

File Manager Mentor Workshop

Lab Exercises



Lab Exercise 1

Lab Setup: Create your lab files

In this exercise you will:

- Run the LABSETUP program to create your own copies of sample files that will be used during the File Manager exercises
 - Check that your files have been created
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the ISPF command shell. On most systems, this is **Option 6** from the main ISPF menu.
 3. Run the LabSetup program:
 - On the command line, enter the lab setup command that your instructor or training coordinator has given to you. The command will have the format:

EX 'xxxx.ADLAB.INSTALL(LABSETUP)'

```
Menu List Mode Functions Utilities Help
-----
                                ISPF Command Shell
Enter TSO or Workstation commands below:
===> EXEC 'DNET249.MASTER.ADLAB.DATA(LABSETUP)'
```

```
Place cursor on choice and press enter to Retrieve command
=>
=>
->
```

4. You will see the message “**SETUP FOR HANDS-ON TRAINING**” message.
 - If you do not see this message, check the spelling of the command and try again.
 - Press the **ENTER** key repeatedly until the LabSetup program completes.
 - Note: Many screens full of messages will be displayed. Continue to press **Enter**. There may be times when three asterisks appear in the bottom left corner of the screen or the process just stops. Keep pressing Enter. You will end up at the Command Shell panel once again.

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5. Note: In the next steps, you will verify that your files have been created.
6. Navigate to the system 3.4 panel (Data Set List).
 - Type **3.4** on the command line, then **ENTER**:
7. Enter a Dsname level of: **your-tso-id.ADLAB**, then press **ENTER**.

```

Menu  RefList  RefNode  Utilities  Help
-----
Data Set List Utility
Option ==>

blank Display data set list             P Print data set list           More: +
      U Display UTOC information         PU Print UTOC information

Enter one or both of the parameters below:
Dsname Level . . . DNET249.ADLAB
Volume serial . . .

Data set list options
  Telnet View         1  1  Utility      Enter '/' to select option

```

8. You should see a list of data sets that begin with your ID, with a middle qualifier of ADLAB.

```

Menu  Options  View  Utilities  Compilers  Help
-----
DSLIST - Data Sets Matching DNET249.ADLAB           Row 1 of 16
Command ==>                                         Scroll ==> CSR
Command - Enter "/" to select action                Message           Volume
-----
DNET249.ADLAB.COPYLIB                                DMPU14
DNET249.ADLAB.CUSTFILE                               DMPU23
DNET249.ADLAB.DATA                                   DMPU25
DNET249.ADLAB.DTCMD                                 DMPU07
DNET249.ADLAB.DTMAP                                DMPU05
DNET249.ADLAB.DTMAP                                DMPU16
DNET249.ADLAB.EMI                                  MIGRAT1
DNET249.ADLAB.EQI                                  DMPU05
DNET249.ADLAB.JCI                                  DMPU15
DNET249.ADLAB.LIB                                   DMPU08
DNET249.ADLAB.LOAD                                  DMPU19
DNET249.ADLAB.PROC                                  DMPU09
DNET249.ADLAB.SOURCE                                DMPU21
DNET249.ADLAB.SYSDEBUG                              DMPU01
DNET249.ADLAB.TEMPLATE                              DMPU02

F1=Help      F2=Split      F3=Exit      F4=SwapNext   F5=Rfind      F7=Up
F8=Down      F9=Swap       F10=Left     F11=Right     F12=Cancel

```

It is OK if your list of files is different from the list shown here.

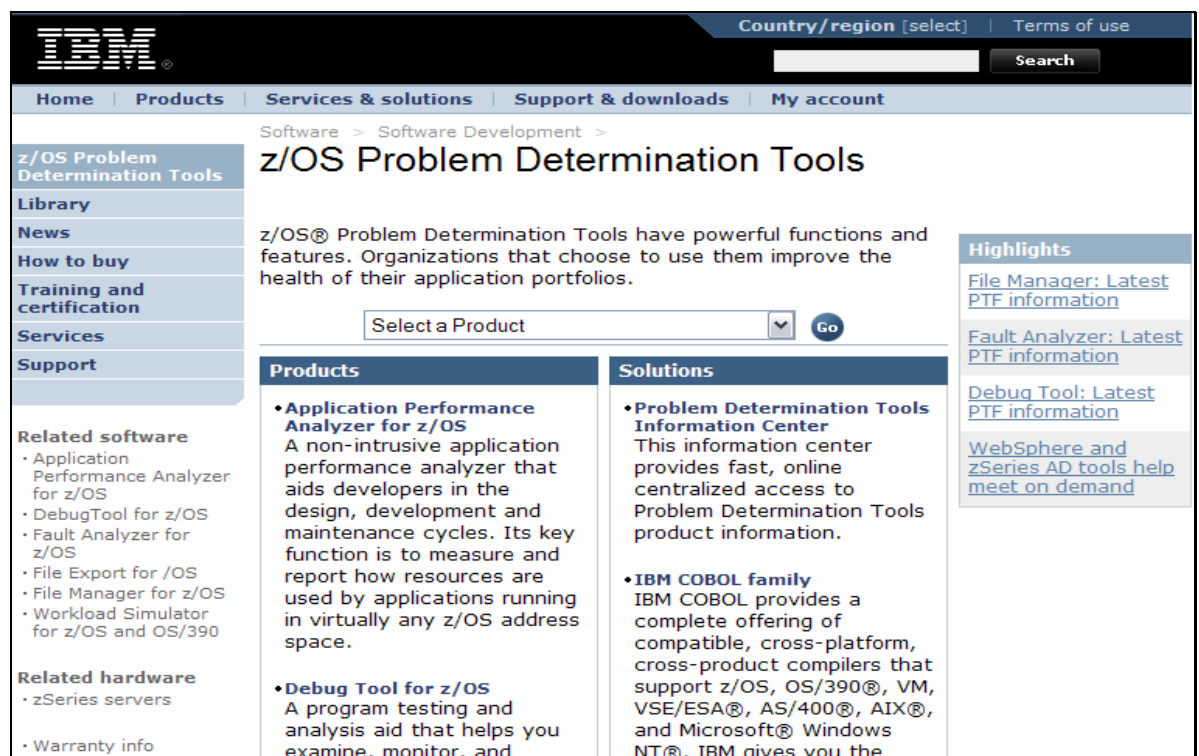
- If you have ADLAB data sets, then you are ready for the File Manager exercises.
- If you do not have the ADLAB datasets, then return to step 1. Ask for help if you aren't sure why you don't have the sample files.

Lab Exercise 2

Access the File Manager On-Line Library

In this exercise you will:

- Use a web browser to locate the File Manager manuals on the IBM web site.
 - Open the “File Manager User’s Guide and Reference” manual for your reference.
 - Learn how to download any of the File Manager manuals to your workstation.
1. Start an Internet Browser window.
 2. Open URL:
<http://www.ibm.com/software/awdtools/deployment>
 3. Click on the **Select a Product** pull-down.
 4. Click on **File Manager**



The screenshot shows the IBM website interface for the z/OS Problem Determination Tools. The page features a navigation bar with links for Home, Products, Services & solutions, Support & downloads, and My account. A search bar is located in the top right corner. The main content area is titled "z/OS Problem Determination Tools" and includes a description of the tools' capabilities. A "Select a Product" dropdown menu is visible, along with a "Go" button. The page is organized into several sections: "Related software" (listing tools like Application Performance Analyzer and DebugTool), "Related hardware" (listing zSeries servers), "Products" (listing Application Performance Analyzer for z/OS and Debug Tool for z/OS), and "Solutions" (listing Problem Determination Tools Information Center and IBM COBOL family). A "Highlights" sidebar on the right provides links to the latest PTF information for File Manager, Fault Analyzer, and Debug Tool, as well as a link to WebSphere and zSeries AD tools help.

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5. Click on **Library**

Software > Software Development > File Manager for z/OS

File Manager for z/OS

Library

Overview

- IBM File Manager for z/OS™ is a single tool that provides comprehensive, user-friendly tools for working with OS/390® data sets, DB2® data or IMS™ data. These tools include the familiar browse, edit, copy and print utilities found in ISPF, enhanced to meet the needs of application developers.. File Manager V6.1 adds many new functions and enhancements, including:
- Utilize COBOL or PL/I copybooks stored in partitioned data sets, external library management systems or CA-Panvalet libraries to define data set records more efficiently, or dynamically define your own record structure in a template.
- Browse, edit, copy and compare data using copybook or dynamic templates.

6. You can browse manuals online. For the “User’s Guide and Reference” manual, click on the link under the Book Manager column.

United States [change] | Terms of use

Home | Products | Services & industry solutions | Support & downloads | My IBM

Software > Software Development > File Manager for z/OS

Library

IBM File Manager - English:

- Version 7 Release 1
- Version 6 Release 1
- Version 5 Release 1

IBM File Manager - Japanese:

- Version 5 Release 1

IBM File Manager, Version 7 Release 1 Publications - English

Title	Order number	View BookManager	Last update
Program Directory (0.1MB)	GI10-8696-00		Sep 06
Customization Guide (2.7MB)	SC19-1036-01		Jan 07
User's Guide and Reference (9.1MB)	SC19-1037-00		Sep 06
User's Guide and Reference for DB2 Data (7.0MB)	SC19-1038-00		Sep 06

7. The contents page for the Reference and Messages manual appears. You can use the navigation links to get to specific sections.

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- Click on the browser's **BACK** button until you are back to the Debug Tool Library page.
- You can download Debug Tool manuals to your workstation from this web site.
RIGHT CLICK on the link for the “User’s Guide and Reference” under the PDF column.



- Click on **SAVE TARGET AS**.
- A dialog is displayed where you can select any valid directory on your workstation to download the manual in PDF format. If you would like a softcopy of the manual, you can download and save it now. Otherwise, press Escape.
- Close your Internet Browser window.

Lab Exercise 3

Using the File Manager Editor

In this exercise you will:

- Use the File Manager Edit utility.
 - Learn basic editor commands.
 - Explore the formats available for displaying data.
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the File Manager menu.

Part 1: Starting the Editor

3. Select the Edit option.
 - Type **2** on the command line, then **ENTER**.

```
File Manager                               Primary Option Menu
Command ==>> 2
-----
0 Settings                               Set processing options           User ID
1 Browse                                 Browse data                      System
2 Edit                                   Edit data                        Appl ID
3 Utilities                              Perform utility functions        Version
4 Tapes                                  Tape specific functions          Termin
5 Disk/VSAM                              Disk track and VSAM CI functions Screen
6 OAM                                     Work with OAM objects           Date.
7 Templates                              Template and copybook utilities Time.
8 HFS                                     Access Hierarchical File System
X Exit                                   Terminate File Manager
```

4. The Edit Entry Panel is displayed. Enter the name of the file to be edited.
 - Type **ADLAB.CUST1** in the Data set/path name field.
 - Note: depending on your TSO settings you may be required to enter the full file name: *your-tso-id*.ADLAB.CUSTFILE (where *your-tso-id* is the prefix for your files)
 - Type **3** (None) in the “Copybook/Template usage field”.
 - This setting tells File Manager that a copybook (a record layout) will NOT be used.
 - Press **ENTER**.

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```

File Manager                               Edit Entry Panel
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name ADLAB.CUST1 _____ +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . . . _____ Record sampling _
  Inplace edit . . . . _____ Prevent inserts and deletes
Copybook or Template:
  Data set name . . _____
  Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template Start position type Enter "/" to select option
 3 1. Above          █ 1. Key          _ Edit template _ Type (1,2,S)
   2. Previous      █ 2. RBA          _ Include only selected records
   3. None          █ 3. Record number _ Binary mode, reclen _____
   4. Create dynamic  _ Create audit trail
  
```

5. The Edit panel is displayed.

```

Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==> █                               Scroll PAGE
Col 1                               Insert length 596                               Format CHAR
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
000000 **** Top of data ****
000001 01001Lynn, Amanda      .....111 North Lake Road Spirit Lake IDUSA
000002 02200Graham, Anna    ../.*..89 Clay Springs Rd Atwon NVUSA
000003 02202Major, Art      .....1551 Pine Bluff Harmon MNUSA
000004 03003Prentice, Anna  .....22 Renshaw Laramie WYUSA
000005 03390Deeds, Darren   ... ..649 Brown Street Sandstone INUSA
000006 05570Parker, Ford    ....@..3039 Manning St. Dearborn MIUSA
000007 06101Early, Brighton .....9662 Summit Road Buxford NEUSA
000008 06106Lander, Annette ...q<..1887 Cedar Street Taledega ALUSA
000009 06700Dubree, Dustin  .....9229 Delegate's Row Indianapolis INUSA
000010 06900Bacon, Chris P. ....%..4934 Rosetta Lisle ILUSA
000011 07008Houston, Roger  ....@..4111 Northside PkwayBanner Elk NCUSA
000012 07044Schauer, April  ...h...7331 Gulf Shore Dr. Naples FLUSA
000013 07077Mann, Mr. E.    ....*..24 Valentine Rd Danville TNUSA
000014 07707Clime, Hilda    .....5545 Crystal SpringsDowagiac MIUSA
000015 07870Furst, April   ....*..955 Dundas London ONCanada
F1=Help F2=Zoom F3=Exit F4=CRetrieval F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Cancel
  
```

6. Note: The editor is displaying records without formatting, since you have not yet specified a copybook or template as a record layout. In this mode, you edit data by overtyping it. Commands and line commands that are similar to the commands available in the ISPF editor.

7. Press **PF3** to exit the editor. The Edit Entry Panel is displayed again.

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Tip: About your TSO “profile prefix” setting.

- TSO has a setting that can save you some typing by assuming that file names you enter without quotes begin with your tso id.
- The command: `TSO PROFILE PREFIX(yourid)` turns the option on. With this setting, if you enter a file name: `some.file` then file `yourid.some.file` is used.
- The command: `TSO PROFILE NOPREFIX` turns the option off. With this setting, if you enter a file name: `some.file` then file `some.file` is used.
- Regardless of the profile setting, when you enter a file name in quotes, like this: `'yourid.some.file'` then the exact name that you enter is used. To save you a keystroke, in File Manager the quote at the end is optional.
- The command: `TSO PROFILE` displays your TSO profile settings.

8. The Edit Entry Panel is displayed. Next, you will use a copybook as a record layout.

- Type **ADLAB.CUST1** in the Data set/path name field.
- Type **ADLAB.COPYLIB(CUST1)** in the Copybook or Template: Data set name field.
- Type **1** (above) in the “Copybook / Template” option field.
 - This setting tells File Manager that a copybook (a record layout) will be used.
- Press **ENTER**.

```
File Manager                               Edit Entry Panel
Command ==>>> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name ADLAB.CUST1 _____ +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . . _____ Record sampling _
  Inplace edit . . . - Prevent inserts and deletes
Copybook or Template:
  Data set name . . ADLAB.COPYLIB(CUST1) _____
  Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template Start position type Enter "/" to select option
 1 1. Above  1. Key _ Edit template _ Type (1,2,S)
 2. Previous 2. RBA _ Include only selected records
 3. None 3. Record number _ Binary mode, reclen _____
 4. Create dynamic _ Create audit trail
```

9. The Edit panel is displayed.

- Notice that since you specified a record layout (a copybook), the records are displayed formatted into fields.

10. Press **PF3** to exit the editor.

11. The Edit Entry Panel is displayed.

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12. You can use wildcards in the file name to save time or to save typing:

- Type **ADLAB.**** in the Data set/path name field.
 - Note: depending on your TSO “profile prefix” setting (see above tip) you may be required to enter: *your-tso-id*.ADLAB.**
- Type (or verify) **ADLAB.COPYLIB(CUST1)** in the Copybook or Template: Data set name field.
- Type **1** (above) in the “Copybook / Template” option field.
- Press **ENTER**.

