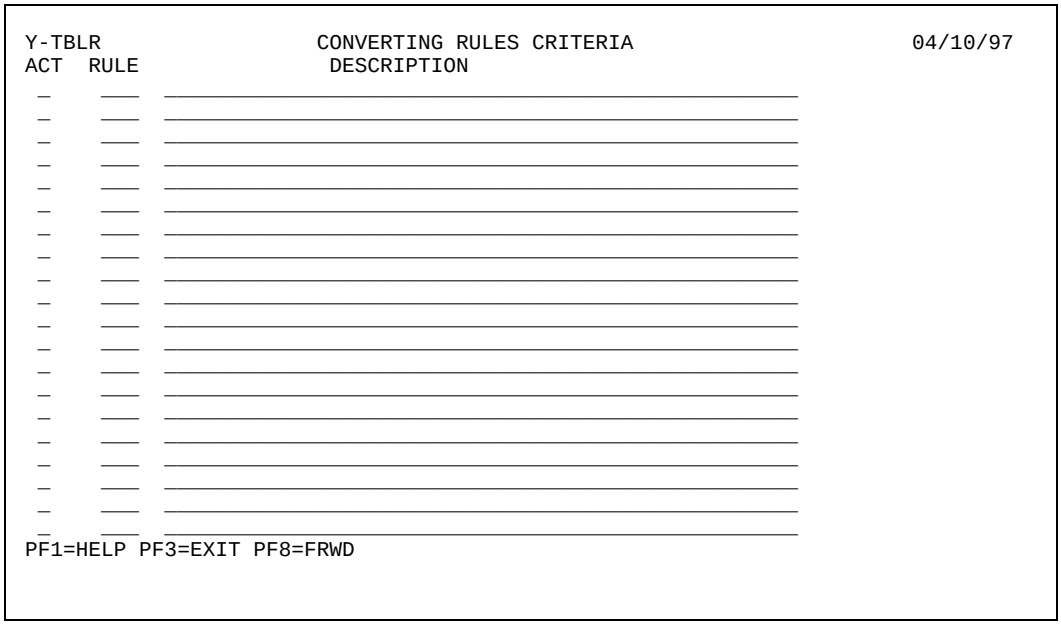
Calls Screen: Rules to Convert Results Screen

Instruction Steps:

INPUT DATA:

- Enter specific reserved word or leave blank.
- Press <ENTER>. The system displays Rules to Convert Results Screen.

4.1.5.2 Rules to Convert Results Screen



Purpose: Display Action, Rule, Description entries in Y-TBLR

Called from Screen: Rule to Convert - Rule Code Screen

Calls Screen: N/A

Instruction Steps:

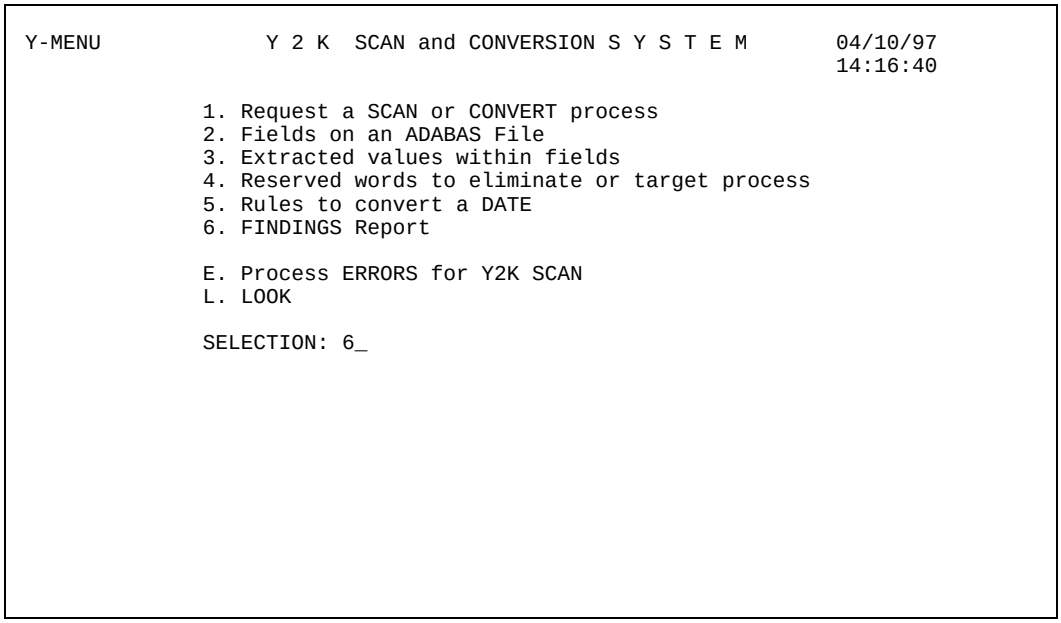
INPUT DATA

- ACT Input values = 'A' (Add), 'C' (Update), or 'D' (Delete)
- Press PF1. The system displays the 4.1.1.4 Action Field Help Screen.
- Press PF3. The system returns to the previous screen.
- Press PF8. The table list scrolls forward.
- Press <ENTER>. The system displays the message “Fields have been processed”.

OUTPUT DATA

- Rules and Description

4.1.6 Main Menu - Findings Report (Y-MENU option 6)



Purpose: Displays the scan report generated online and batch flat file created.

Called from Screen: Y-MENU

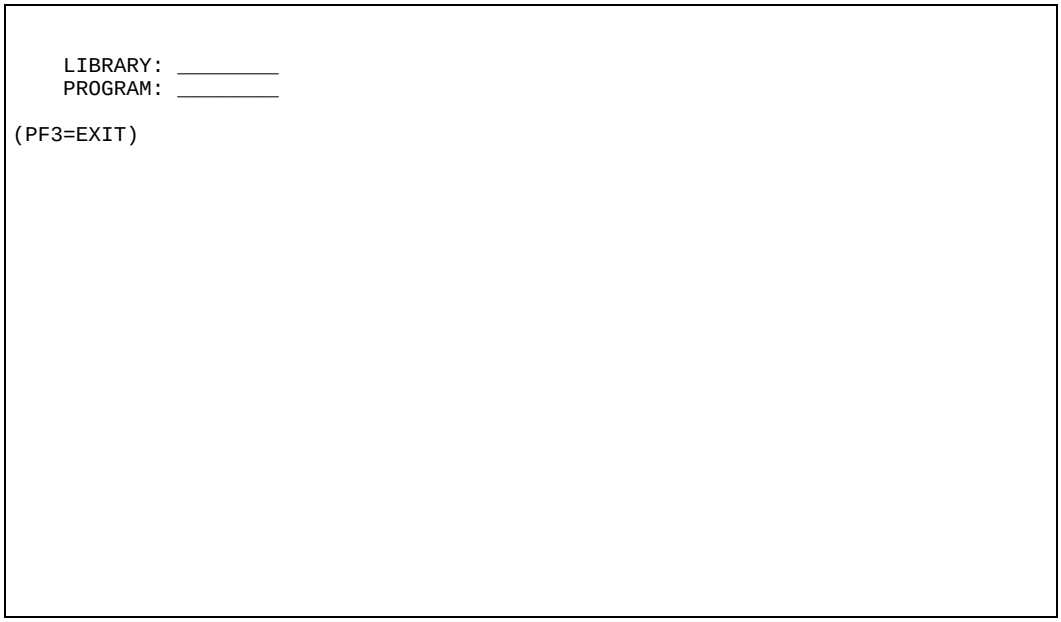
Calls Screen: Findings Report Input Library/Program Screen

Instruction Steps:

Step 1

- Enter '6' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries).
- Press <ENTER>. The system displays the requested screen

4.1.6.1 Findings Report Input Library/Program Screen



Purpose: Choose which report generated you wish to review.