```

File Manager                               Edit Entry Panel
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name ADLAB.** +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . . _____ Record sampling _
  Inplace edit . . . - Prevent inserts and deletes
Copybook or Template:
  Data set name . . ADLAB.COPYLIB(CUST1)
  Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template  Start position type  Enter "/" to select option
1 1. Above          - 1. Key                - Edit template _ Type (1,2,S)
  2. Previous       - 2. RBA                - Include only selected records
  3. None           - 3. Record number     - Binary mode, reclen _____
  4. Create dynamic - Create audit trail
    
```

13. The Data Set Selection panel is displayed. Select the file to edit:

- Type **S** next to the file *your-id*.ADLAB.CUST1, then **ENTER**.

```

- DNET074.ADLAB.CUSTFILE.SEG
S DNET074.ADLAB.CUST1
- DNET074.ADLAB.CUST1.COPY
    
```

14. The Edit panel is displayed:

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```

Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==> |
                                                    Scroll CSR
                                                    Format TABL

      CUST-ID NAME                ACCT-BALANCE  ORDERS-YTD  ADDR
      #3      #4                    #5            #6 #7
      AN 1:5  AN 6:17                PD 23:5     BI 28:2  AN 30:20
      <--->  <---+---1---+--->  <---+---1>  <---+>  <---+---1---+--->
000000 **** Top of data ****
000001 01001 Lynn, Amanda                67.68                9 119 North Lake Road
000002 02200 Graham, Anna                610.05               10 89 Clay Springs Rd
000003 02202 Major, Art                  1234.56              5 1512 Pine Bluff
000004 03003 Prentice, Anna                0.00                 7 33 Renshaw
000005 03390 Deeds, Darren                74.00                 3 649 Brown Street
000006 05570 Parker, Ford                222.27              12 2020 Manning St
  
```

Tip: Using wildcards in file names.

- You can use wildcard characters in file names and member names:
 - ****** (2 asterisks) is a wildcard for any number of qualifiers
 - ***** (1 asterisk) is a wildcard for a single qualifier
 - **%** is a wildcard for a single character
- For example, to see a list of file names that includes 'ABC.ADLAB.CUST1', you could enter any of the following:
 - 'ABC.**
 - 'ABC.AD**
 - 'ABC*.CUST1
 - 'ABC.AD*.%U%%1
 - 'AB**

Part 2: PF Keys, Scrolling, and Changing Data

15. Turn on the PF key display.

- Type **PFSHOW ON** on the command line, then **ENTER**:

```

Edit                               DNET074.ADLAB.CUST1
Command ==> PFSHOW ON |
      CUST-ID NAME                ACCT-BALANCE
  
```

- PF key settings are displayed on the panel:

```

000010 06900 Bacon, CHRIS P.                21.88                0 4534 Rosetta
000011 07008 Houston, Roger                296.97               10 4111 Northside Pkwy
000012 07044 Schauer, April                88.83                7 7331 Gulf Shore Dr.
F1=Help   F2=Zoom   F3=Exit   F4=CRetriev  F5=RFind   F6=RChange
F7=Up     F8=Down   F9=Swap   F10=Left    F11=Right  F12=Cancel
  
```

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Tip: Displaying and customizing your PF Keys.

- The command: PFSHOW ON displays your PF key settings on the screen.
- The command: PFSHOW OFF removes the display.
- The command: KEYS displays the Keylist panel where you can modify your PF key settings.

16. You can scroll (navigate) using the UP, DOWN, LEFT, and RIGHT commands, or with PF keys.

- Press **PF8** a few times to scroll down in the file.
- Press **PF7** to scroll up.
- Press **PF11** to scroll to the right in the records.
- Press **PF10** to scroll to the left.
- You can scroll the “maximum” amount. Type **M** (maximum) on the command line, then press **PF8**. This will scroll down to the end of the file.
 - Note: You can use the M modifier in any direction: left, right, up, or down.
- You can scroll a specified amount. Type **30** on the command line, then press **PF7**. This will scroll up 30 records.
 - Note: You can use a number to scroll in any direction. When scrolling to the right or left it will scroll the specified number of characters or fields.
- Navigate to the top of the file using either of these methods:
 - Type **M** on the command line, then press **PF7**, or
 - Type **TOP** on the command line, then **ENTER**.
 - You should be positioned at the top of the file, like this:

```

Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==> |_____ Scroll CSR
                                     Format TABL
CUST-ID NAME                        ACCT-BALANCE ORDERS-YTD ADDR
#3      #4                          #5          #6 #7
AN 1:5  AN 6:17                      PD 23:5    BI 28:2 AN 30:20
<--->  <-----1-----> <-----1>  <---> <-----1----->
000000 **** Top of data ****
000001 01001 Lynn, Amanda                67.68          9 119 North Lake Road
000002 02200 Graham, Anna                 610.05         10 89 Clay Springs Rd
000003 02202 Major, Art                   1234.56         5 1512 Pine Bluff
000004 03003 Prentice, Anna                0.00           7 33 Renshaw
000005 03390 Deeds, Darren                 74.00           3 649 Brown Street
000006 05570 Parker, Ford                 222.27         12 2020 Mapping St

```

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17. Change data by overtyping.

- Overtyping to change the text in record 1 in the ADDRESS field from North to **South**.
- Overtyping to change the ACCT-BAL in record 4 to **111.22**.
- Press **ENTER**.
- Notice that the records you changed are highlighted with a different color. Any records you have changed during the edit session will remain highlighted.

```
Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==>                               Scroll CSR
                                           Format TABL

  CUST-ID NAME                        ACCT-BALANCE ORDERS-YTD ADDR
  #3      #4                          #5          #6 #7
AN 1:5  AN 6:17                       PD 23:5     BI 28:2 AN 30:20
<--->  <---+-----1----->  <---+-----1>  <---+> <---+-----1----->
000000 **** Top of data ****
000001 01001 Lynn, Amanda                67.68                9 119 South Lake Road
000002 02200 Graham, Anna                 610.05              10 89 Clay Springs Rd
000003 02202 Major, Art                   1234.56             5 1512 Pine Bluff
000004 03003 Prentice, Anna                111.22              7 33 Renshaw
000005 03300 Deeds, Darren                 74.00              3 648 Brown Street
```

18. There is an online HELP facility that describes fields and commands. Get information about the Find command:

- Put the cursor on the command line and Press **PF1**.
- The “File Manager Tutorial” panel is displayed. From here you can get information about using the editor.
- Select “Primary commands”: Type **8** on the command line, then **ENTER**.
- Another menu is displayed. Select “FIND/FE/CHANGE/EXCLUDE commands”: Type **3** on the command line, then **ENTER**.
- Another menu is displayed. Select “FIND command”: Type **1** on the command line, then **ENTER**.
- The “FIND command” tutorial is displayed. Press **PF11** to scroll through the tutorial.
- Exit from the help tutorial and return to Edit: Press **PF3**.

Part 3: Formats

19. Notice that you are currently in “table” format, which is indicated by “TABL” in the FORMAT field in the upper right area of the panel. File Manager can display data in five different formats.

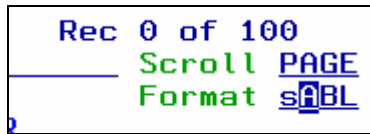
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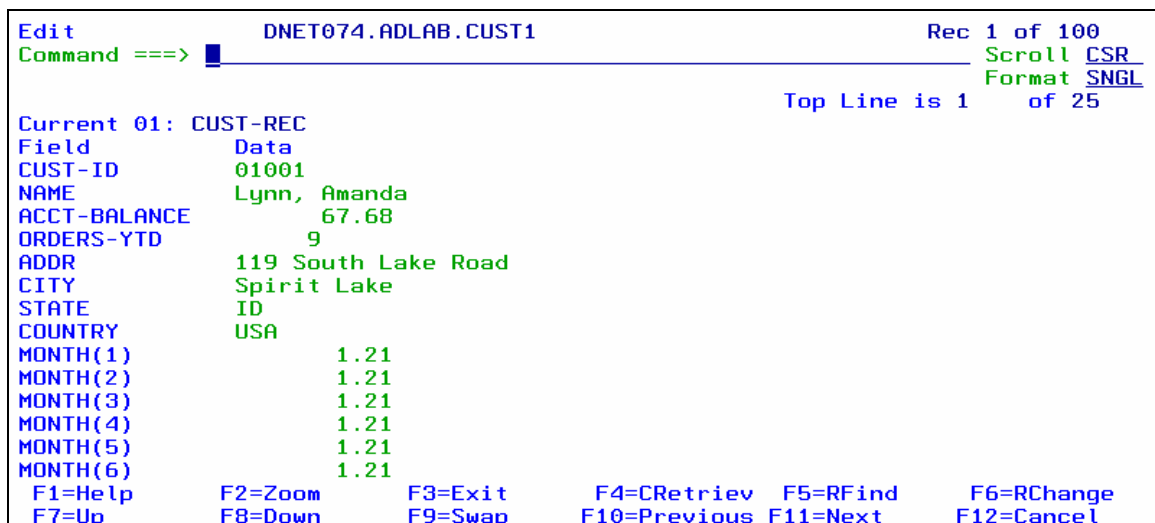


20. One way to change the format is to overwrite the FORMAT field. Change to Sngl format:

- Type **S** (for SNGL) in the first character of the FORMAT field, then **ENTER**.

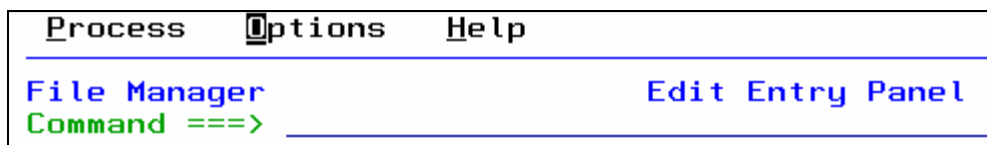


21. SNGL format is displayed. In this format, only one record is displayed. PF7 and PF8 scroll up and down in the record. PF10 and PF11 scroll to the previous record and next record.



22. You can customize your options settings to show more information in SNGL format. You will customize these options now.

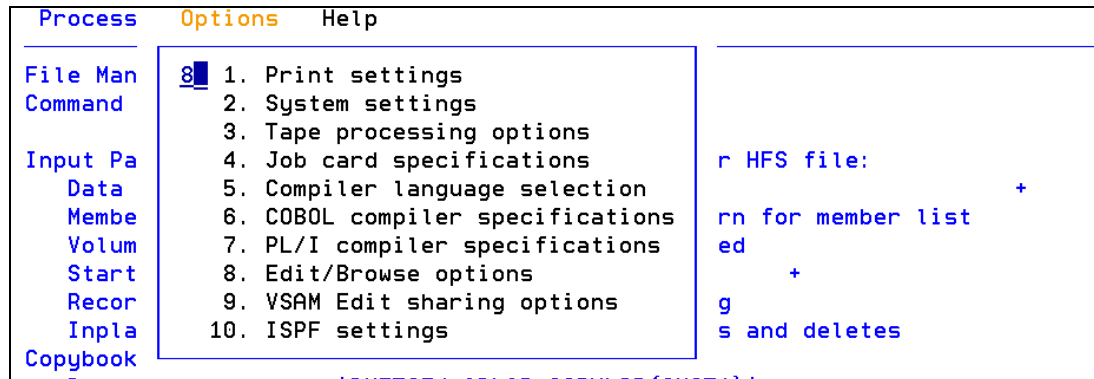
- Press **PF3** to exit the editor.
- The Edit Entry Panel is displayed.
- Put the cursor on the “Options” pull-down at the top of the screen , then press **ENTER**.



- The Options menu is displayed. Select “Edit/Browse Options”: type **8** (Edit/Browse options), then press **ENTER**.

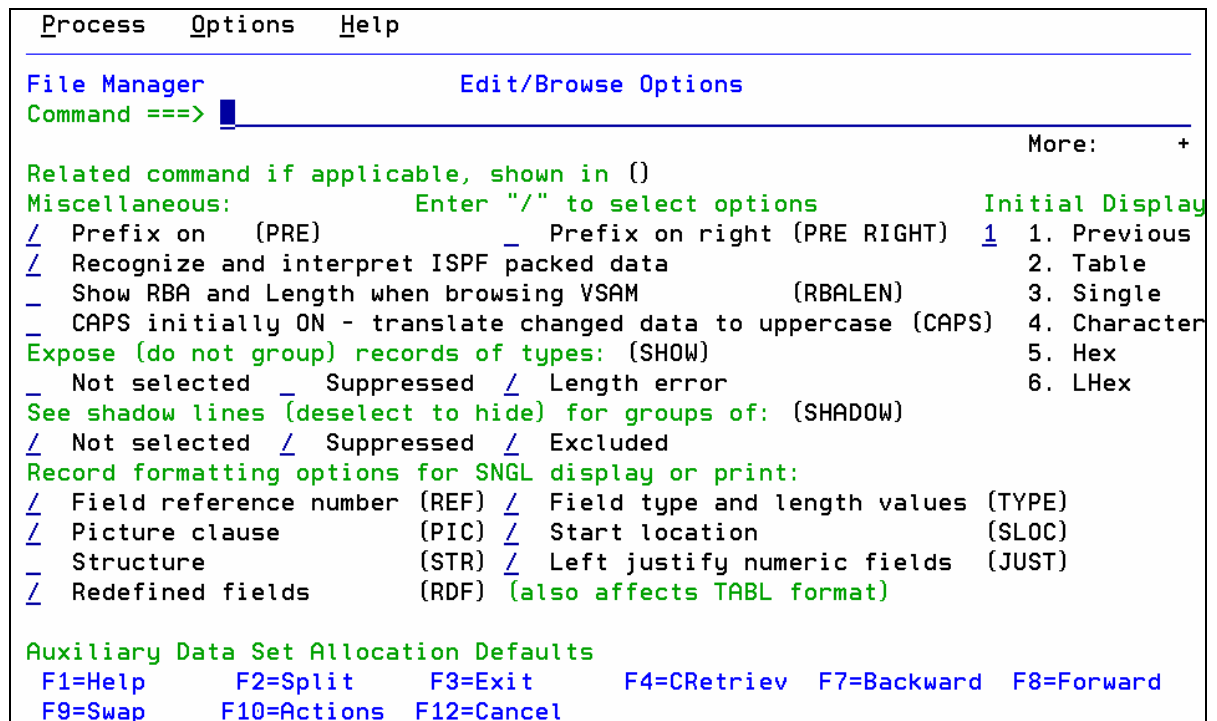
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- The Edit and Browse Options panel is displayed. You can select your default edit settings here. Take a look at the default settings that are available here. Select any options you want. At a minimum, select the following in the area titled **“Record formatting options for SNGL display or print:”**. Select by typing / (slash) next to them:

- / “Field reference number”
- / “Show type and length values”
- / “Picture clause”
- / “Start location”
- / “Left justify numeric fields”



- Press **PF3** to return to the Edit Entry Panel. You will see this screen:

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```
File Manager                               Edit Entry Panel
Command ==> █

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name 'DNET074.ADLAB.CUST1' +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . . _____ Record sampling _
  Inplace edit . . . - Prevent inserts and deletes
Copybook or Template:
  Data set name . . 'DNET074.ADLAB.COPYLIB(CUST1)'
  Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template Start position type Enter "/" to select option
 1 1. Above - 1. Key - Edit template _ Type (1,2,S)
 2. Previous 2. RBA - Include only selected records
 3. None 3. Record number - Binary mode, reclen _____
 4. Create dynamic - Create audit trail
```

23. Press **ENTER** to start the editor.

24. When the editor is displayed, if you not in SNGL format, then type **SNGL** in the FORMAT field, then ENTER. Notice that your selections from Edit/Browse Options (Reference number, Picture, Start, Length) are displayed:

```
Edit                               DNET074.ADLAB.CUST1                               Rec 1 of 100
Command ==> █                                                                    Scroll CSR
                                                                                               Format SNGL
                                                                                               Top Line is 1 of 47

Current 01: CUST-REC
Ref Field Picture Typ Start Len Data
 3 CUST-ID
 4 NAME X(5) AN 1 5 01001
 5 ACCT-BALANCE X(17) AN 6 17 Lynn, Amanda
 6 ORDERS-YTD S9(7)V99 PD 23 5 67.68
 7 ADDR S9(4) BI 28 2 9
 8 CITY X(20) AN 30 20 119 South Lake Road
 9 STATE X(14) AN 50 14 Spirit Lake
10 COUNTRY X(02) AN 64 2 ID
11 MONTH(1) X(11) AN 66 11 USA
12 MONTH(1) S9(7)V99 PD 77 5 1.21
F1=Help F2=Zoom F3=Exit F4=CRetriev F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Previous F11=Next F12=Cancel
```

Formatting command in SNGL format

- In addition to setting your SNGL formatting preferences in your options, these edit commands can be used when you are in SNGL format to toggle the display settings on or off:

REF, TYPE, PIC, SLOC, STR, JUST, RDF
- Try typing some of these commands in the editor to see the result.

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25. Change to Char format:

- Type **C** (for CHAR) in the FORMAT field, then **ENTER**.