Called from Screen: Y-MENU

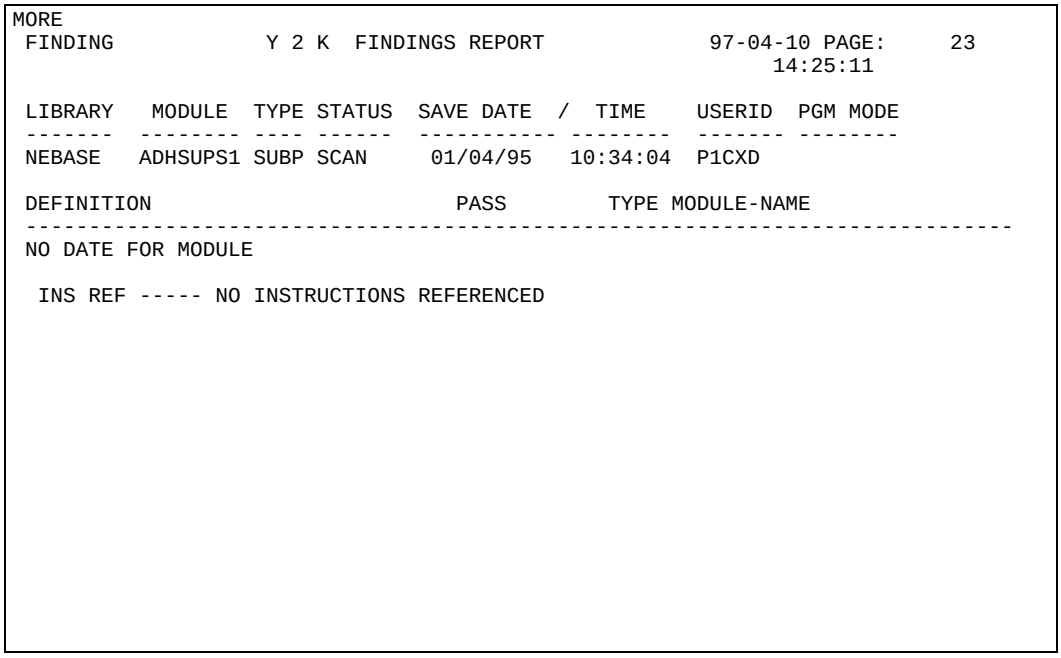
Calls Screen: Findings Report Results Screen

Instruction Steps:

INPUT DATA

- Enter Library Name
- Enter Start Program
- Press PF3. The system returns to the previous screen.
- Press PF8. The table list scrolls forward.
- Press <ENTER>. The system displays the message “Fields have been processed”.

4.1.6.2 Scan Findings Report Screen



Purpose: Findings report displays fields that were identified in the scan and the line of NATURAL code the scan found.

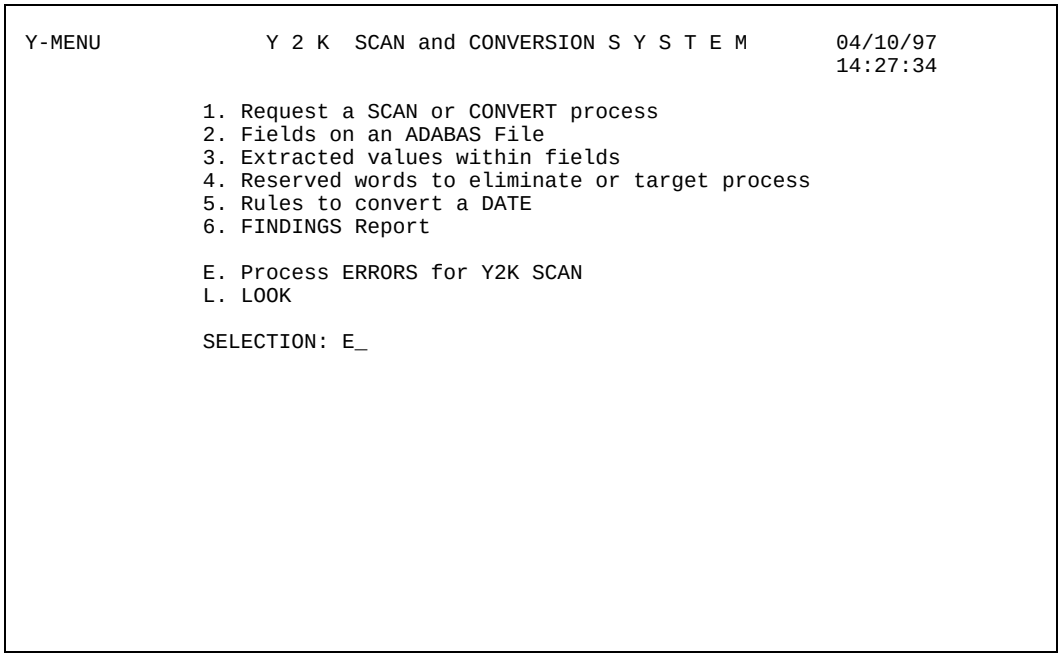
Called from Screen: Y-MENU

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>.

4.1.7 Main Menu - Process Errors (Y-MENU option E)



Purpose: Allows the user to delete the online error log.

Called from Screen: Y-MENU

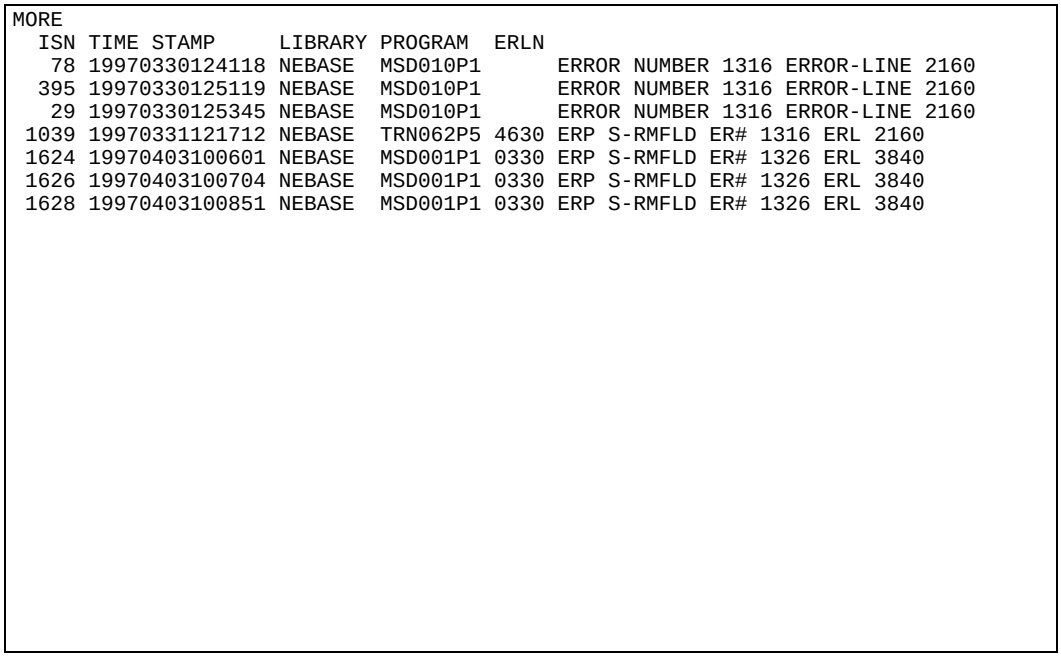
Calls Screen: Error Log Report Screen

Instruction Steps:

Step 1

- Enter 'E' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries).
- Press <ENTER>. The system displays the requested screen.

4.1.7.1 Error Log Report Screen



```
MORE
  ISN TIME STAMP     LIBRARY PROGRAM  ERLN
   78 19970330124118 NEBASE  MSD010P1      ERROR NUMBER 1316 ERROR-LINE 2160
  395 19970330125119 NEBASE  MSD010P1      ERROR NUMBER 1316 ERROR-LINE 2160
   29 19970330125345 NEBASE  MSD010P1      ERROR NUMBER 1316 ERROR-LINE 2160
 1039 19970331121712 NEBASE  TRN062P5 4630 ERP S-RMFLD ER# 1316 ERL 2160
 1624 19970403100601 NEBASE  MSD001P1 0330 ERP S-RMFLD ER# 1326 ERL 3840
 1626 19970403100704 NEBASE  MSD001P1 0330 ERP S-RMFLD ER# 1326 ERL 3840
 1628 19970403100851 NEBASE  MSD001P1 0330 ERP S-RMFLD ER# 1326 ERL 3840
```

Purpose: Displays ISN, TIME STAMP, LIBRARY, PROGRAM, ERROR Line

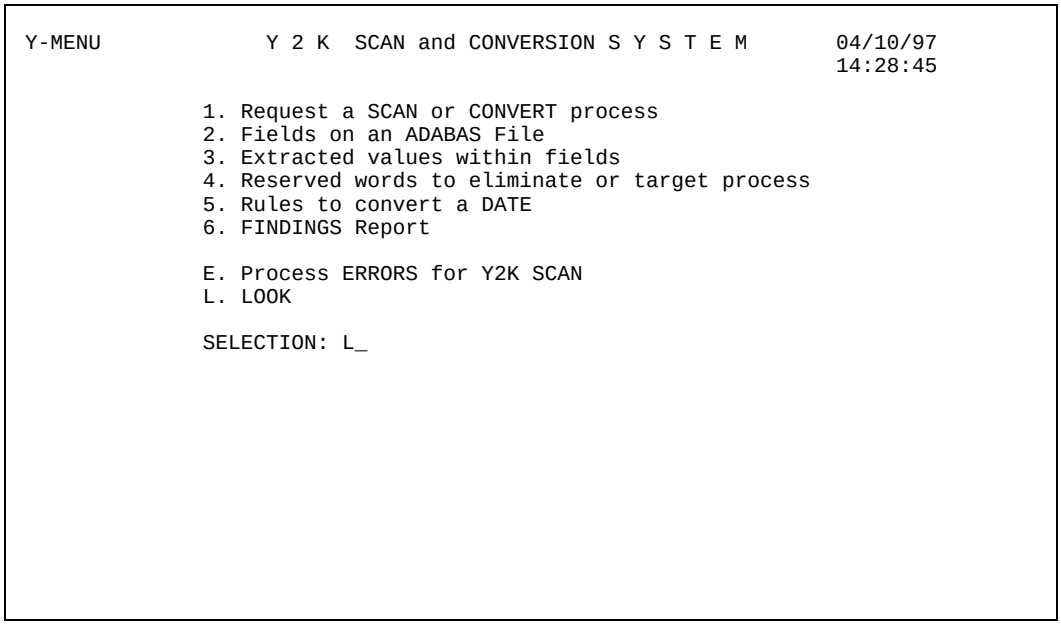
Called from Screen: Y-MENU

Calls Screen: N/A

Instruction Steps:

Press <ENTER>.

4.1.8 Main Menu - Look Menu (Y-MENU option L)



Purpose: Menu of NATURAL UTILITIES such as List Library, List Programs Names, List program Scan programs for up to 20 specific list items, Find a module in the system, List of Files which contain a specified element, and Help for the menu.

Called from Screen: Y-MENU

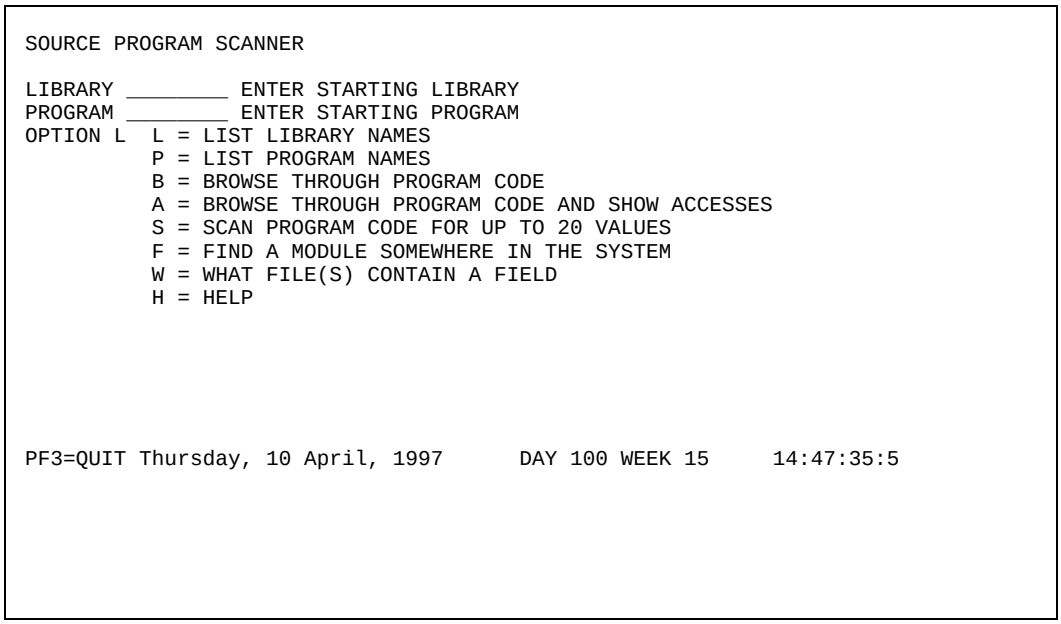
Calls Screen: Source Program Scanner

Instruction Steps:

Step 1

- Enter 'L' in Selection Field ('1','2','3','4','5','6','E' and 'L' are valid entries).
- Press <ENTER>. The system displays the requested screen.

4.1.8.1 Look Menu - List Library Name (LOOK option L)



Purpose: List Library Names.

Called from Screen: LOOK

Calls Screen: List Library Names Results Screen

Instruction Steps:

INPUT DATA:

- Enter Starting Library (Blank is valid).
- Enter Starting Program (Blank is valid).
- Enter 'L' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.1.1 List Library Names Results Screen

```
LIBRARY/MODULE/TYPE
 BACDB2CS
 BACDB2WK
 BNADB2A
 BNADB2C
 BNADB2D
 BNADB2EX
 BNAVSMA
 BNAVSMC
 BNAVSMD
 BNAVSMEX
 BNAVSMW
 BNAV21A
 BNAV21D
 BNAV21EX
 BNAV21W
 CABASE
 DBAONLY
 MACDB2WK
 MANDB2D
 MANDB2W
 NCBASE
 PF13=SELECTION SCREEN  PF1=SKIP TO NEXT PROGRAM 04/27/97
```

Purpose: Displays a listing of Libraries requested

Called from Screen: LOOK

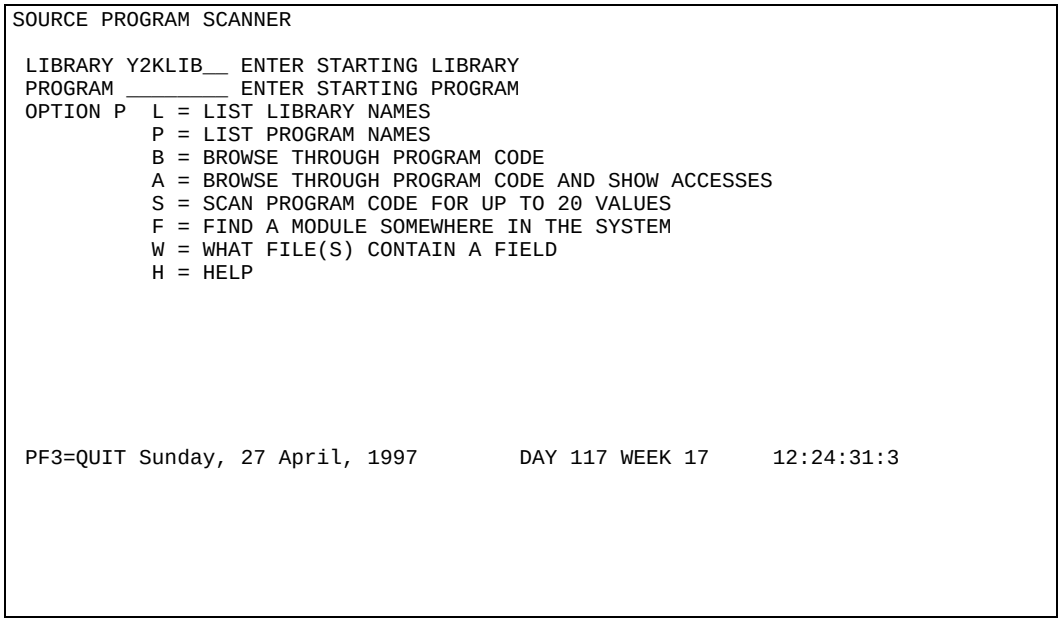
Calls Screen: N/A

Instruction Steps:

INPUT DATA:

- Press PF1. The system skips to next program.
- Press PF13. The system call Selection Screen (Y-MENU).