```
Rec 1 of 100
Scroll PAGE
Format cNGL
line is 1 of 47
```

26. CHAR format is displayed. In this format, records are displayed without formatting:

```
Edit          DNET074.ADLAB.CUST1          Rec 1 of 100
Command ==>                                     Scroll CSR
          Col 1          Insert length 596          Format CHAR
-----+-----+-----+-----+-----+-----+-----+-----+
000001 01001Lynn, Amanda      .....119 South Lake Road Spirit Lake  IDUSA
000002 02200Graham, Anna     ../.*.89 Clay Springs Rd  Atwon    NVUSA
000003 02202Major, Art        ....%.1512 Pine Bluff    Harmon   MNUSA
000004 03003Prentice, Anna     .....33 Renshaw          Laramie  WYUSA
000005 03390Deeds, Darren     ... ..649 Brown Street   Sandstone INUSA
000006 05570P... ..F... ..A... ..0000... ..S... ..P... ..M... ..T... ..
```

27. Change to Hex format:

- Type **H** (for Hex) in the FORMAT field, then **ENTER**.

28. Hex format is displayed. This is similar to CHAR format, but the hexadecimal representation of data is also displayed. You can overwrite either the character (text) data, or the hex values.

- Note: You can turn the display of hex data on and off in any format with the commands: **HEX ON** and **HEX OFF**.

29. Change to LHex format:

- Type **L** (for LHex) in the FORMAT field, then **ENTER**.

30. LHex format is displayed. Only the hexadecimal representation of data is displayed. If you need to type in a lot of hex data, you may find it easier to work in this format.

31. Another easy way to change formats is with the “F_” commands.

- Change to TABL: Type **FT** (for Format Tabl) on the command line, then **ENTER**.

```
Edit          DNET074.ADLAB.CUST1
Command ==> FT
          Col 1          Insert length 596
-----+-----+-----+-----+-----+-----+-----+-----+
000001  F0E1E0E0E1D30895956B40C194819584814
```

- Change to HEX: Type **FH** (for Format Hex) on the command line, then **ENTER**.

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- Change to LHEX: Type **FL** (for Format LHex) on the command line, then **ENTER**.
- Change to SNGL: Type **FS** (for Format Sngl) on the command line, then **ENTER**.
- Change to CHAR: Type **FC** (for Format Char) on the command line, then **ENTER**.

32. You can also use the “F_” commands as LINE commands.

- Type **FT** (for Format Tabl) in the **prefix area** (not on the command line) next to any record, then **ENTER**.

```

      Cb1 1      Insert length 990      Format CHNK
      ----+----1-----+----2-----+----3-----+----4-----+----5-----+----6-----+----7-----
000001 01001Lynn, Amanda      .....111 South Lake Road Spirit Lake  IDUSA
000002 02200Graham, Anna     ../.*.89 Clay Springs Rd  Atwon      NVUSA
FT 003 02202Major, Art      ....%.1551 Pine Bluff    Harmon     MNUSA
000004 03003Prentice, Anna    .....22 Renshaw         Laramie    WYUSA
000005 03390Deeds, Darren    ... ..649 Brown Street   Sandstone  INUSA
000006 05570Parker, Ford     ....@.3039 Manning St.   Dearborn   MIUSA
000007 06101Early, Brighton  .....9662 Summit Road   Buxford    NEUSA
000008 06106Lander, Annette  n< 1887 Cedar Street    Taledaga   ALUSA
  
```

- This will display Tabl format, and will bring the record you chose to the top of the screen.
- Type **FS** (for Format Sngl) in the prefix area next to any record, then **ENTER**.

```

                                Format IABL
      CUST-ID NAME                ACCT-BALANCE ORDERS-YTD ADDR
      #3      #4                  #5          #6 #7
      AN 1:5  AN 6:17              PD 23:5   BI 28:2 AN 30:20
      <--->  <---+-----1-----+>  <---+-----1>   <---+>  <---+-----1-----+----->
000003 02202 Major, Art          1234.56   5 1551 Pine Bluff
000004 03003 Prentice, Anna      396.63   7 22 Renshaw
FS 005 03390 Deeds, Darren       74.00    3 649 Brown Street
000006 05570 Parker, Ford       233.27   5 3039 Manning St.
000007 06101 Early, Brighton    311.08   10 9662 Summit Road
  
```

- This will display Sngl format, showing the record that you chose.
- Note: You can use any of the format commands: FT, FS, FC, FH, FL as line commands to select and format a record.

33. You can also “zoom in” to a record:

- Change back to Table format: Type **FT** on the command line, then **ENTER**.
- Type **ZOOM** on the command line (or just **Z**), then place the cursor in the data area of any record, then **ENTER**.

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```

Edit          DNET074.ADLAB.CUST1          Rec 5 of 100
Command ==> ZOOM                          Scroll PAGE
                                          Format TABL

  CUST-ID NAME          ACCT-BALANCE ORDERS-YTD ADDR
  #3      #4          #5          #6 #7
  AN 1:5  AN 6:17      PD 23:5    BI 28:2 AN 30:20
  <----> <---+-----1-----> <---+-----1> <----> <---+-----1----->
000005 03390 Deeds, Darren          74.00          3 649 Brown Street
000006 05570 Parker, Ford          233.27         5 3039 Manning St.
000007 06101 Early, Brighton          311.08        10 9662 Summit Road
000008 06106 Lander, Annette          489.84         7 1887 Cedar Street
000009 06700 Dubree, Dustin          192.98         1 9229 Delegate's Row
000010 06900 Bacon, Chris P.          21.86          0 4934 Rosetta
000011 07008 Houston, Roger          296.97        10 4111 Northside Pkway
000012 07044 Schauer, April          88.83          7 7331 Gulf Shore Dr
  
```

- You are zoomed on the record you selected. Notice that the word “Zoom” is displayed next to the FORMAT field. When you zoom from TABL or SNGL format, SNGL format is displayed in zoom mode.

```

Edit          DNET074.ADLAB.CUST1          Rec 9 of 100
Command ==>                               Scroll PAGE
                                          Zoom Format SNGL
                                          Top Line is 7 of 55

Current 01: CUST-REC
Ref Field Picture Typ Start Len Data
 4 2 NAME X(17) AN 6 17 Dubree, Dustin
 5 2 ACCT-BALANCE
   S9(7)V99 PD 23 5 192.98
 6 2 ORDERS-YTD
   S9(4) BI 28 2 1
 7 2 ADDR X(20) AN 30 20 9229 Delegate's Row
 8 2 CITY X(14) AN 50 14 Indianapolis
 9 2 STATE
   X(02) AN 64 2 IN
  
```

- Note: Also notice that PF10 and PF11 (Previous record and Next record) are NOT active. In zoom mode, you cannot navigate to other records. You can exit zoom mode with PF3 or by using the ZOOM command again.

34. If you are “ZOOMed” in CHAR format, a special character mode zoom format is displayed.

- Change to CHAR format: Type **FC** on the command line, then **ENTER**.

35. Notice that in character zoom mode, an unformatted record is displayed. If the file has variable length records, you can change the record length by overtyping the record length field.

```

Edit          DNET074.ADLAB.CUST1          Rec 9 of 100
Command ==>                               Scroll PAGE
                                          Col 1          Format CHAR

Record Length Byte ----+----1----+----2----+----3----+----4----+----5----+----6
9          331      1 06700Dubree, Dustin .....9229 Delegate's Row Indianapoli
              61 s INUSA .....<.....%.....<.....<.....
              121 %.....%.....Demolition Contractor me sample note
              181 s. More notes. And yet more notes.Some sample notes. More no
              241 tes. And yet more notes.Some sample notes. M
              301
  
```

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- Exit zoom mode: Type **zoom** on the command line, then **ENTER**.

Tip: About ZOOM.

- Use ZOOM for safety, to ensure that you will make changes to only the selected record.
- ZOOM allows you to display only a single record, and in this way it is similar to SNGL format. In fact, it may look like SNGL format. However, when in zoom mode, you cannot navigate to another record or make changes to another record.
- The scope of all commands (including Find and Change) is just one record.

Part 4: Find, Change, and Locate commands

36. Change to TABL format, and go to the top of the file:

- Type **FT** on the command line, then **ENTER**.
- Type **TOP** on the command line, then **ENTER**.

37. Note: You can use most edit commands (such as Find, Change, and Locate) in any of the formats. During the remaining steps, you may switch to different formats to see how commands work in various formats.

38. The Find command is used to find data in a file. Enter a simple find command:

- Type **f ann** on the command line, then **ENTER**. The next record that contains the text is found, and other instances of the text are highlighted. You should see results similar to the following:

```

Edit                               DNET074.ADLAB.CUST1                               Chars ann found
Command ==> _____ Scroll PAGE
                               Format TABL

  CUST-ID NAME                      ACCT-BALANCE  ORDERS-YTD  ADDR
  #3      #4                          #5          #6 #7
  AN 1:5  AN 6:17                      PD 23:5     BI 28:2 AN 30:20
  <--->  <---+-----1----->  <---+-----1>  <---+>  <---+-----1----->
000000 **** Top of data ****
000001 01001 Lynn, Amanda                67.68      9 111 South Lake Road
000002 02200 Graham, Anna                 610.05    10 89 Clay Springs Rd
000003 02202 Major, Art                   1234.56    5 1551 Pine Bluff
000004 03003 Prentice, Anna               396.63     7 22 Renshaw
000005 03390 Deeds, Darren                 74.00     3 649 Brown Street
000006 05570 Parker, Ford                 233.27     5 3039 Manning St.
000007 06101 Early, Brighton              311.08    10 9662 Summit Road
000008 06106 Lander, Annette              489.84     7 1887 Cedar Street
000009 06700 Dubree, Dustin                192.98     1 9229 Delegate's Row
000010 06900 Bacon, Chris P.              21.86     0 4934 Rosetta
```

39. Notice that PF5 is set to RFind (Repeat Find).

- Press **PF5** a few times to find the NEXT occurrences of “ann”.

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40. You can limit the scope of the Find command to a field.

- Type **f ann #7** on the command line, then **ENTER** . Only field #7 (ADDR) is searched.

41. You can also search all records.

- Type **f ann all** on the command line, then **ENTER** . A count is displayed.

42. You can search for very large text strings.

- Type **fx** (Find eXtended) on the command line, then **ENTER** .
- A pop-up box is displayed where long search string can be entered. Type **ann** in the box, then then **ENTER** .

43. Go to the top of the file.

- Type **m** (maximum) on the command line, then **PF7** .

44. Use the Change command to make changes to data.

- Type **c ROAD LANE** on the command line, then **ENTER** . This will change the next instance of the ROAD to LANE.

```
Edit          DNET074.ADLAB.CUST1
Command ==> c ROAD LANE
          CUST-ID NAME          ACCT-BALANCE ORI
```

45. You can limit the scope of the Change command to a column.

- Type **c 10 20 #6** on the command line, then **ENTER** . This will change the next occurrence of 10 to 20, but only field #6 (Orders-Ytd) is searched.

46. You can also search all records.

- Type **c 10 20 all #6** on the command line, then **ENTER** . This will change ALL occurrences of 10 to 20 in field #6.

47. Note: You can change large text strings with the CX (Change eXtended) command. It is similar to the FX (Find eXtended) command, and displays a pop-up window where you can enter long “from” and “to” values.

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Tips: More about the FIND and CHANGE commands.

- If text strings contains spaces or special characters, then type quotes around the strings (either single quotes or double quotes). For example:
 - F 'ABC 123'
 - C 'ABC 123' 'XYZ 789'
- Limit the columns (byte positions) searched by specifying the start and end columns. For example: search only between position 50 through 85:
 - F ABC 50 85
 - C ABC XYZ 50 85
- Limit the fields searched (in TABL or SNGL formats) by specifying the start and end columns. For example: search only in field #5:
 - F ABC #5
 - C ABC XYZ #5
- Example: search only in fields #5, #9, and #12:
 - F ABC (#5 #9 #12)
 - C ABC XYZ (#5 #9 #12)
- The ALL modifier can be used to search all in-scope records. Examples:
 - F ABC ALL
 - F ABC #5 ALL
 - F ABC (#5 #9 #12) ALL
 - C ABC XYZ ALL
- In addition to ALL, other modifiers are available: FIRST, LAST, PREV, NEXT, X, NX .
- You can also use the BND line command, or the BOUNDS command to limit the positions searched for all Find and Change commands.
- Use the help facility (PF1) to get more information about these and other commands.

48. The *Locate* command is used to position to fields or records. You can use the Locate command in any format.

- Change to SNGL format: Type **FS** on the command line, then **ENTER**.
- Locate a field name: Type **L OCC** on the command line, then **ENTER**.

```
Edit          DNET074.ADLAB.CUST1
Command ==> l occ
Support 01: CUST REC
```

- This will position to a FIELD NAME that contains “occ”.
- Locate a record number: Type **L 44** on the command line, then **ENTER**.
 - This will position to record number 44.
- Change to TABL format and scroll to the left:

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- Type **FT** on the command line, then **ENTER**.
- Press **PF10** several times until you get to the beginning of the records.
- You can also use the Locate command to position to a record “label”. A record label is a name that you give to a record. To label a record, you type a period (.) followed by any name in the prefix area of any record. Label a record:
 - In the **prefix area** of record number 50, type: Type **.abc** then **ENTER**.

000047	40045	WOOD, Holly	421.86	7	3
000048	40909	Burr, Tim	111.10	0	4
000049	41060	Maugham, Collier	466.62	3	1
.abc	43004	Coates, Levon	385.52	20	2
000051	45400	Underhill, Doug	677.71	4	2
000052	46050	Wright Candace B	766.59	4	3

- Locate your label: Type **L .abc** on the command line, then **ENTER**.

```

Edit                                DNET074.ADLAB.CUST1
Command ==> L .abc
    
```

- This will position to the record labeled “.abc”.
- Note: Labelling and Locating records can be especially helpful in large files when you need an easy way to bookmark and return to certain records.

Part 5: FE command

49. The **FE** (Find fields in Error) command is used to find bad data in numeric fields.

- Navigate to the top of the file: Type **TOP** on the command line, then **ENTER**.
- Type **FE** on the command line, then **ENTER**.
 - This will find the next numeric field that contains bad data. Like this:

```

Edit                                DNET074.ADLAB.CUST1                                1 errors found
Command ==> _____                                Scroll PAGE
                                                        Format TABL
CUST-ID  NAME                ACCT-BALANCE  ORDERS-YTD  ADDR
#3       #4                  #5            #6 #7
AN 1:5  AN 6:17              PD 23:5      BI 28:2  AN 30:20
<--->  <---+---1---+>      <---+---1>   <---+---1---+>
000021  11004  Ness, Luke    *****      3 5166 Sprinkle Road
000022  13002  Turner, Paige 1234.00        4 3039 Lost Creek Rd
000023  13003  Sawyer, Dinah 622.16         4 498 Oak Grove Rd
    
```

- Note: If a numeric field contains bad data, then File Manager displays it with asterisks.