4.1.8.2 Look Menu - List Program Names (LOOK option P)



Purpose: List Programs for a Library

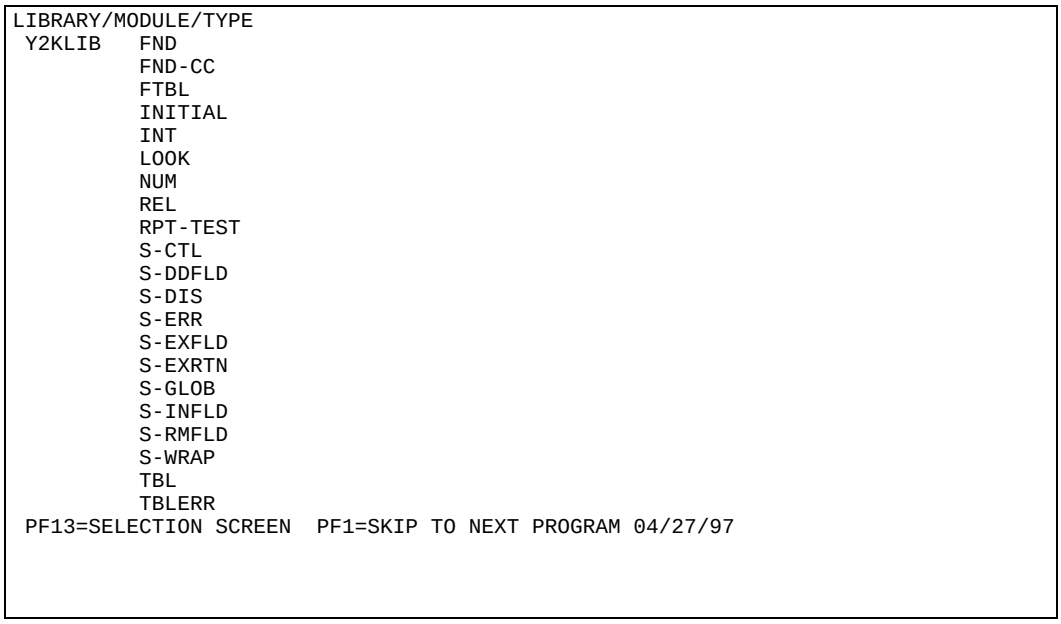
Called from Screen: LOOK

Calls Screen: List Programs Results Screen

Instruction Steps:

- Enter Starting Library (Blank is valid).
- Enter Starting Program (Blank is valid).
- Enter 'P' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.2.1 List Program Names Results Screen



Purpose: List programs in specific Library

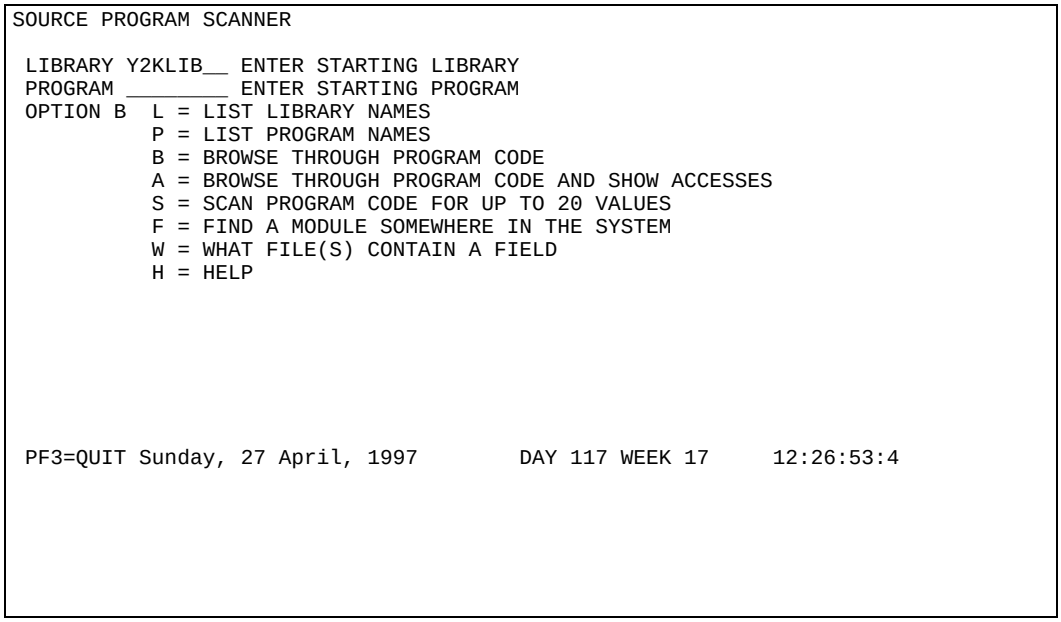
Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

- Press PF1. The system skips to next program.
- Press PF13. The system calls Selection Screen (Y-MENU).

4.1.8.3 Look Menu - Browse a Program (LOOK option B)



Purpose: Browse programs within a Library starting with specific program

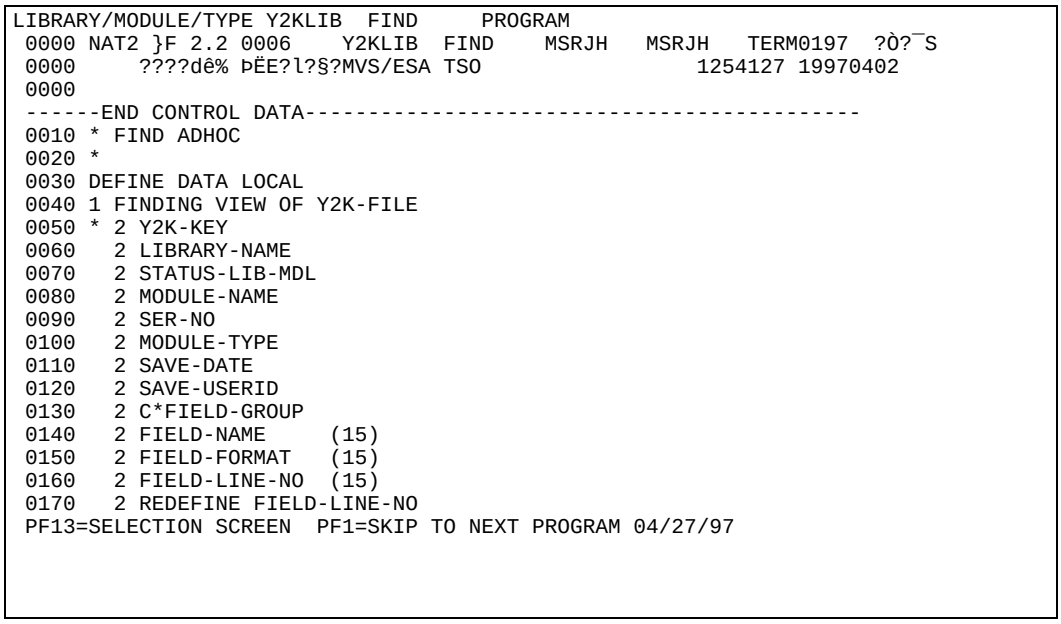
Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