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- View the hex representation of the data: Type **HEX ON** on the command line, then **ENTER**.
- Fix the bad numeric data: Overtyping the asterisks with **1234**. Then **ENTER**.

```

Edit                               DNET074.ADLAB.CUST1                               Rec 21 of 100
Command ==> _____                               Scroll PAGE
                                                    Format TABL
CUST-ID NAME                ACCT-BALANCE ORDERS-YTD ADDR
#3 #4 #5 #6 #7
AN 1:5 AN 6:17 PD 23:5 BI 28:2 AN 30:20
<---> <---+-----1-----> <---+-----1> <---+> <---+-----1----->
000021 11004 Ness, Luke 1234 ***** 3 5166 Sprinkle Road
FFFFF D8AA64DA98444444 67555 00 FFFF4E99899984098844
11004 5522B03425000000 CCC0B 03 51660279952350961400

```

- The field now contains good data. Notice the hex values have also changed.
- Turn off the hex display: Type **HEX OFF** on the command line, then **ENTER**.

Part 6: EXIT, SAVE, and CANCEL

50. Note: The **SAVE** command can be used at any time to save your changes and remain in the editor.
51. Note: The **CANCEL** command can be used to end the edit session WITHOUT SAVING your changes.
52. Use the **EXIT** command to end the session and automatically save changes. PF3 is set to EXIT.
- Press **PF3** to exit and save your changes.

Part 6: Repeat, Insert, and Delete

53. The Edit Entry Panel is displayed. Edit the file again.
- Leave fields as shown here, and press **ENTER**.

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```

File Manager                               Edit Entry Panel
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name ADLAB.CUST1           +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . . _____ Record sampling _
  Inplace edit . . . _ Prevent inserts and deletes
Copybook or Template:
  Data set name . . ADLAB.COPYLIB(CUST1)
  Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template  Start position type  Enter "/" to select option
 1 1. Above          1. Key          _ Edit template _ Type (1,2,S)
 2. Previous        2. RBA          _ Include only selected records
 3. None            3. Record number _ Binary mode, reclen _____
 4. Create dynamic  _ Create audit trail
  
```

54. The **R** (repeat) line command is used used to make copies of a record.

- Make a copy of a record: Type **R** (repeat) in the prefix area next to any record, then **ENTER**.

```

000021 11004  Ness, Luke
000022 13002  Turner, Paige
r 00023 13003  Sawyer, Dinah
000024 20307  Lapp, Victor E.
000025 20620  Parris, April Lynn
  
```

- The record has been duplicated in the file.
- Make more than one copy of a record: Type **R3** (repeat 3 times) in the prefix area next to a record, then **ENTER**.
- The record was duplicated 3 times in the file.
- You can make copies of a group of records using a pair of “RR” (block repeat) line commands:
 - Type **RR** in the prefix area next to a record.
 - Type **RR** in the prefix area next to another record later in the file.
 - Press, then **ENTER**.

```

000025 20307  Lapp, Victor E.
rr 0026 20620  Parris, April Lynn
000027 21008  Dante, Al
000028 22090  Lizst, Anna
rr 0029 22600  Boyd, Luke A.
000030 23004  Furst, Hugo
  
```


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- The entire block of records was duplicated.

55. The *I* (insert) line command is used to add a new record.

- Insert a new record: Type **I** (insert) in the prefix area next to any record, then **ENTER**.

```
000026 20620 Parris, April Lynn
000027 21008 Dante, Al
i 00028 22090 Lizst, Anna
000029 22600 Boyd, Luke A.
```

- The new record has been added to the file. The text fields are blank, and numeric fields are initialized to zero.
- Note: Many people prefer to work in SNGL format to work with one record at a time. In the next steps, you will enter data into your new record in SNGL format.
- Select the new record and switch to SNGL format: Type **FS** (format sngl) in the prefix area next to the new record, then **ENTER**.

```
000027 21008 Dante, Al 188.85 1 89140 Rosten 77
000028 22090 Lizst, Anna 363.69 0 9556 Ross Avenue
FS 0029 0.00 0
000030 22600 Boyd, Luke A. 86.88 0 221 Yale Rd
000031 20620 Parris, April Lynn 555.50 3 Calzada Legaria #853
000032 21008 Dante, Al 166.65 1 89140 Rosten 77
```

- The new record is displayed in SNGL format.
- Type data into any fields you wish. Enter at least a Cust-Id, Name, Acct-Balance, and Address.

56. The *D* (delete) line command is used to delete records.

- Switch to TABL format: Type **FT** (format tabl) on the command line, then **ENTER**.
- Delete a record: Type **D** (delete) in the prefix area next to any record, then **ENTER**.

```
000023 13003 Sawyer, Dinah 622.16
000024 13003 Sawyer, Dinah 622.16
d 00025 20307 Lapp, Victor E. 377.74
000026 20620 Parris, April Lynn 555.50
000027 21008 Dante, Al 166.65
```

- The record has been deleted.

Part 7: CANCEL

57. Use the *CANCEL* command to end the edit session without saving changes.

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- Type **CANCEL** on the command line, then **ENTER**.
- A “Confirm Cancel” panel is displayed. Press **ENTER** to confirm.

Lab Exercise 4

Using a Copybook Template

In this exercise you will:

- Use a copybook to create a Template
 - Specify selection criteria to limit records displayed
 - Specify field selection to limit fields displayed
 - Use the TE command to edit a template
 - Use a “temporary” template
 - Save a template
 - Save a copy of a template with a new name
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the File Manager menu.

Part 1: Specify a Copybook

3. Select the Edit option.
 - Type **2** on the command line, then **ENTER**.

```
File Manager                               Primary Option Menu
Command ==>> 2
-----
0 Settings          Set processing options          User I
1 Browse           Browse data                     System
2 Edit             Edit data                       Appl I
3 Utilities        Perform utility functions       Versio
4 Tapes            Tape specific functions         Termin
5 Disk/VSAM        Disk track and VSAM CI functions Screen
6 OAM              Work with OAM objects           Date.
7 Templates        Template and copybook utilities Time.
8 HFS              Access Hierarchical File System
X Exit             Terminate File Manager
```

4. The Edit Entry Panel is displayed. Next, you will name a copybook that will be used to create a template.
 - Type (or verify) **ADLAB.CUST1** in the Data set/path name field.
 - Type **ADLAB.COPYLIB(CUST1)** in the Copybook or Template: Data set name field.

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- Type **1** (above) in the “Copybook / Template” option field.
- Press **ENTER**.

```

File Manager                               Edit Entry Panel
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name ADLAB.CUST1 _____ +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . . . _____ Record sampling _
  Inplace edit . . . . _____ Prevent inserts and deletes
Copybook or Template:
  Data set name . . ADLAB.COPYLIB(CUST1) _____
  Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template   Start position type   Enter "/" to select option
 1 1. Above          1. Key                                     _ Edit template _ Type (1,2,S)
 2 2. Previous       2. RBA                                    _ Include only selected records
 3 3. None           3. Record number                         _ Binary mode, reclen _____
 4 4. Create dynamic                               _ Create audit trail
  
```

5. The Edit panel is displayed. File manager compiled the copybook and created a “template”, which is used to format the records.

```

Edit                                         DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==> █                               Scroll CSR
                                                Format TABL

      CUST-ID NAME                ACCT-BALANCE  ORDERS-YTD  ADDR
      #3      #4                #5                #6 #7
      AN 1:5  AN 6:17            PD 23:5     BI 28:2  AN 30:20
      <--->  <---+-----1----->  <---+-----1>  <---+>  <---+-----1----->
000000 **** Top of data ****
000001 01001 Lynn, Amanda                67.68                9 119 South Lake LANE
000002 02200 Graham, Anna                 610.05               20 89 Clay Springs Rd
000003 02202 Major, Art                   1234.56               5 1512 Pine Bluff
000004 03003 Prentice, Anna                111.22               7 33 Renshaw
000005 03003 Prentice, Anna                71.00               2 610 Renshaw
  
```

Part 2: Editing a Template

6. There are different ways to navigate to the Template Edit panel. The “TE” (Template Edit) command is one way.
 - Type **TE** (Template Edit) on the command line, then **ENTER**.

```

Edit                                         DNET074.ADLAB.CUST1
Command ==> TE █
  
```

7. The Template Edit panel is displayed.

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```

File Manager                               Field Selection/Edit                               Line 1 of 15
Command ==> █                               Scroll CSR

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : _____ +
2 Sel: _____ +
Offset 0
Cmd Seq SHC Ref Field Name                Picture  Type Start Length
**** Top of data ****
_____ 1 1 CUST-REC                        AN      1    331
_____ 2 2 CUSTOMER-KEY                    AN      1     5
_____ 3 3 CUST-ID                          X(5)    AN     1     5
_____ 4 2 NAME                            X(17)   AN     6    17
_____ 5 2 ACCT-BALANCE                     S9(7)V99 PD    23     5
_____ 6 2 ORDERS-YTD                       S9(4)   BI     28     2
_____ 7 2 ADDR                             X(20)   AN    30    20
_____ 8 2 CITY                             X(14)   AN    50    14
_____ 9 2 STATE                            X(02)   AN    64     2
_____ 10 2 COUNTRY                         X(11)   AN    66    11
_____ 11 2 MONTH OCCURS 12 TIMES          S9(7)V99 PD    77     5
  
```

8. Note: From this panel, you can specify selection criteria and field formatting, among other things. **Remember that you can use the “TE” command at any time during your edit session to view or change the template.**
9. In a few steps you will update the template, but right now, exit from Template Edit:
 - Press **PF12** (Cancel).
10. The Edit panel is displayed. Exit from the editor:
 - Press **PF3**.
11. Next, you will specify record selection criteria in the template. There are two methods to specify criteria: 1) as a free format expression, or 2) “by field”. In the next steps you will use the free format method.
12. The Edit Entry panel is displayed. Leave all of the fields unchanged, except:
 - Type / (slash) in the Edit Template field.
 - Press **ENTER**.



```

File Manager                               Edit Entry Panel
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name 'DNET074.ADLAB.CUST1' +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . . _____ Record sampling _
  Inplace edit . . . _ Prevent inserts and deletes
Copybook or Template:
  Data set name . . . 'DNET074.ADLAB.COPYLIB(CUST1) '
  Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template  Start position type  Enter "/" to select option
 1 1. Above         - 1. Key          / Edit template █ Type (1,2,S)
 2 2. Previous     - 2. RBA         - Include only selected records
 3 3. None         - 3. Record number - Binary mode, reclen _____
 4 4. Create dynamic - Create audit trail
  
```

Part 3: Selecting Records

13. Note: The Field Selection / Edit panel is displayed. You can enter free format selection here.

14. Enter criteria to select all records where the Acct-Balance is greater than 1000:

- Type **#5 > 1000** in the Sel field.
- Note: this uses the field reference number (#5) for the ACCT-BALANCE field. Free format criteria have the syntax of a REXX condition. In free-format criteria, you can also use REXX functions and REXX-like functions that are provided by File Manager. The File Manager User's Guide and Reference manual describes available functions.
- You have the option to use the template without saving it ("run temporary"), or to save the template. Run the template without saving it:
 - Press **PF6**. PF6 is set to the "RUNTEMP" (run temporary) command.

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```

File Manager                               Field Selection/Edit                               Line 1 of 15
Command ==>                               Scroll CSR

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id :                                     +
2 Sel: #5 > 1000                           +
Offset 0
Cmd Seq SHC Ref Field Name                Picture  Type Start Length
**** Top of data ****
-----
1 1 CUST-REC                                AN      1     331
2 2 CUSTOMER-KEY                            AN      1     5
3 3 CUST-ID                                X(5)    AN      1     5
4 2 NAME                                    X(17)   AN      6    17
5 2 ACCT-BALANCE                            S9(7)V99 PD    23     5
6 2 ORDERS-YTD                              S9(4)   BI     28     2
7 2 ADDR                                    X(20)   AN     30    20
8 2 CITY                                    X(14)   AN     50    14
9 2 STATE                                    X(02)   AN     64     2
10 2 COUNTRY                                X(11)   AN     66    11
11 2 MONTH OCCURS 12 TIMES                  S9(7)V99 PD    77     5
F1=Help   F2=Split   F3=Exit   F4=Expand   F5=RFind   F6=RunTemp
F7=Up     F8=Down    F9=Swap   F10=Left    F11=Right  F12=Cancel
  
```

15. The Edit panel is displayed. Notice that there are some “Not Selected” lines. These are the records that did not match the selection criteria. Verify that only records with Acct-Balance greater than 1000 are displayed, as shown:

- IF your results are not correct, then check that you entered your selection criteria correctly. Use the **TE** command to edit the template. This will give you a chance to test what you have learned so far about using a template. Hint: After fixing your selection criteria on the template Field Selection / Edit panel, use PF6 (Run Temporary) to return to the Edit panel.

```

Edit                                         DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==>                               Scroll CSR
                                           Format TABL

      CUST-ID NAME                            ACCT-BALANCE ORDERS-YTD ADDR
      #3 #4 #5 #6 #7
      AN 1:5 AN 6:17 PD 23:5 BI 28:2 AN 30:20
      <---> <---+-----1-----> <---+-----1> <---+> <---+-----1----->
000000 **** Top of data ****
-----
000003 02202 Major, Art                       1234.56          2 Line(s) not selected
                                           5 1512 Pine Bluff
-----
000010 06900 Bacon, Chris P.                   1001.01          6 Line(s) not selected
                                           0 1134 Rosetta
-----
000021 11004 Ness, Luke                       1234.00          10 Line(s) not selected
                                           3 5166 Sprinkle Road
-----
000035 30005 Wynn, Betty-May                   8000.08          13 Line(s) not selected
                                           7 9005 Murphy Road
-----
000046 39900 Dewitt, Howdy                    15000.50         10 Line(s) not selected
                                           1 4111 Northside PkWay
000047 40045 Wood, Holly                      25000.02         7 90210 Mt. Lee Rd
000048 40000 Burr, Tim                        7766.55         0 4111 Northside PkWay
  
```

16. The Edit panel is displayed. Exit from the editor:

- Press **PF3**.

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17. In the previous steps, you entered selection criteria using a free format expression. In the next steps, you will use a different method to enter selection criteria: the “by field” method.

18. The Edit Entry Panel is displayed. Leave all of the fields unchanged, except:

- Type / (slash) in the Edit Template field.
- Press **ENTER**.

```
File Manager                               Edit Entry Panel
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name 'DNET074.ADLAB.CUST1' +
Member . . . . . _____ Blank or pattern for member list
Volume serial . . _____ If not cataloged
Start position . . _____ +
Record limit . . _____ Record sampling _
Inplace edit . . . - Prevent inserts and deletes
Copybook or Template:
Data set name . . 'DNET074.ADLAB.COPYLIB(CUST1)'
Member . . . . . _____ Blank or pattern for member list
Processing Options:
Copybook/template Start position type Enter "/" to select option
1 1. Above - 1. Key / Edit template █ Type (1,2,S)
2 2. Previous - 2. RBA - Include only selected records
3 3. None 3. Record number - Binary mode, reclen _____
4 4. Create dynamic - Create audit trail
```

19. The Field Selection / Edit panel is displayed. Choose “By Field” selection:

20. Type 2 on the command line, then **ENTER**.

```
File Manager                               Field Selection/Edit                               Li
Command ==> 2                               S

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : _____
2 Sel: _____
Offset 0
Cmd Seq SHC Def Field Name                               Picture Type S
```

21. The Record Selection Criteria panel is displayed. Enter criteria to select records where the Acct-Balance field is greater than 1000:

- On the line for the “Acct-Balance” field, type > (greater than) in the Operator column.
- On the line for the “Acct-Balance” field, type **1000** in the Value column.
- Note: If needed, help is available by pressing PF1.
- Press **PF3**.

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```

File Manager                               Record Selection Criteria                Line 1 of 14
Command ==>                               Scroll CSR

Cmd Con ( Field Name                        Op Value                                )
<-> - <---+---1---+---2---+---3---> <-> <---+---1---+---2---+---
*** **** Top of data ****
--- AND - CUST-REC
--- AND - CUSTOMER-KEY
--- AND - CUST-ID
--- AND - NAME
--- AND - ACCT-BALANCE > 1000
--- AND - ORDERS-YTD
--- AND -

```

22. The Field Selection / Edit panel is displayed. Notice that File Manager automatically formatted the free format criteria on this panel. Exit from this panel:

- Press **PF3**.

```

File Manager                               Field Selection/Edit                    Line 1 of 15
Command ==>                               Scroll CSR

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : █
2 Sel: #5 > 1000
Offset 0
Cmd Seq SHC Ref Field Name                Picture Type Start Length
-----
      1 1 CUST-REC                          AN      1    331
      2 2 CUSTOMER-KEY                       AN      1     5
      3 3 CUST-ID                            X(5)    AN      1     5
      4 4 NAME                                X(17)   AN      1    17

```

23. The Template Save panel is displayed. You have the option to save the template, or use the template without saving it (“run temporary”). Save the template:

- Type **ADLAB.TEMPLATE(CUST1)** in the Data set/path name field.
 - This will save the template with the name CUST1 in your template library. A template library can be any PDS or PDSE with LRECL=80 and RECFM=FB.
 - Note: depending on your TSO profile settings, you may need to type the full data set name with your personal file prefix.
- Press **PF3** to save the template.

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```

- Command ==> _____ Template Save
F
C
- To discard changes to your template, press PF12/Cancel.
1 To use changes without saving, press PF6/RunTemp.
2
0 To save changes, type a data set and member name below, then press
C PF3/Exit.

Data set name ADLAB.TEMPLATE(CUST1) █
Member . . . . . _____

F1=Help      F2=Split      F3=Exit      F6=RunTemp   F7=Backward
F8=Forward   F9=Swap       F12=Cancel
  
```

24. The Edit Entry Panel is displayed.

- Notice that the template was saved, and the name of the new template was automatically filled in.
- Press **ENTER**.

```

File Manager                               Edit Entry Panel                               Template saved
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name 'DNET074.ADLAB.CUST1' _____ +
Member . . . . . _____ Blank or pattern for member list
Volume serial . . _____ If not cataloged
Start position . . _____ +
Record limit . . _____ Record sampling _
Inplace edit . . _____ Prevent inserts and deletes
Copybook or Template:
Data set name . . 'DNET074.ADLAB.TEMPLATE' _____
Member . . . . . CUST1 _____ Blank or pattern for member list
Processing Options:
Copybook/template Start position type Enter "/" to select option
1 1. Above - 1. Key - Edit template _ Type (1,2,S)
2. Previous - 2. RBA - Include only selected records
3. None - 3. Record number - Binary mode, reclen _____
4. Create dynamic - Create audit trail
  
```

25. The Edit panel is displayed. Notice that there are some “Not Selected” lines. These are the records that did not match the selection criteria. Verify that only records with Acct-Balance greater than 1000 are displayed, as shown:

- IF your results are not correct, then check that you entered your selection criteria correctly. Use the **TE** command to edit the template.

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```

Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==> |                                                                Scroll CSR
                                                                Format TABL

  CUST-ID NAME                               ACCT-BALANCE ORDERS-YTD ADDR
  #3      #4                               #5          #6 #7
  AN 1:5  AN 6:17                          PD 23:5     BI 28:2 AN 30:20
  <--->  <---+-----1----->  <---+-----1>  <---+> <---+-----1----->
000000 **** Top of data ****
-----
000003 02202 Major, Art                      1234.56      - 2 Line(s) not selected
                                     5 1512 Pine Bluff
-----
000010 06900 Bacon, Chris P.                 1001.01     - 6 Line(s) not selected
                                     0 1134 Rosetta
-----
000021 11004 Ness, Luke                      1234.00     - 10 Line(s) not selected
                                     3 5166 Sprinkle Road
-----
000035 30005 Wynn, Betty-May                 8000.08     - 13 Line(s) not selected
                                     7 9005 Murphy Road
-----
000046 39900 Dewitt, Howdy                  15000.50    - 10 Line(s) not selected
                                     1 4111 Northside PkWay
000047 40045 Wood, Holly                    25000.02    7 90210 Mt. Lee Rd
000048 40009 Burr, Tim                      7766.55    0 4111 Northside PkWay
  
```

26. The Edit panel is displayed. “Not Selected” lines are one type of shadow line. You can use the SHADOW command to display or hide shadow lines:

- Type **SHADOW ALL OFF** on the command line, then **ENTER**.
- Notice that the “Not Selected” lines disappear.
- Type **SHADOW ALL ON** on the command line, then **ENTER**.
- Notice that the “Not Selected” lines are displayed.

27. The RECSTATS command can be used to get record counts.

- Type **RECSTATS** on the command line, then **ENTER**.
- Notice that information about the file is displayed, such as record lengths and how many changes are pending.
- Type **PF8** (scroll forward).
- Notice that the number of records selected, and not selected, are displayed.
- Press **PF3** to exit the RECSTATS display.

Part 4: Selecting Fields

28. In the next steps, you will select only certain fields for display. Edit the template:

- Type **TE** (Template Edit) on the command line, then **ENTER**.

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```

Edit                               DNET074.ADLAB.CUST1
Command ==> TE █

      CUST-ID NAME                ACCT-BALANCE ORDERS-YTD ADD
      #3      #4                    #5          #6 #7
      AN 1:5  AN 6:17                PD 23:5    BI 28:2 AN
      <---->  <----+----1----+-->  <----+----1>  <----+> <--
000000 **** Top of data ****
-----
000003 02202 Major, Art             1234.56
-----
000010 06900 Bacon, Chris P.       1001.01
-----

```

29. By default, all elementary fields are displayed. Select the fields to be displayed, specify the order in which fields are displayed, and “hold” a field (to keep it on the display when scrolling)::

- Type **S** (select) in the Cmd column next to the following fields:
 - CUST-ID
 - NAME
 - ACCT-BALANCE
 - ADDR
 - CITY
 - OCCUPATION (you may need to scroll forward (PF8) to see this field)
- In the Seq (sequence) column:
 - Type **1** for the NAME field.
 - Type **2** for the OCCUPATION field.
- Press **ENTER** .

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```
File Manager                               Field Selection/Edit                               Line 1 of 15
Command ==>                               Scroll CSR

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id :                                     +
2 Sel: #5 > 1000                           +
Offset 0
Cmd Seq SHC Ref Field Name                Picture  Type Start Length
-----
      1 1 CUST-REC                          AN       1    331
      2 2 CUSTOMER-KEY                       AN       1     5
s      3 3 CUST-ID                            X(5)     AN       1     5
s      4 2 NAME                               X(17)    AN       6    17
s      5 2 ACCT-BALANCE                       S9(7)V99 PD    23     5
      6 2 ORDERS-YTD                          S9(4)    BI    28     2
s      7 2 ADDR                               X(20)    AN    30    20
s      8 2 CITY                               X(14)    AN    50    14
      9 2 STATE                               X(02)    AN    64     2
      10 2 COUNTRY                            X(11)    AN    66    11
s     11 2 MONTH OCCURS 12 TIMES              S9(7)V99 PD    77     5
s     12 2 OCCUPATION                          X(30)    AN   137    30
```

- Type **H** (hold) in the Cmd column for the NAME field.

```
      3 3 CUST-ID
h      4 2 NAME
      5 2 ACCT-BALANCE
```

- Press **PF3**.

30. The Edit panel is displayed. Notice that only the selected fields are displayed. Name and Occupation are the first fields displayed, as shown here:

```
Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==>                               Scroll CSR
                                           Format TABL

      NAME                OCCUPATION                CUST-ID ACCT-BALANCE
      #4                #12                #3      #5
      AN 6:17            AN 137:30            AN 1:5   PD 23:5
      <-----1-----> <-----1-----2-----> <----> <-----1>
000000 **** Top of data ****
-----
000003 Major, Art      College student      02202      1234.56
-----
000010 Bacon, Chris P. Chef                06900      1001.01
-----
                                           24 Line(s) not selected
```

31. IF your results are not correct, then check that you selection the fields correctly. Use the **TE** command to get started.

32. Scroll to the right.

- Press **PF11**.
- Notice that the NAME field is still displayed. It is a “held” field.

33. Switch to SNGL format.

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- Type **FS** on the command line, then **ENTER**.

34. Notice that only the selected fields are shown in SNGL format.

Part 5: Make a copy of a Template

35. Note: Sometimes you may want to save a copy of a template, so that you can make changes to the copy while leaving the original template unchanged. In the next steps you will make a copy of a template.

36. Edit the template:

- Type **TE** (Template Edit) on the command line, , then **ENTER**.

37. The Field Selection / Edit panel is displayed. Save the template with a new name:

- Type **SAVEAS** on the command line, then **ENTER**.

```
File Manager                               Field Selection/Edit                               Line 1 of 15
Command ==> saveas                                                                    Scroll CSR
----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : _____+
2 Sel: #5 > 1000 _____+
Offset _____0
Cmd Seq SHC Ref Field Name                               Picture   Type Start Length
-----
          **** Top of data ****
          1 1 CUST-REC                                     AN         1   331
          2 2 CUSTOMER-KEY                               AN         1    5
          S 3 3 CUST-ID                                   X(5)       AN         1    5
          1 SH 4 2 NAME                                   X(17)      AN         6   17
```

- The Template Save panel is displayed.
- Type **ADLAB.TEMPLATE(CUST1NEW)** in the Data set name field.
 - Note: depending on your TSO profile settings, you may need to type the full data set name with your personal file prefix.
- Press **PF3**.

```
----- Template Save -----
- Command ==> _____
F
C
- To discard changes to your template, press PF12/Cancel.
1 To use changes without saving, press PF6/RunTemp.
2
0 To save changes, type a data set and member name below, then press
C PF3/Exit.
Data set name ADLAB.TEMPLATE(CUST1NEW)
Member . . . . _____
```

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38. The Field Selection / Edit panel is displayed. The DESCRIBE command can be used to show information about a template:

- Type **DESCRIBE** on the command line, then **ENTER**.

39. Notice that you are now using the new template named CUST1NEW.

40. Exit from the editor:

- Press **PF3** several times until you exit from the editor.



Lab Exercise 5

More Complex Selection Criteria

In this exercise you will:

- Edit a template
- Use the EXPAND command to allow entry of extensive freeform criteria
- Specify complex selection criteria using selection “by field”
- View the results

Part 1: Edit a new Template

1. Starting from the Edit Entry panel, use a copybook to create a new template.
 - Type **ADLAB.CUST1** in the Data set/path name field.
 - Type **ADLAB.COPYLIB(CUST1)** in the Copybook or Template Data set name field.
 - Type **1** (above) in the “Copybook / Template” option field.
 - Type **/** (slash) in the Edit Template field.
 - Press **ENTER**.

```
File Manager                               Edit Entry Panel
Command ==>> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name ADLAB.CUST1 _____ +
Member . . . . . _____ Blank or pattern for member list
Volume serial . . _____ If not cataloged
Start position . . _____ +
Record limit . . _____ Record sampling _
Inplace edit . . . _ Prevent inserts and deletes

Copybook or Template:
Data set name . . ADLAB.COPYLIB _____
Member . . . . . CUST1 _____ Blank or pattern for member list

Processing Options:
Copybook/template Start position type Enter "/" to select option
1 1. Above - 1. Key / Edit template _ Type (1,2,S)
2. Previous 2. RBA - Include only selected records
3. None 3. Record number - Binary mode, reclen _____
4. Create dynamic - Create audit trail
```

Part 2: Expand the free format criteria field

2. The Field Selection / Edit panel is displayed. From here, you can enter free format criteria in the Sel: field. Free format criteria have the syntax of a REXX condition. Any standard REXX

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function can be used, and File Manager also provides many REXX-like functions. The File Manager User's Guide has detailed information about free format criteria syntax and functions.

- If your criteria are too large to fit on the line available, you can use the EXPAND command:
 - Place the cursor on the Sel: (selection criteria) field.
 - Press **PF4** . (PF4 is set to EXPAND) .

```
File Manager                               Field Selection/Edit                               Line 1 of 15
Command ==>>                               Scroll CSR_

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id :                                     +
2 Sel: █                                   +
Offset 0
Cmd Seq SHC Ref Field Name               Picture Type Start Length
-----
          1 1 CUST-REC                       AN      1    331
          2 2 CUSTOMER-KEY                    AN      1      5
          **** Top of data ****
```

- The expanded criteria panel is displayed. This panel allows you to enter and edit extensive freeform criteria.

```
----- FMNSLEXP+0 -----

Command ==>>                               Line 1 of 443
                                             Scroll ==>> PAGE

█

F1=Help    F2=Split  F3=Exit   F5=Rfind  F6=Rchange F7=Up
F8=Down    F9=Swap   F10=Left F11=Right
```

- Press **PF3** to exit.

Part 3: Enter Complex Criteria “by field”

- The Field Selection / Edit panel is displayed. Perform record selection “by field”.
 - Type 2 on the command line, then **ENTER**.

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```
File Manager                               Field Selection/Edit                               Line
Command ==> 2                               Scroll

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : _____
2 Sel: _____
Offset _____ 0
Cmd Seq SHC Ref Field Name                               Picture Type Sta
```

6. The Record Selection Criteria panel is displayed. In the next steps you will specify criteria that will select records where:

- o (Cust-ID <= '30000' and Acct-Bal > 999.99), OR...
- o Cust-ID = '33333' or '55555'

7. Begin by making entries as show here:

```
File Manager                               Record Selection Criteria                               Line 1 of 14
Command ==>                               Scroll CSR

Cmd Con ( Field Name                               Op Value )
<-> - <-----1-----2-----3-----> <-> <-----1-----2-----+
*** **** Top of data ****
--- AND - CUST-REC
--- AND - CUSTOMER-KEY
--- AND - CUST-ID <= '30000'
--- AND - NAME
--- AND - ACCT-BALANCE > 999.99
--- AND - ORDERS-YTD
```

8. Repeat the CUST-ID line, using the **R** line command, then **ENTER**.

```
Cmd Con ( Field Name                               Op Value )
<-> - <-----1-----2-----3-----> <-> <-----1-----2-----+
*** **** Top of data ****
--- AND - CUST-REC
--- AND - CUSTOMER-KEY
R AND - CUST-ID <= '30000'
--- AND - NAME
```

9. Move the second CUST-ID line after the ACCT-BALANCE-ID line, using the **M** (move) the **A** (after) line commands, then **ENTER**.

```
--- AND - CUSTOMER-KEY
--- AND - CUST-ID <= '30000'
M AND - CUST-ID <= '30000'
--- AND - NAME
A AND - ACCT-BALANCE > 999.99
--- AND - ORDERS-YTD
```

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10. Make changes to the criteria so that it matches this example. **Note the left and right parentheses, the “OR” condition for CUST-ID, the CO condition, and values: ‘33333’, ‘55555’.**

- After entering all criteria, press **PF3**.