- Enter Starting Library (Blank is valid).
- Enter Starting Program (Blank is valid).
- Enter 'B' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.3.1 Browse a Program Results Screen



```
LIBRARY/MODULE/TYPE Y2KLIB  FIND     PROGRAM
 0000 NAT2 }F 2.2 0006    Y2KLIB  FIND    MSRJH   MSRJH   TERM0197  ?Ò?¯S
 0000     ????dê% ÞËE?l?§?MVS/ESA TSO                1254127 19970402
 0000
 ------END CONTROL DATA-------------------------------------------
 0010 * FIND ADHOC
 0020 *
 0030 DEFINE DATA LOCAL
 0040 1 FINDING VIEW OF Y2K-FILE
 0050 * 2 Y2K-KEY
 0060   2 LIBRARY-NAME
 0070   2 STATUS-LIB-MDL
 0080   2 MODULE-NAME
 0090   2 SER-NO
 0100   2 MODULE-TYPE
 0110   2 SAVE-DATE
 0120   2 SAVE-USERID
 0130   2 C*FIELD-GROUP
 0140   2 FIELD-NAME     (15)
 0150   2 FIELD-FORMAT   (15)
 0160   2 FIELD-LINE-NO  (15)
 0170   2 REDEFINE FIELD-LINE-NO
 PF13=SELECTION SCREEN  PF1=SKIP TO NEXT PROGRAM 04/27/97
```

Purpose: List program code

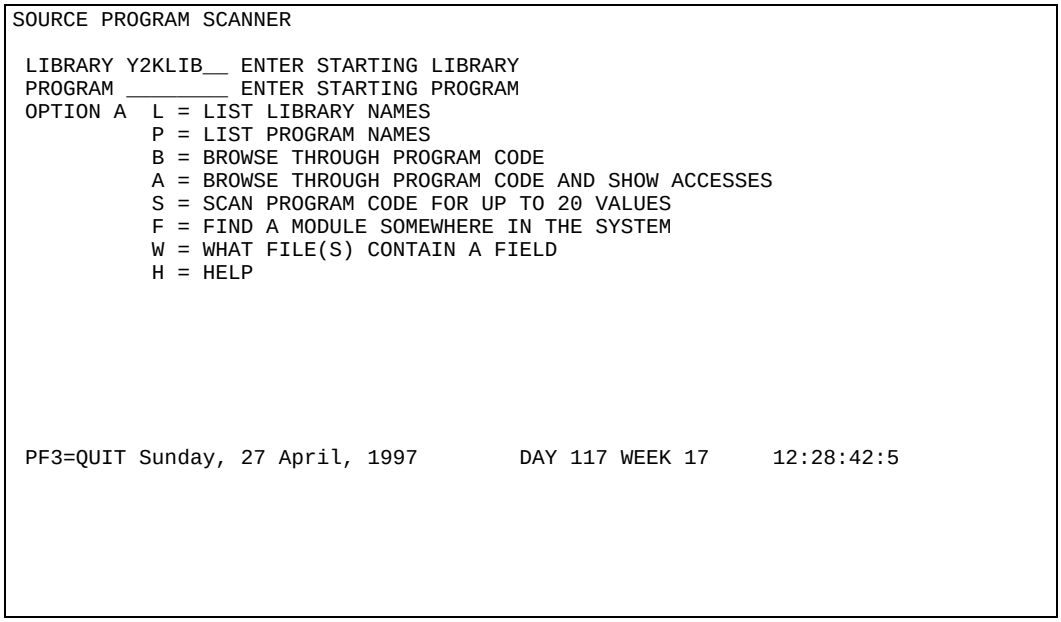
Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>. To scroll forward.
- Press PF1. The system skips to next program.
- Press PF13. The system calls Selection Screen (Y-MENU).

4.1.8.4 Look Menu - Browse a Program/Show Access (LOOK option A)



Purpose: Browse programs within a Library starting with specific program with NATURAL syntax highlighted.

Called from Screen: LOOK

Calls Screen: Browse a Program/Show Access Results Screen

Instruction Steps:

- Enter Starting Library (Blank is valid).
- Enter Starting Program (Blank is valid).
- Enter 'A' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.4.1 Browse a Program/Show Access Results Screen

```
LIBRARY/MODULE/TYPE Y2KLIB  FIND     PROGRAM
 0000 NAT2 }F 2.2 0006    Y2KLIB  FIND    MSRJH   MSRJH   TERM  <  FIND  >
 0000     ????dê% ÞËE?l?§?MVS/ESA TSO                1254127 19970402
 0000
 ------END CONTROL DATA-------------------------------------------
 0010 * FIND ADHOC
 0020 *
 0030 DEFINE DATA LOCAL
 0040 1 FINDING VIEW OF Y2K-FILE  <  FIND  >
 0050 * 2 Y2K-KEY
 0060   2 LIBRARY-NAME
 0070   2 STATUS-LIB-MDL
 0080   2 MODULE-NAME
 0090   2 SER-NO
 0100   2 MODULE-TYPE
 0110   2 SAVE-DATE
 0120   2 SAVE-USERID
 0130   2 C*FIELD-GROUP
 0140   2 FIELD-NAME     (15)
 0150   2 FIELD-FORMAT   (15)
 0160   2 FIELD-LINE-NO  (15)
 0170   2 REDEFINE FIELD-LINE-NO
 PF13=SELECTION SCREEN  PF1=SKIP TO NEXT PROGRAM 04/27/97
```

Purpose: Displays NATURAL code.

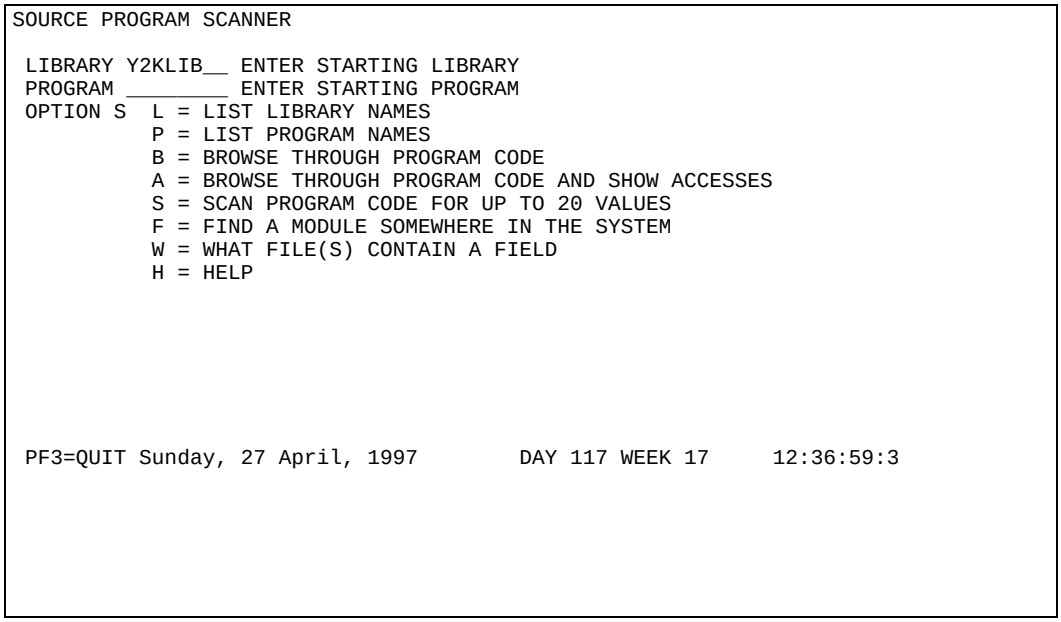
Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>. To scroll forward.
- Press PF1. The system skips to next program.
- Press PF13. The system call Selection Screen (Y-MENU).

4.1.8.5 Look Menu - Scan up to 20 Values (LOOK option S)



Purpose: Process scans a program for a pre-defined set of values.