```

AND CUSTOMER-KEY
AND ( CUST-ID <= '30000'
AND NAME
AND ACCT-BALANCE > 999.99 )
OR CUST-ID CO '33333', '55555'
AND ORDERS-YTD
AND ADDR
  
```

11. The Field Selection / Edit panel is displayed. Notice the free format criteria that was generated.

- Press **PF3**.

```

File Manager                               Field Selection/Edit                               Line 1 of 20
Command ==>                               Scroll CSR

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id :                                     +
2 Sel: (#3 <= '30000' & #5 > 999.99 ) | FLD CO(1,5,C,'33333','55555')   +
Offset 0
Cmd Seq SHC Ref Field Name                Picture  Type Start Length
-----
          1 1 CUST-REC                      AN      1      33
          2 2 CUSTOMER-KEY                  AN      1
  
```

12. The Template Save panel is displayed. Save the template with a new name:

- Type **ADLAB.TEMPLATE(CUST1SEL)** in the Data set name field.
- Press **PF3** to save the template.

Tip: Values in a template are case sensitive!

- For example, say you search for “ANN” in the Name field, with this criteria:
`FLD_CO(6,17,C,'ANN')`
 - This uses the “FLD_CO” (field contains) function to search for “ANN” in the field starting in position 6 for a length of 17. Remember that functions (like FLD_CO) are described in the User’s Guide manual.
 - The above criteria would NOT find a record containing “Ann”, with lower case n’s.
 - Some of the File Manager REXX-like functions allow non-case-sensitive searches. For example, if you code selection criteria like this:
`FLD_CO(6,17,'U','ANN')`
- the ‘U’ operand converts the data in the record to upper case before comparing. This search WILL find both “ANN” and “Ann”.

Part 4: View the Results

13. In the next steps, you will see the results of your selection criteria.

14. The Edit Entry panel is displayed.

- Press **ENTER**.

```

File Manager                               Edit Entry Panel                               Template saved
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name ADLAB.CUST1 _____ +
  Member . . . . . _____ Blank or pattern for member list
  Volume serial . . _____ If not cataloged
  Start position . . _____ +
  Record limit . . _____ Record sampling _
  Inplace edit . . . _ Prevent inserts and deletes
Copybook or Template:
  Data set name . . DNET074.ADLAB.TEMPLATE'
  Member . . . . . CUST1SEL _____ Blank or pattern for member list
Processing Options:
Copybook/template  Start position type  Enter "/" to select option
 1 1. Above          _ 1. Key          _ Edit template _ Type (1,2,S)
 2 2. Previous      _ 2. RBA         _ Include only selected records
 3 3. None          _ 3. Record number _ Binary mode, reclen _____
 4 4. Create dynamic _ Create audit trail
    
```

15. The Edit panel is displayed. If you are not in TABL format, use the FT (format table) command to switch to TABL format.

16. You will see records selected similar to the example shown. Your results may be somewhat different since you have made changes to the file. If your results are incorrect, edit the template, and check/correct your selection criteria. Remember, you can use the TE (Template Edit) command to edit the template.

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```

Edit                               DNET074.ADLAB.CUST1                               Rec 3 of 100
Command ==>                               Scroll CSR
                                           Format TABL

```

CUST-ID	NAME	ACCT-BALANCE	ORDERS-YTD	ADDR
#3	#4	#5	#6	#7
AN 1:5	AN 6:17	PD 23:5	BI 28:2	AN 30:20
<--->	<---+---1---+-->	<---+---1>	<---+>	<---+---1---+--->
000003	02202 Major, Art	1234.56		5 1512 Pine Bluff
				6 Line(s) not selected
000010	06900 Bacon, Chris P.	1001.01		0 1134 Rosetta
				10 Line(s) not selected
000021	11004 Ness, Luke	1234.00		3 5166 Sprinkle Road
				20 Line(s) not selected
000042	33333 Graham, Holly	0.00		1 3100 Oaktree Ct
				20 Line(s) not selected
000063	55555 DeMann, Hugh	12345.54		7 55 Segal Road
				37 Line(s) not selected
000101	**** End of data ****			

17. Exit from the editor:

- Press **PF3** to exit from the editor.



Lab Exercise 6

Using a Dynamic Template

In this exercise you will:

- Create a Dynamic Template to lay out fields in a record
 - Specify selection criteria to limit records displayed
 - Save the template
 - View the results
 - Edit the new template and make changes to it
 - View the results
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the File Manager menu.
 3. Select the Edit option.
 - Type 2 on the command line, then ENTER.

Part 1: Create a Dynamic Template

4. The Edit Entry Panel is displayed. Create a new Dynamic Template:
 - Type (or verify) ADLAB.CUST1 in the Data set/path name field.
 - Type 4 (Create Dynamic) in the “Copybook / Template” option field.
 - Note: The Copybook / Template name will be ignored.
 - Press ENTER.

```
File Manager                               Edit Entry Panel
Command ==>> █

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name ADLAB.CUST1              +
Member . . . . .                          Blank or pattern for member list
Volume serial . . . . .                    If not cataloged
Start position . . . . .                   +
Record limit . . . . .                    Record sampling _
Inplace edit . . . . .                    Prevent inserts and deletes
Copybook or Template:
Data set name . . . . . 'DNET074.ADLAB.COPYLIB
Member . . . . . CUST1                    Blank or pattern for member list
Processing Options:
Copybook/template  Start position type  Enter "/" to select option
 4 1. Above          - 1. Key          - Edit template _ Type (1,2,S)
   2. Previous      - 2. RBA          - Include only selected records
   3. None          - 3. Record number - Binary mode, reclen ____
   4. Create dynamic - Create audit trail
```

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5. The Dynamic Template panel is displayed. Notice that you can define fields in the record. Make field definitions as shown here:

```
File Manager                               Dynamic Template
Command ==> _____

1 Edit template field attributes and selection

Cmd Con ( Start Length Type Op Value
  <-> - <----> <----> <> <-> <--+---1---+---2---+
*** **** Top of data ****
  ___ - 1 5
  ___ AND - 6 17
  ___ AND - 23 5 pd
  ___ AND - 137 30
  ___ AND
```

6. You can also name the fields you have defined.

- Press **PF11**.
- Type field names as shown:

```
Process Options Help
File Manager                               Dynamic Template                               Line 1 of 15
Command ==> _____                               Scroll CSR

1 Edit template field attributes and selection

Cmd Con ( Field Name                               Op Value                               )
  <-> - <--+---1---+---2---+---3---> <-> <--+---1---+---2---+---
*** **** Top of data ****
  ___ Cust ID
  ___ AND - Name
  ___ AND - Acct Balance
  ___ AND - Occupation
  ___ AND
```

7. Press **PF3**.
8. The Template Save panel is displayed. Save the template in your ADLAB.TEMPLATE library with the name CUST1DYN:
- Type **ADLAB.TEMPLATE(CUST1DYN)** in the Data set name field.
 - Press **PF3** to save.

Part 2: View the Results

9. The Edit panel is displayed. If you are not in TABL format, then switch to TABL format (FT command). Notice that the fields you defined are shown.

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```

Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==> █                               Scroll CSR
                                           Format TABL

  Cust ID Name                      Acct Balance Occupation
  #2      #3                          #4 #5
  AN 1:5  AN 6:17                      PD 23:5 AN 137:30
  <----> <----+-----1-----> <----+-----> <----+-----1-----2----->
000000 **** Top of data ****
000001 01001 Lynn, Amanda              6768 Musician
000002 02200 Graham, Anna              61005 Cryptographer
000003 02202 Major, Art                123456 College student
000004 03003 Prentice, Anna            39663 New hire
000005 03390 Deeds, Darren             7400 Air rescue pilot
000006 05570 Deeds, Fred              22227 Garage attendant
  
```

Tip: An easy way to see the entire record.

- Notice that only the defined fields are shown, and the rest of the record is hidden.
- You can always edit the template (TE command) and add the other fields, but an easy way to see the entire record is to switch to CHAR format. (The FC command will do it.)

Part 3: Edit the Template

10. Edit the dynamic template:

- Type **TE** (Template Edit) on the command line, then **ENTER**.

11. The Field Selection / Edit panel is displayed. Edit the dynamic template definition:

- Type **1** on the command line, then **ENTER**.

```

File Manager                               Field Selection/Edit
Command ==> 1 █
----- Selection expression -----
1 Sel: _____
Cmd Seq SHC Ref Field Name                               Picture
      **** Top of data ****
  
```

12. The Dynamic Template panel is displayed again. Notice that you can delete fields or define additional fields as needed fields in the record. You can also specify selection criteria on this panel. **Type selection criteria as shown:**

```

Cmd Con ( Start Length Type Op Value
  <-> - <----> <----> <> <-> <----+-----1-----2-----3-----4--
**** **** Top of data ****
  ___ AND - 1 5 AN ___
  ___ AND - 6 17 AN CO 'ANN', 'Ann' █
  ___ AND - 23 5 PD ___
  ___ AND - 137 30 AN ___
**** **** End of data ****
  
```

13. Press **PF3** to exit.

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14. The Field Selection / Edit panel is displayed.

- Press **PF3** to exit.

Part 4: View the Results

18. The Edit panel is displayed. You should see records selected similar to the example shown. If your results are incorrect, edit the template, and check/correct your selection criteria.

```

Edit                               DNET074.ADLAB.CUST1                               Rec 0 of 100
Command ==> █                               Scroll CSR
                                           Format TABL

  Cust ID Name                      Acct Balance Occupation
  #2      #3                          #4 #5
  AN 1:5  AN 6:17                      PD 23:5 AN 137:30
  <---->  <----+-----1----->  <----+-----> <----+-----1-----+-----2----->
000000 **** Top of data ****
- - - - - 1 Line(s) not selected
000002 02200 Graham, Anna              61005 Cryptographer
- - - - - 1 Line(s) not selected
000004 03003 Prentice, Anna            39663 New hire
- - - - - 3 Line(s) not selected
000008 06106 Lender, Annette          48884 Teacher, artist

```

19. Exit from the editor:

- Press **PF3** to exit from the editor.

Lab Exercise 7

Working with Multiple record Types

In this exercise you will:

- Examine an example of a copybook that describes two types of records
 - Edit a file that contains two types of records
 - Specify “record identification criteria” to tell File Manager how to differentiate between the different types of records
 - View the results
 - Use the SHOW SUP ON command to view all record types
 - Use the SHOW SUP OFF command to view only one record type
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the File Manager menu.
 3. Select the Edit option.
 - Type **2** on the command line, then **ENTER**.

Part 1: Examine and select a multi-record copybook

4. The Edit Entry Panel is displayed. Edit a file that contains multiple record types, and display a member list of a copybook library (by leaving the copybook member name blank):
 - Type **ADLAB.FILES(CUST2)** in the Data set/path name field.
 - Type **ADLAB.COPYLIB** in the Copybook or Template Data set name field.
 - Leave the copybook member name blank.
 - Type **1** (above) in the “Copybook / Template” option field.
 - Press **ENTER**.

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```

File Manager                               Edit Entry Panel
Command ==> _____

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name ADLAB.FILES(CUST2)      +
Member . . . . . _____ Blank or pattern for member list
Volume serial . . _____ If not cataloged
Start position . . _____ +
Record limit . . _____ Record sampling _
Inplace edit . . . _ Prevent inserts and deletes

Copybook or Template:
Data set name . . ADLAB.COPYLIB
Member . . . . . █ _____ Blank or pattern for member list

Processing Options:
Copybook/template Start position type Enter "/" to select option
 1 1. Above         - 1. Key           - Edit template _ Type (1,2,S)
 2 2. Previous      - 2. RBA           - Include only selected records
 3 3. None          - 3. Record number - Binary mode, reclen _____
 4 4. Create dynamic - Create audit trail
  
```

5. A selection list is displayed, showing the members of the copybook library. First, browse the copybook:

- Type **B** (browse) next to copybook CUST2, then **ENTER**.

```

File Manager                               Template Member Selection           Row 1 of 15
Command ==> _____                               Scroll CSR
DSNAME DNET074.ADLAB.COPYLIB
Sel Name Prompt Alias-of Size Created Changed ID
- CUSTCOPY
- CUSTCPYA 32 05/09/02 05/09/02 18:17:04 DNET074
- CUSTMAST
- CUSTMULT 40 06/01/24 06/01/24 09:03:14 DNET074
- CUSTOLD 40 06/01/24 06/01/24 09:02:54 DNET074
- CUSTREC 39 06/01/24 06/01/24 09:02:27 DNET074
- CUSTREC1
- CUSTREC2
- CUST1 19 06/02/06 06/02/06 11:40:00 DNET074
- CUST1DYN
b █ CUST2 24 06/02/07 06/02/07 16:19:17 DNET074
- IGZEDT4
- ORDREC
  
```

6. The Browse panel is displayed. Notice that the copybook contains more than one “01” level. (CUSTOMER-RECORD and PRODUCT-RECORD). File Manager will process every “01” level in a copybook as a different type of record. Exit from browsing the copybook:

- Press **PF3**.

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```

EDIT          DNET074.ADLAB.COPYLIB(CUST2) - 01.08          Columns 00001 00072
Command ==> |                                           Scroll ==> CSR
***** ***** Top of Data *****
000001      * -----
000002      *   Sample COBOL Copybook for IBM PD Tools Workshops
000003      *   Describes file <userid>.ADLAB.FILES(CUST2)
000004      * -----
000005      01  CUSTOMER-RECORD.
000006          05  CUSTOMER-KEY.
000007              10  CUST-ID                PIC X(5).
000008              10  RECORD-TYPE            PIC X.
000009              10  FILLER                 PIC X(7).
000010          05  NAME                       PIC X(17).
000011          05  ACCT-BALANCE                PIC S9(7)V99  COMP-3.
000012          05  ORDERS-YTD                  PIC S9(4)    COMP.
000013          05  CITY                       PIC X(15).
000014          05  OCCUPATION                  PIC X(28).
000015      01  PRODUCT-RECORD.
000016          05  PRODUCT-KEY.
000017              10  CUST-ID                PIC X(5).
000018              10  RECORD-TYPE            PIC X.
000019              10  PRODUCT-ID              PIC X(7).
  
```

7. The member selection list is displayed. Select the copybook:

- Type **S** (select) next to copybook CUST2, then **ENTER**.

```

File Manager          Template Member Selection          Row 1 of 15
Command ==> |                                           Scroll CSR
DSNAME DNET074.ADLAB.COPYLIB
Sel Name      Prompt      Alias-of      Size Created      Changed      ID
- CUSTCOPY
- CUSTCPYA      32 05/09/02 05/09/02 18:17:04 DNET074
- CUSTMAST
- CUSTMULT      40 06/01/24 06/01/24 09:03:14 DNET074
- CUSTOLD      40 06/01/24 06/01/24 09:02:54 DNET074
- CUSTREC      39 06/01/24 06/01/24 09:02:27 DNET074
- CUSTREC1
- CUSTREC2
- CUST1      19 06/02/06 06/02/06 11:40:00 DNET074
- CUST1DYN
s | CUST2      *Edited      24 06/02/07 06/02/07 18:08:05 DNET074
- IGZEDT4
- ORDREC
- DECBUE
  
```

- The File Manager Edit panel is displayed. If you are not already in TABL format, then switch to TABL format (the FT command).

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```

Edit                               DNET074.ADLAB.FILES(CUST2)                               Rec 0 of 100
Command ==> _____                               Scroll CSR
                                                Format TABL
CUST-ID RECORD-TYPE FILLER  NAME                               ACCT-BALANCE ORDERS-YTD
#3      #4          #5      #6                               #7          #8
AN 1:5  AN 6:1     AN 7:7  AN 14:17                          PD 31:5     BI 36:2
<---->  -         <----+> <----+----1----+> <----+----1> <----+>
000000 **** Top of data ****
000001 01001 C                               Lynn, Amanda                               67.68          9
000002 01001 P                               AG00487 Acoustic guitar                    *****      16448
000003 01001 P                               VN00048 Violin                             *****      16448
000004 02200 C                               Graham, Anna                               610.05        10
000005 02200 P                               BG00459 Bass Guitar                        *****      16448
000006 02200 P                               DS00099 Starter Drum Set                   *****      16448
000007 02200 P                               EG00057 Electric Guitar                    *****      16448
000008 02200 P                               EP00000 Electric Piano                     *****      16448
  
```

8. Notice that the headings for record type CUSTOMER-RECORD are displayed. Since all of the records in this file have the same length, and since you have not yet specified “record identification criteria”, file manager assumes that all of the records are described by the first record type in the copybook/template (CUSTOMER-RECORD).

Part 2: Record Identification Criteria

9. Note: You use “Record Identification Criteria” to identify different types of records. When file manager has identified a record, it can format with the correct record layout. In the next steps, you will specify record identification criteria for each of the record types in the file.

10. Edit the template:

- Type **TE** (template edit) on the command line, then **ENTER**.

11. The record selection panel is displayed. Edit the definition for CUSTOMER-RECORD records:

- Type **E** (edit) next to record type CUSTOMER-RECORD, then **ENTER**.

```

File Manager                               Record Type Selection                               Line 1 of
Command ==> _____                               Scroll CS
Processing Option: _ Template for segmented data
Cmd SIE Field Name                               Prompt   Offset Len
E S   **** Top of data ****
  S   CUSTOMER-RECORD                               0
  S   PRODUCT-RECORD                               0
  S   **** End of data ****
  
```

12. The Field Selection/Edit panel is displayed. Display the record identification “by field” panel:

- Type **1** on the command line, then **ENTER**.

13. The Record Identification Criteria panel is displayed.

- Note: In this file, a Record-Type of “C” indicates a Customer record.

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- Specify identification criteria as shown: then **PF3**.

```

File Manager                               Record Identification Criteria          Line 1
Command ==> _____ Scroll

Cmd Con ( Field Name                               Op Value
  <-> - <---+----1-----+----2-----+----3-----> <-> <---+----1-----+----2---
*** **** Top of data ****
  ___ ___ CUSTOMER-RECORD
  ___ AND ___ CUSTOMER-KEY
  ___ AND ___ CUST-ID
  ___ AND ___ RECORD-TYPE
  ___ AND ___ FILLER
  ___ AND ___ NAME
  ___ AND ___ ACCT-BALANCE
  ___ AND ___ ORDERS-YTD
  
```

14. The Field Selection/Edit panel is displayed. Exit from the CUSTOMER-RECORD definition:

- Press **PF3**.

```

File Manager                               Field Selection/Edit                      Line 1 of 10
Command ==> _____ Scroll CSR

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : #4 = 'C'
2 Sel:
Offset 0
Cmd Seq SHC Ref Field Name                               Picture Type Start Length
  ___ ___          1 1 CUSTOMER-RECORD                      AN      1      80
  ___ ___          2 2 CUSTOMER-KEY                          AN      1      13
  ___ ___          3 3 CUST-ID                               X(5)    AN      1      5
  
```

15. The record selection panel is displayed. So far, you have given File Manager criteria for one type of record. Now, specify criteria for the other type:

- Type **E** (edit) next to PRODUCT-RECORD, then **ENTER**.

```

File Manager                               Record Type Selection                      Lin
Command ==> _____ Scr

Processing Option: _ Template for segmented data
Cmd SIE Field Name                               Prompt Offs
  ___ SI CUSTOMER-RECORD
  E S PRODUCT-RECORD
  ___ S
  **** End of data ****
  
```

16. The Field Selection / Edit panel is displayed. Display the record identification criteria panel:

- Type **1** on the command line, then **ENTER**.

17. The Record Identification Criteria panel is displayed.

- Note: In this file, a Record-Type of “P” indicates a Product record.

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- Specify identification criteria as shown: then **PF3**.

```

File Manager                               Record Identification Criteria
Command ==>> _____

Cmd Con ( Field Name                               Op Value
  <-> - <---+-----1-----+-----2-----+-----3-----> <-> <---+-----1----->
*** **** Top of data ****
____ AND _ PRODUCT-RECORD
____ AND _ PRODUCT-KEY
____ AND _ CUST-ID
____ AND _ RECORD-TYPE
____ AND _ PRODUCT-ID
____ AND _ PRODUCT-NAME
____ AND _ DATE-PURCHASED
  
```

18. The Field Selection/Edit panel is displayed. Exit from the CONTACT-REC definition:

- Press **PF3**.

19. The Record Selection panel is displayed. At this point, you have specified identification criteria for both types of records. Exit:

- Press **PF3**.

```

File Manager                               Record Type Selection
Command ==>> _____

Processing Option: _ Template for segmented data
Cmd SIE Field Name                               Prompt Of
____ SI CUSTOMER-RECORD                          *Edited
____ SI PRODUCT-RECORD                           *Edited
**** End of data ****
  
```

20. The Template Save panel is displayed. Save the template with a new name:

- Type **ADLAB.TEMPLATE(CUST2)** in the Data set name field.
- Press **PF3**.



```

                                Template Save
Command ==> _____

To discard changes to your template, press PF12/Cancel.

To use changes without saving, press PF6/RunTemp.

To save changes, type a data set and member name below, then press
PF3/Exit.

Data set name  adlab.template(cust2) █
Member        . . . _____
    
```

Part 3: The VIEW Command

20. The Edit panel is displayed. Notice that the different record types are now recognized. One record type is “active” (displayed). In TABL format, headings for the active record type are displayed. Records that are not “active” (other types of records) are called “Suppressed” records. Notice that suppressed records appear as shadow lines.

```

Edit                                DNET074.ADLAB.FILES(CUST2)                                Template saved
Command ==> █                                                                    Scroll CSR
                                                                              Format TABL
CUST-ID RECORD-TYPE PRODUCT-ID PRODUCT-NAME DATE-PURCHASED
#3      #4          #5          #6          #7
AN 1:5  AN 6:1     AN 7:7     AN 14:25   AN 39:10
<--->  -          <---+>    <---+---1---+---2---> <---+--->
000000 **** Top of data ****
- - - - - CUSTOMER-RECORD - - - - - 1 Line(s) suppressed
000002 01001 P          AG00487 Acoustic guitar 2004-05-13
000003 01001 P          VN00048 Violin          2004-03-25
- - - - - CUSTOMER-RECORD - - - - - 1 Line(s) suppressed
000005 02200 P          BG00459 Bass Guitar 1996-04-30
000006 02200 P          DS00099 Starter Drum Set 2001-09-04
000007 02200 P          EG00057 Electric Guitar 2003-07-31
000008 02200 P          EP00090 Electric Piano 2005-05-27
000009 02200 P          MC00400 Microphone    2003-03-15
000010 02200 P          PA00760 Amplifier 11+ 1999-04-08
- - - - - CUSTOMER-RECORD - - - - - 1 Line(s) suppressed
000012 02202 P          CL00857 Cello          1998-06-30
    
```

21. You can make any record type active with the “V” line command:
- Type V (view) next to any “suppressed” record, then **ENTER**.

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```

Edit                                  DNET074.ADLAB.FILES(CUST2)
Command ==> _____

      CUST-ID RECORD-TYPE FILLER  NAME          ACCT-BA
      #3      #4          #5      #6
      AN 1:5  AN 6:1     AN 7:7  AN 14:17   PD
      <--->    -         <---+>  <---+----1----+> <---+
000000 **** Top of data ****
000001 01001  C          Lynn, Amanda
- - - - - - - - - - - - - - - - - - - - - - - - - - - 2 Line(s)
000004 02200  C          Graham, Anna
V - - - - - - - - - - - - - - - - - - - - - - - - - - - 6 Line(s)
000011 02202  C          Major, Art
- - - - - - - - - - - - - - - - - - - - - - - - - - - 3 Line(s)
000015 03003  C          Prentice, Anna
- - - - - - - - - - - - - - - - - - - - - - - - - - - 3 Line(s)

```

22. Notice that the CONTACT-RECORD records are now active. Make CUSTOMER-RECORD the active record type again:

- Type V (view) next to any CUST-REC suppressed record, then **ENTER**.

```

Edit                                  DNET074.ADLAB.FILES(CUST2)                                Template saved
Command ==> _____                                Scroll CSR
                                                        Format TABL
      CUST-ID RECORD-TYPE PRODUCT-ID  PRODUCT-NAME          DATE-PURCHASED
      #3      #4          #5          #6          #7
      AN 1:5  AN 6:1     AN 7:7     AN 14:25   AN 39:10
      <--->    -         <---+>    <---+----1----+----2----> <---+---->
000000 **** Top of data ****
- - - - - - - - - - - - - - - - - - - - - - - - - - - 1 Line(s) suppressed
000002 01001  P          AG00487  Acoustic guitar       2004-05-13
000003 01001  P          VN00048  Violin                2004-03-25
V - - - - - - - - - - - - - - - - - - - - - - - - - - - 1 Line(s) suppressed
000005 02200  P          BG00459  Bass Guitar           1996-04-30
000006 02200  P          DS00099  Starter Drum Set     2001-09-04

```

Part 4: The SHADOW Command

23. Note: The SHADOW command can be used to hide shadow lines. Shadow lines are dashed lines representing one or more record. There are three kinds of shadow lines: Suppressed, Not Selected, and Excluded.

24. Hide all shadow lines:

- Type **SHADOW ALL OFF** on the command line, then **ENTER**.

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```

Edit          DNET074.ADLAB.FILES(CUST2)          Rec 1 of 100
Command ==> SHADOW ALL OFF                          Scroll CSR
                                                    Format TABL
CUST-ID RECORD-TYPE FILLER  NAME          ACCT-BALANCE ORDERS-YTD
#3      #4          #5      #6          #7          #8
AN 1:5  AN 6:1     AN 7:7  AN 14:17   PD 31:5    BI 36:2
<---->  -         <----+> <-----1-----> <-----1> <---->
000001 01001  C          Lynn, Amanda      67.68          9
-----  - - - - - PRODUCT-RECORD - - - - - 2 Line(s) suppressed
000004 02200  C          Graham, Anna      610.05         10
-----  - - - - - PRODUCT-RECORD - - - - - 6 Line(s) suppressed
000011 02202  C          Major, Art        1234.56         5

```

25. Notice that the shadow lines are not displayed:

```

Edit          DNET074.ADLAB.FILES(CUST2)          Rec 1 of 100
Command ==> SHAD                                     Scroll CSR
                                                    Format TABL
CUST-ID RECORD-TYPE FILLER  NAME          ACCT-BALANCE ORDERS-YTD
#3      #4          #5      #6          #7          #8
AN 1:5  AN 6:1     AN 7:7  AN 14:17   PD 31:5    BI 36:2
<---->  -         <----+> <-----1-----> <-----1> <---->
000001 01001  C          Lynn, Amanda      67.68          9
000004 02200  C          Graham, Anna      610.05         10
000011 02202  C          Major, Art        1234.56         5
000015 03003  C          Prentice, Anna    396.63          7
000018 02200  C          Beards, Dennis    74.00          2

```

26. Display the shadow lines:

- Type **SHADOW ALL ON** on the command line, then **ENTER**.
- Notice that the shadow lines are displayed again.

Part 5: SHOW SUP ON/OFF settings

27. Switch to CHAR format:

- Type **FC** (format character) on the command line, then **ENTER**.

28. The “SHOW SUP ON” and “SHOW SUP OFF” commands control whether all record types are displayed, or only one type at a time. View all record types:

- Type **SHOW SUP ON** (show suppressed) on the command line, then **ENTER**.

```

Edit          DNET074.ADLAB.FILES(CUST2)
Command ==> show sup on
Col 1 Insert length 80
-----+-----1-----+-----2-----+-----3-----+-----4-----

```

29. Notice that all record types are displayed.

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```

Edit                               DNET074.ADLAB.FILES(CUST2)                               Rec 0 of 100
Command ==> █                                                                Scroll CSR
Col 1                               Insert length 80                                                                Format CHAR
-----1-----2-----3-----4-----5-----6-----7-----
000000 **** Top of data ****
000001 01001C      Lynn, Amanda      .....Spirit Lake      Musician
=SUPP  01001PAG00487Acoustic guitar      2004-05-13..2006-03-30
=SUPP  01001PVN00048Violin                2004-03-25..2004-03-26
000004 02200C      Graham, Anna      ../.*..Atwon           Cryptographer
=SUPP  02200PBG00459Bass Guitar            1996-04-30..2003-06-14
=SUPP  02200PDS00099Starter Drum Set      2001-09-04..2002-10-05
=SUPP  02200PEB00057Electric Guitar       2003-07-31  2004-03-30
  
```

30. View only one record type:

- Type **SHOW SUP OFF** on the command line, then **ENTER**.

```

Edit                               DNET074.ADLAB.FILES(CUST2)
Command ==> show sup off█
Col 1                               Insert length 80
-----1-----2-----3-----4
  
```

31. Notice that only one record type is active.

```

Edit                               DNET074.ADLAB.FILES(CUST2)                               Rec 0 of 100
Command ==> █                                                                Scroll CSR
Col 1                               Insert length 80                                                                Format CHAR
-----1-----2-----3-----4-----5-----6-----7-----
000000 **** Top of data ****
000001 01001C      Lynn, Amanda      .....Spirit Lake      Musician
- - - - - PRODUCT-RECORD - - - - - 2 Line(s) suppressed
000004 02200C      Graham, Anna      ../.*..Atwon           Cryptographer
- - - - - PRODUCT-RECORD - - - - - 6 Line(s) suppressed
000011 02202C      Major, Art       ....%..Harmon         College student
- - - - - PRODUCT-RECORD - - - - - 3 Line(s) suppressed
000015 03003C      Prentice, Anna   Laramie               New hire
  
```

Tip: Find and Change command scope, and active records.

- The SHOW SUP OFF and SHOW SUP ON commands affect commands like Find and Change.
- With the SHOW SUP OFF setting (do not show suppressed records), your Find and Change commands will only affect the active record type.
- With the SHOW SUP ON setting (show suppressed records), Find and Change commands will affect all record types.

32. Select a record and switch to SNGL format:

- Type **FS** (format single) next to a displayed record, then **ENTER**.

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```
000001 01001C      Lynn, Amanda      .....Spirit Lake      Musician
- - - - - - - - - - PRODUCT-RECORD - - - - - - - - - - 2 Line(s) suppressed
FS 004 02200C      Graham, Anna      ../.*..Atwon          Cryptographer
- - - - - - - - - - PRODUCT-RECORD - - - - - - - - - - 6 Line(s) suppressed
000011 02202C      Major, Art        ....%..Harmon         College student
- - - - - - - - - - PRODUCT-RECORD - - - - - - - - - - 3 Line(s) suppressed
```

33. In SNGL format, you can control whether you want to work with all record types, or only one record type. Right now, the “SHOW SUP OFF” setting is in effect, and you can only see the active record type.

- Scroll through the next several records: Press **PF11** (next record) several times.
- Notice that suppressed records (other record types) are skipped.

34. Display all record types:

- Type **SHOW SUP ON** (show suppressed) on the command line, then **ENTER**.
- Scroll through the next several records: Press **PF11** (next record) several times.
- Now notice that suppressed records (other record types) are displayed.

35. Switch to TABL format:

- Type **FT** (format table) on the command line, then **ENTER**.

36. Exit the editor:

- Press **PF3**.

Lab Exercise 8

Print Utility

In this exercise you will:

- Customize your Options Settings.
 - Use the Print Utility to “print” interactively.
 - Use a Template to select records, and print interactively.
 - Use the Print Utility to generate JCL that you will submit to run the Print Utility as a batch job.
1. Log on to TSO (if you are not already logged on).