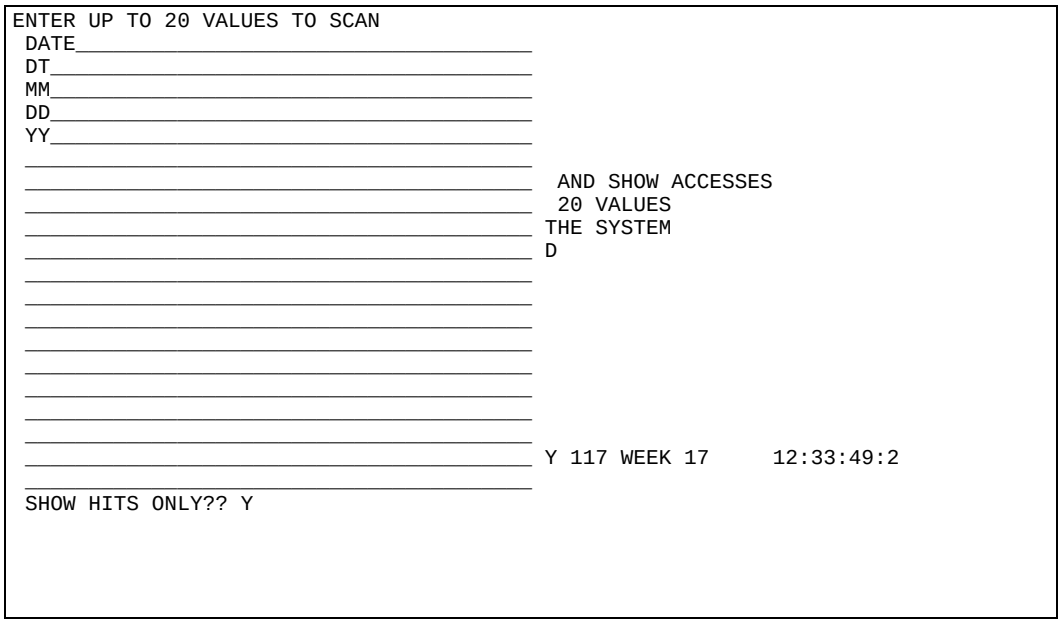
Called from Screen: LOOK

Calls Screen: Scan up to 20 Values - Input Values

Instruction Steps:

- Enter Starting Library (Blank is valid).
- Enter Starting Program (Blank is valid).
- Enter 'S' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.5.1 Scan up to 20 Values - Input Values



Purpose: Input scan Values

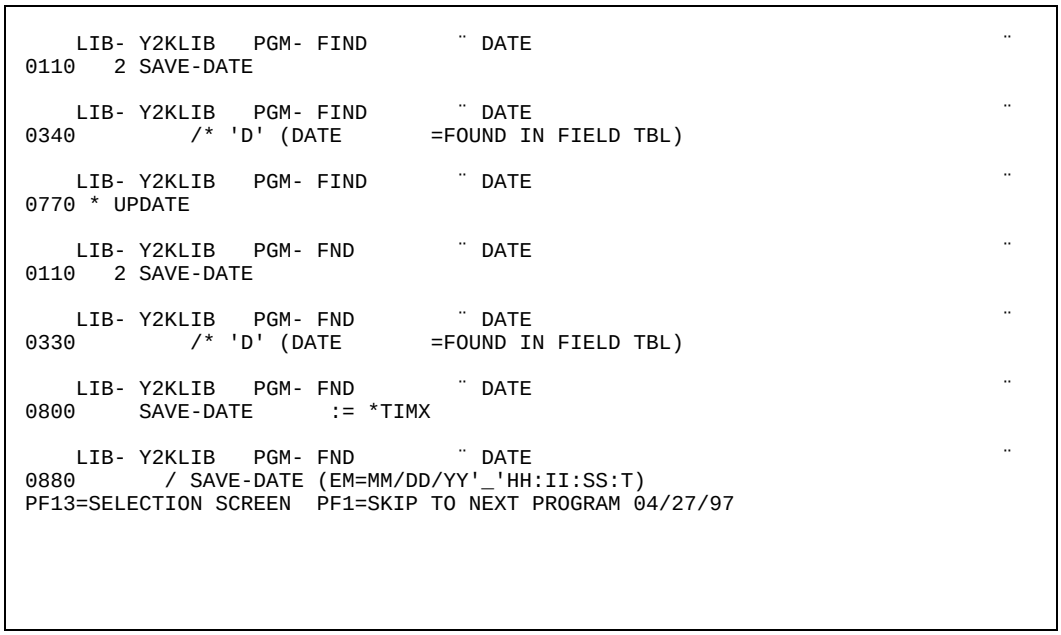
Called from Screen: LOOK

Calls Screen: Scan up to 20 Values - Results Screen

Instruction Steps:

- Input Y in Show Hits ONLY option.
- Press <ENTER>.

4.1.8.5.2 Scan up to 20 Values Results Screen



Purpose: Results screen displays scan elements and lines of code per program found.

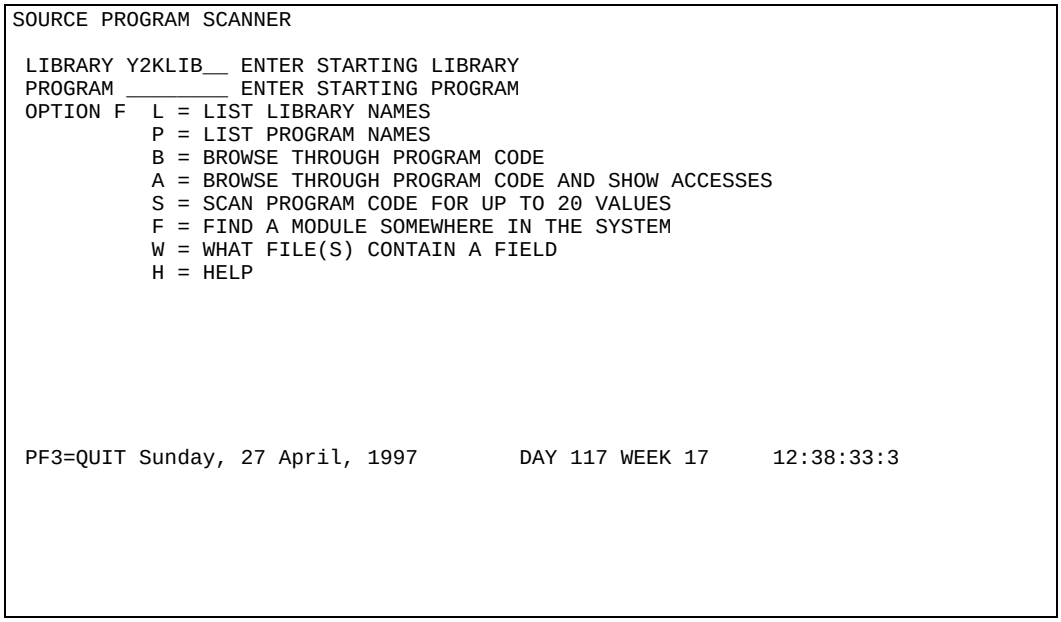
Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>. To scroll forward.
- Press PF1. The system skips to next program.
- Press PF13. The system calls Selection Screen (Y-MENU).

4.1.8.6 Look Menu - Find Module in System (LOOK option F)



Purpose: This process will locate a module in the system when library is not known.

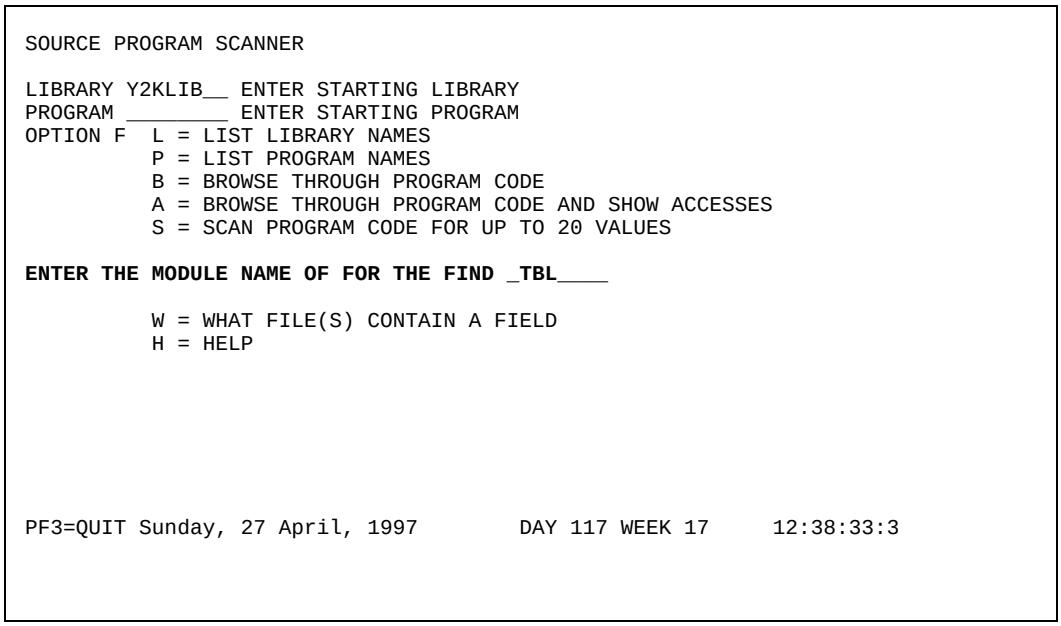
Called from Screen: LOOK

Calls Screen: Find Module in System - Input Module Name Window

Instruction Steps:

- Enter Starting Library (Blank is valid).
- Enter Starting Program (Blank is valid).
- Enter 'F' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.6.1 Find Module in System - Input Module Name



Purpose: Input module

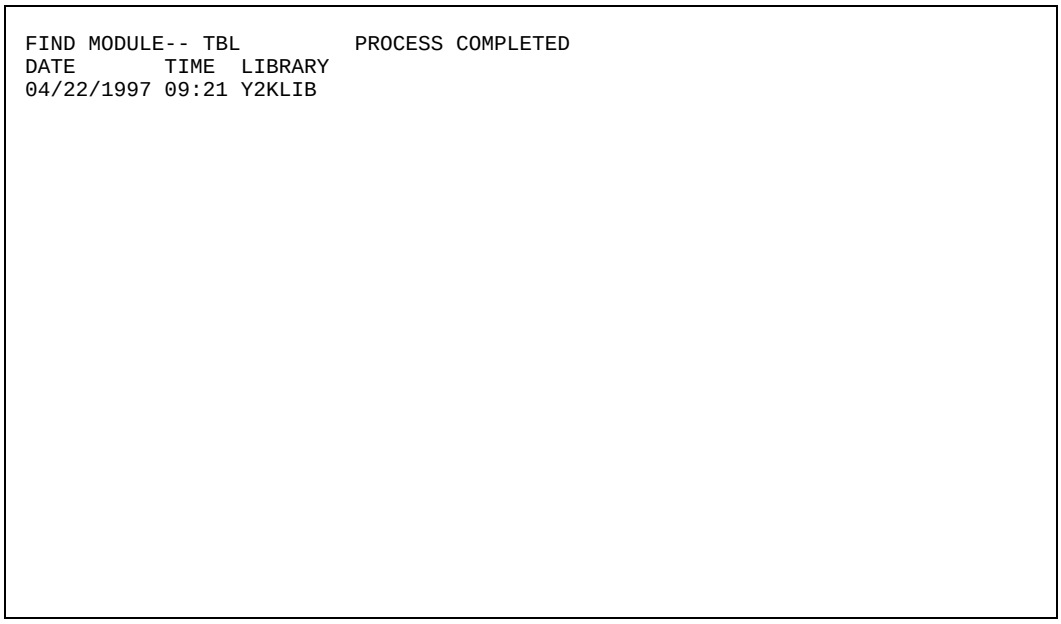
Called from Screen: LOOK

Calls Screen: Find Module in System Results Screen

Instruction Steps:

- Press <ENTER>. To perform search.
- Press PF13 to Quit and return to Selection Main Menu.

4.1.8.6.2 Find Module in System Results Screen



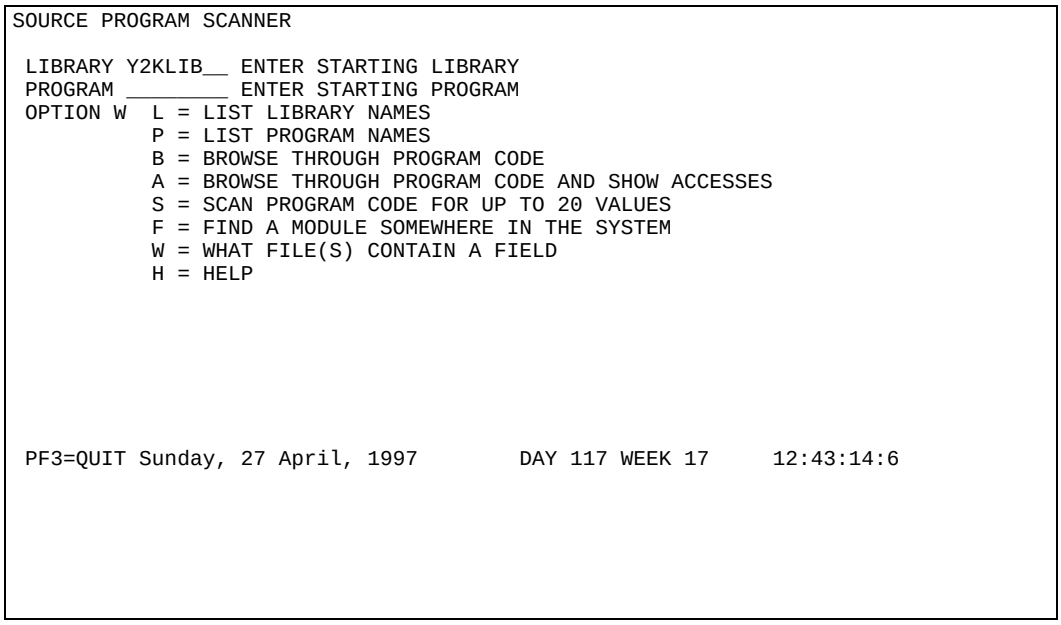
Purpose: List Date and Time Module was stowed in Library

Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>. The system calls Selection Screen (Y-MENU).



4.1.8.7 Look Menu - What File Contains Field (LOOK option W)

Purpose: Identifies all of the Files a data element can be found in.

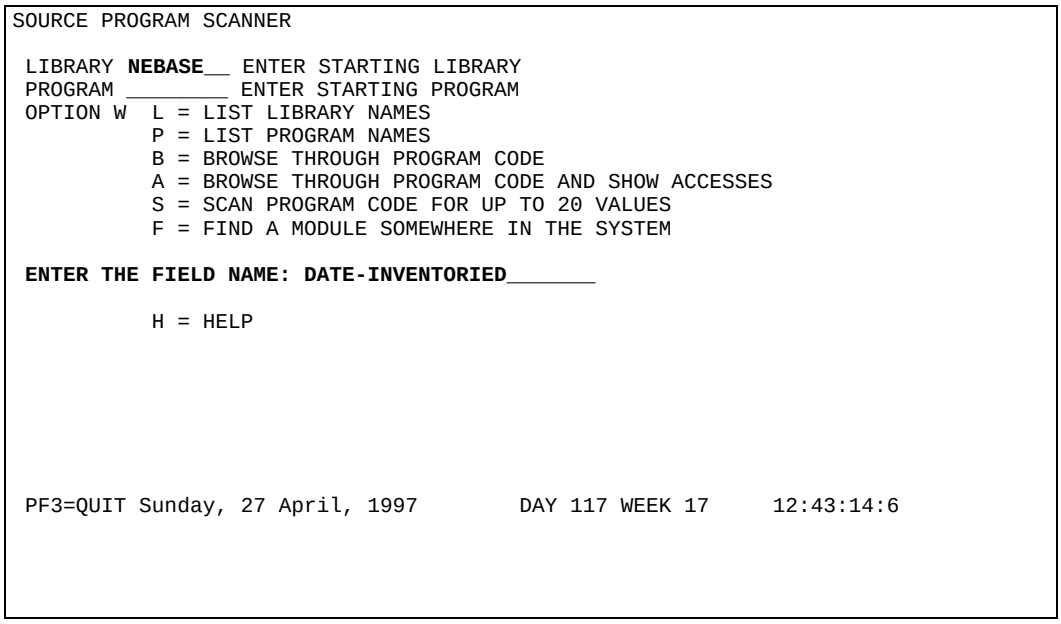
Called from Screen: LOOK

Calls Screen: What file - Input Element Screen

Instruction Steps:

- Enter Starting Library (Blank is valid).
- Enter Starting Program (Blank is valid).
- Enter 'W' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.7.1 What File - Input Element Screen



Purpose: Input field is provided to search for files containing element

Called from Screen: LOOK

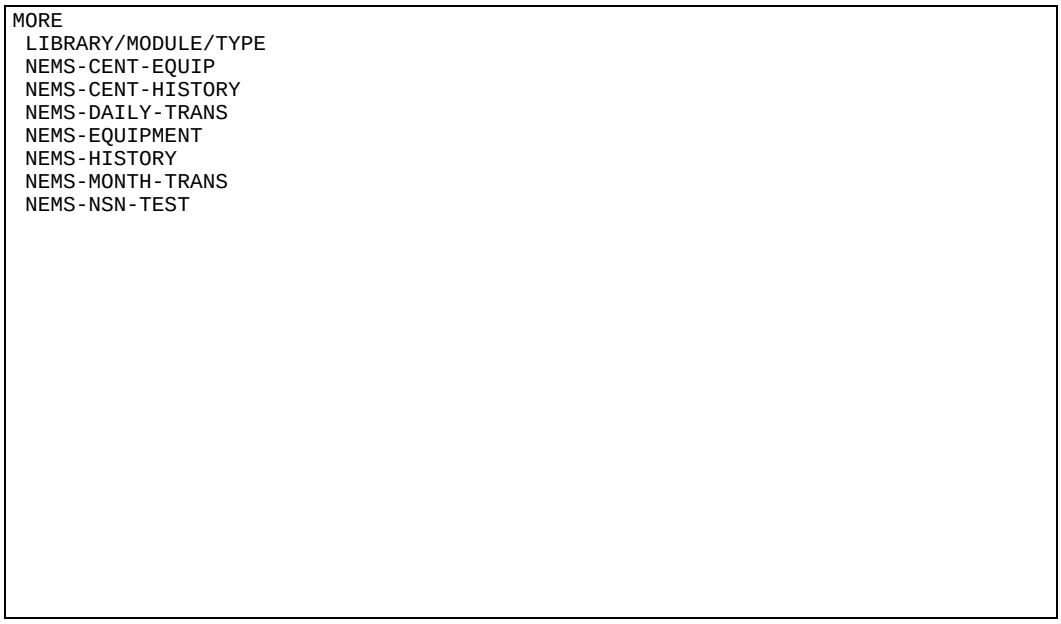
Calls Screen: What File Contains Field Results Screen

Instruction Steps:

Press <ENTER>. To display Results Screen.

Press PF3. System will Quit process and Return to Selection Main Menu (Y_MENU).

4.1.8.7.2 What File Contains Field Results Screen



Purpose: Lists of file that contain field inputted.

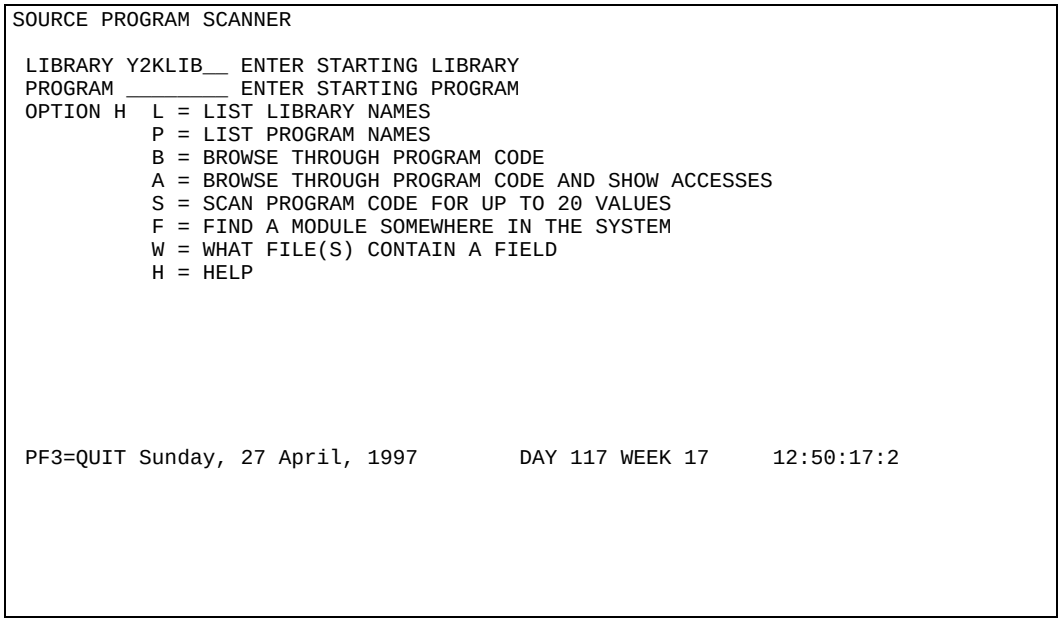
Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

- Press <ENTER>. The system redisplays Selection Main Menu (Y-MENU).

4.1.8.8 Look Menu - Help (LOOK option H)



Purpose: Displays LOOK Menu Help Screen

Called from Screen: LOOK

Calls Screen: Help Screen

Instruction Steps:

- Enter 'H' in Selection Field ('L','P','B','A','S','F','W' and 'H' are valid entries).
- Press PF3. The system displays Main Menu (Y-MENU).
- Press <ENTER>. The system displays the requested screen.

4.1.8.8.1 LOOK HELP Screen

```
B BROWSE THROUGH CODE STARTING WITH LIBRARY AND PROGRAM ENTERED.
     IF PROGRAM LEFT BLANK, BROWSE STARTS WITH FIRST PROGRAM IN THE
     LIBRARY.
   A BROWSE THROUGH CODE AND SHOW ACCESSES-SAME AS BROWSE EXCEPT
     WILL HIGHLIGHT FILE ACCESSES, CALLS AND CALLNATS.
   L LIST ALL LIBRARIES STARTING WITH THE LIBRARY ENTERED. IF YOU
     WANT TO LIST ALL THE LIBRARIES, BLANK OUT LIBRARY.
   P SAME AS 'L' EXCEPT WILL ALSO LIST PROGRAM NAMES.
   F FIND A MODULE SOMEWHERE IN THE NATURAL SYSTEM FILE.
   S SCAN FOR UP TO 20 VALUES. A SCREEN WILL ALLOW UP TO 20 VALUES
     FOR SCAN STARTING WITH THE LIB AND PROGRAM ENTERED. ABSOLUTE
   SCAN WILL TAKE PLACE UNLESS A BLANK IS ENTERED BEFORE THE
   VALUE ENTERED. YOU CAN CHOOSE DISPLAY OF 'HITS' ONLY OR ALL
   SOURCE CODE WITH WITH 'HITS' HIGHLITED.
 C COMPARE PROGRAMS IN THE SAME LIBRARY WITH UNLIKE NAMES OR
    PROGRAMS IN DIFFERENT LIBRARIES WITH THE SAME OR DIFFERENT
    NAMES. ALSO COMPARE ALL PROGRAMS IN ONE LIBRARY TO THE SAME
    PROGRAMS IN ANOTHER AND LIST THE PROGRAMS WHICH HAVE UNEQUAL    SOURCE CODE.
 V CHECK PROGRAMS FOR REFERENCED BUT UNUSED ADABAS FIELDS. IF
  THE PROGRAM HAS EXTERNAL LOCALS, THESE ARE ALSO CHECKED.
```

Purpose: Display Help for LOOK Menu

Called from Screen: LOOK

Calls Screen: N/A

Instruction Steps:

Press <ENTER>. The system returns to previous screen.