Part 1: Customize your Print and Batch Options

2. Navigate to the File Manager menu.
3. Review and change your Print Utility Options settings:
 - Type **0** (Settings) on the command line, then **ENTER**.
 - The “Set Processing Options” menu is displayed.
 - Type **1** (Print Settings) on the command line, then **ENTER**.
 - The “Set Print Processing Options” panel is displayed.
4. Update your print options settings:
 - Type **SYSOUT=x** in the PRINTOUT field. Important: Replace the *x* with a valid held SYSOUT class. With this setting, File Manager interactive panels will write print reports to the print data set. You will also be able to route the contents of the print data set to SYSOUT (to the class you specify).
 - Type **OLD** in the PRTDISP field. With the “OLD” setting, File Manager will replace the contents of the print data set every time you print interactively. You may prefer the “MOD” setting, which makes File Manager append each report to the end of the print data set.

File Manager Mentor Workshop

Lab Exercises



```
Process  Options  Help
-----
File Manager                               Set Print Processing Options
Command ==> █

Set processing options as desired and enter EXIT (F3) to save your changes.
Enter RESET to restore installation defaults.

Print Options:
PRINTOUT SYSOUT=H          SYSPRINT, SYSOUT=c, TERMINAL or REXX
PRINTDSN DNET074.FMN.LIST
PRINTLEN 132              132 or 80
PAGESIZE 60               Number of lines on a printed page
PRTRANS  ON               ON, OFF, or KN
PRTDISP  OLD              OLD or MOD
HEADERPG YES             YES or NO
PAGESKIP NO              NO or YES
DUMP . . UPDOWN         UPDOWN or ACROSS
```

- Notice the name of the file in the PRINTDSN field. This is your print file. File Manager will “print” reports to this file from online utility panels. (Note: File Manager does NOT write to this file when you run the utilities as batch jobs).
- Press **PF3** to return to the “Set Processing Options” menu.

5. Review and change your Print Utility Options settings:

- Type **4** (Batch) on the command line, then **ENTER**.
- The “Set Batch Job Card Information” panel is displayed.

6. Update your batch job card:

- Cut-and-paste, or type a job card that is valid for your system. Each system has unique job card requirements. It is best to copy an existing, working job card. The following generic example may NOT work on your system.

```
File Manager                               Set Batch Job Card Information
Command ==> █

Set processing options as desired and enter EXIT (F3) to save your changes.

Batch Submission Job Statement Information:
//DNET074X JOB REGION=4M,CLASS=A
//          MSGCLASS=H,NOTIFY=&SYSUID,MSGLEVEL=(1,1)
_____
_____
_____
```

- Press **PF3** twice to return to the File Manager main menu.

Part 2: Print Interactively

7. Navigate to the Print Utility. From the File Manager main menu:

- Type **3** (Utilities) on the command line, then **ENTER**.
- The “Utility Functions” menu is displayed.

File Manager Mentor Workshop

Lab Exercises



- Type **2** (Print) on the command line, then **ENTER**.
- The “Print Utility” panel is displayed.

8. “Print” a file to the print data set:

- Type **ADLAB.CUST1** in the Data set/path name field.
- Type **ADLAB.COPYLIB(CUST1)** in the Copybook or Template: Data set name field.
- Type **4** (TABL) in the Print Option field.
- Type **1** (Above) in Copybook/Template/Access field.
- Press **ENTER** to print the file.

```

Process  Options  Help
-----
File Manager                                Print Utility
Command ==> _____
More: +
Input Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name . . . adlab.cust1 +
Member . . . . . (Blank or pattern for member list)
Volume serial . . . . . (If not cataloged)
Start key . . . . . key or slot
Skip count . . . . . number of records to be skipped
Print count . . . . . ALL number of records to be printed

Copybook or Template:
Data set name . . . . . ADLAB.COPYLIB
Member . . . . . CUST1 (Blank or pattern for member list)

Processing Options:
Print Option Copybook/template/access Enter "/" to select option
4 1. Char 1 1. Above Edit template _ Type (1,2,S)
2. Hex 2. Previous _ Batch execution
3. Sngl 3. None _ Use proc _____
4. Tabl 4. Physical Blk/CI Access _ REXX member selection: P
ISPF Packing 5. Create dynamic _ Advanced member selection
  
```

9. You should see a “... **Records Printed**” message. To view the output in the Print Data Set, you can use the PB (Print Browse) command:

- Type **PB** (Print Browse) on the command line, then press **ENTER**.

```

File Manager                                Print Utility                                100 record(s) printed
Command ==> PB █
More: +
Input Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name . . . adlab.cust1 +
Member . . . . . (Blank or pattern for member list)
  
```

10. The Print Browse panel is displayed.

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Lab Exercises



```
Process  Options  Help
-----
File Manager  Print Browse
Command ==> █                                     Line 1
                                                    Scroll CSR
                                                    Col 1
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----8
IBM File Manager for z/OS

CURRENT SET FUNCTION VALUES:

PRINTOUT=SYSOUT=H  HEADERPG=YES  ASCII=BOTH  RECLIMIT=(1,*)
PRINTLEN=132      PAGESKIP=NO  PAD=OFF     EOD=
PAGESIZE=60      DATAHDR=YES DBCSPRT=OFF LANGUAGE=ENGLISH
PRTRTRANS=ON     DUMP=UPDOWN  TAPELBL=SL  CYLHD=ABSOLUTE
SMFNO=000        PRDISP=OLD  USEIOX=DISABLE IOX=
PRINTDSN=DNET074.FMN.LIST
TEMPHLQ=
ABENDCC=NONE

IBM File Manager for z/OS
* * * * Device 0C0A, 3390, VOLSER=DMPU27          Data Set Name: DNE
F1=Help  F2=Split  F3=Exit  F4=Print  F5=RFind  F6=Purge  F7=Up
F8=Down  F9=Swap  F10=Left F11=Right F12=Cancel
```

11. Scroll to see the report:

- Press **PF8** several times to scroll down through the report.
- Press **PF11** to scroll to the right.

12. Notice that PF4 is set to the “PRINT” command. If you press PF4, the contents of the Print Data Set will be routed to SYSOUT (to the SYSOUT class you specified in your Print Options).

Tip: View your PF key settings.

- If your PF keys are not displayed, the command: PFSHOW ON will display them.
- PFSHOW OFF will hide them.

13. Press **PF3** to return to the Print Utility panel.

Part 3: Print Interactively with record selection

14. On the Print Utility Panel:

- Leave the File and Copybook names unchanged:
 - a. The file is: ADLAB.CUST1
 - b. The copybook is: ADLAB.COPYLIB(CUST1)
- Type / (slash) in the “Edit Template” field.
- Press **ENTER**.

File Manager Mentor Workshop

Lab Exercises



```

File Manager                               Print Utility
Command ==> █

Input Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name . . . ADLAB.CUST1
  Member . . . . . (Blank or pattern for member list)
  Volume serial . . . . . (If not cataloged)
  Start key . . . . . key or slot
  Skip count . . . . . number of records to be skipped
  Print count . . . . . ALL number of records to be printed

Copybook or Template:
  Data set name . . . . . ADLAB.COPYLIB
  Member . . . . . CUST1 (Blank or pattern for member list)

Processing Options:
  Print Option Copybook/template/access Enter "/" to select option
  4 1. Char 1. Above / Edit template _ Type (1,2,S)
    2. Hex 2. Previous _ Batch execution
    3. Sngl 3. None _ Use proc _____
    4. Tabl 4. Physical Blk/CI Access _ REXX member selection: P
  ISPF Packing 5. Create dynamic _ Advanced member selection
  
```

15. The Field Selection / Edit panel is displayed. Perform record selection “by field”.

- Type 2 on the command line, then ENTER.

```

File Manager                               Field Selection/Edit
Command ==> 2█

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : _____
2 Sel: _____
Offset 0
Cmd Seq SHC Ref Field Name Picture Type Sta
  
```

16. The Record Selection Criteria panel is displayed. Specify criteria as shown below to select only records where the Cust-ID > ‘90000’

```

File Manager                               Record Selection Criteria
Command ==> _____ Line 1 of 14
                               Scroll CSR

Cmd Con ( Field Name Op Value )
<-> - <-----1-----2-----3-----> <-> <-----1-----2----->
*** **** Top of data ****
___ AND - CUST-REC
___ AND - CUSTOMER-KEY
___ AND - CUST-ID > '90000'█
___ AND - NAME
___ AND - ACCT-BALANCE
___ AND - ORDERS-YTD
  
```

17. You could save your template if you would exit with PF3. Instead, just run with a “temporary” template:

- Press PF6 (Run Temporary).

File Manager Mentor Workshop

Lab Exercises



18. You should see a "... **Records Printed**" message. To view the output in the Print Data Set, you can use the PB (Print Browse) command:

- Type **PB** (Print Browse) on the command line, then press **ENTER**.

19. The Print Browse panel is displayed.

20. Scroll through the report to verify that the correct records were printed (CUST-ID > 90000). If not, try again until you are comfortable with using a Template with the Print Utility to select records.

Part 4: Print in Batch

21. Navigate to the Print Utility panel.

22. On the Print Utility Panel:

- Leave the File and Copybook names unchanged:
 - a. The file is: ADLAB.CUST1
 - b. The copybook is: ADLAB.COPYLIB(CUST1)
- Type **/** (slash) in the "Batch execution field".
- Press **ENTER**.

23. File Manager generated JCL for the Print Utility, and is displaying it to you. Notice that the job card that you entered in you Batch Job Card options appears at the top.

24. Submit the generated JCL:

- Type **SUB** (submit) on the command line, then **ENTER**.

```
EDIT          DNET074.SPFTEMP1.CNTL          Columns 00001 00072
Command ==> sub                               Scroll ==> CSR
***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
000001 //DNET074X JOB REGION=4M,CLASS=A,
000002 //          MSGCLASS=H,NOTIFY=&SYSUID,MSGLEVEL=(1,1)
000003 //*
000004 //FILEMGR EXEC PGM=FMNMAIN
000005 //STEPLIB DD DSN=LNKLST.FILEMGR.V6R1.SFMNMOD1,DISP=SHR
000006 //* DD DSN=COBOL.V3R4.SIGYCOMP,DISP=SHR
000007 //SYSPRINT DD SYSOUT=*
000008 //FMNTSPRT DD SYSOUT=*
000009 //SYSTEM DD SYSOUT=*
000010 //SYSIN DD *
000011 $$FILEM DSP FORMAT=TABL,
000012 $$FILEM PACK=IINPACK
```

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Lab Exercises



25. Use a SYSOUT browser (such as SDSF) to check the job and view the report in SYSOUT. If the job did not run correctly, verify that you have a valid job card. Ask your instructor for assistance if needed.



Lab Exercise 9

Copy Utility

In this exercise you will:

- Use the Copy Utility to copy a file interactively.
 - Use a Template to select records, and copy interactively.
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the File Manager menu.

Part 1: Copy Interactively

3. Navigate to the Copy Utility. From the File Manager main menu:
 - Type **3** (Utilities) on the command line, then **ENTER**.
 - The “Utility Functions” menu is displayed.
 - Type **3** (Copy) on the command line, then **ENTER**.
 - The “Copy Utility” panel is displayed.
4. Specify information about the input file:
 - Type **ADLAB.CUST1** in the From file field.
 - Type **2** (None) in the Copybook/Template Options field.
 - Press **ENTER**.

```

File Manager                               Copy Utility
Command ==> █

From Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name . . ADLAB.CUST1          +
Member . . . . .          (Blank or pattern for member list)
Volume serial . . . . .
Start key . . . . .          key or slot
Skip count . . . . .          number of records to be skipped
Copy count . . . . . ALL          number of records to be copied

From Copybook or Template:
Data set name . . . . .
Member . . . . .          (Blank or pattern for member)

Processing Options:
Copybook/template  Enter "/" to select option
 2 1. Above         _ Batch execution         _ Advanced member selection
   2. None         _ Use proc _____ _ Skip member name list
   3. Create dynamic / Ignore length mismatch _ REXX member selection: P
_ Edit template   _ JCL Source format         _ Directory integrity
_ Type (1,2,S)    _ Report PDS record counts
                  _ Binary mode, reclen ____
    
```

File Manager Mentor Workshop

Lab Exercises



Tip: Copy in Batch.

- If you select the “Batch Execution” option on the Copy Utility panel, File Manager will automatically generate JCL to run the copy utility as a batch job.

5. A panel is displayed where you can specify information about the output file.

- Type **ADLAB.CUST1.COPY** in the To file field.
- Type **1** (Old or Reuse) in the Disposition field.
- Press **ENTER**.

```
Copy from DNET074.ADLAB.CUST1
Command ==>

To Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name . . ADLAB.CUST1.COPY
Member name (or mask) .
Volume serial . . . . .

Processing Options:
Disposition                Execution "/" options          ISPF Packing
 1 1. Old or Reuse         _ Replace members             1 1. Asis
   2. Mod                  _ Binary mode, reclen _____ 2. Pack
                               _ Stats Off                    3. Unpack
                                       4. None
                                       5. Skip
```

6. Since the output file does not already exist, File Manager will automatically step you through panels to create it. If you do not make any changes, File Manager will use the input file as a model for the new output file. First, you are asked what type of file to create. Take the default values:

- Press **ENTER**.

```
Allocate DNET074.ADLAB.CUST1.COPY
Command ==>

New Data Set Organization:
Select option                Instructions
 6 1. KSDS                    The above data set does not exist.
   2. ESDS                    To define or allocate a new data set select a data
   3. RRDS                    set organization and press ENTER or press PF3/EXIT
   4. VRRDS                   or PF12/CANCEL to return without allocation.
   5. LDS
   6. Non VSAM

For a new data set, enter a data set name
below to copy existing allocation attributes.

Existing Data Set:
Like data set . . . . . 'DNET074.ADLAB.CUST1'
Volume serial . . . . .
```

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Lab Exercises



7. Next, File Manager shows the allocation attributes for the new file. By default, it is using the attributes of the input file. You can change the attributes, if needed. Take the default values:
- Press **ENTER**.

```
Allocate DNET074.ADLAB.CUST1.COPY
Command ==> _____

Specify a model data set, volume, SMS class names, or leave blank for defaults:
Like data set . . . 'DNET074.ADLAB.CUST1'
Volume serial . . . █
Data class . . . _____ leave blank for default
Storage class . . . USRBASE leave blank for default
Management class USRMGMT leave blank for default

Space Requirements:
Space unit . . . CYLS BLKS, TRKS, CYLS, KB, or MB
Primary units . . . 1 quantity of above units
Secondary units . . . 1 quantity of above units
Directory blocks 0 leave blank for SMS default
Record format . . . VB if new format: U,F,V, or D, with B,S,A,M
Record length . . . 600
Block size . . . 27600 physical output block size
Library type . . . _____ LIBRARY, PDS, or blank for default
Release unused . . . NO enter YES to free unused space, else NO
Expiration date . . . _____ yyyy.ddd, blank for default
```

8. You should see a “... RECORD(S) SUCCESSFULLY COPIED” message. If you did not, try the process again until you are successful. Ask your instructor for assistance, if needed.

Part 2: Copy with record selection

9. Navigate to the Copy Utility panel.
- Leave the “From” file name unchanged: ADLAB.CUST1
 - Type **ADLAB.COPYLIB(CUST1)** in the From Copybook or Template: Data set name field.
 - Type **/** (slash) in the “Edit Template” field.
 - Type **1** (above) in the “Copybook/Template” field.
 - Press **ENTER**.

File Manager Mentor Workshop

Lab Exercises



```

File Manager                               Copy Utility
Command ==> █

From Partitioned, Sequential or VSAM Data Set, or HFS file:
  Data set/path name . . . ADLAB.CUST1 +
  Member . . . . . (Blank or pattern for member list)
  Volume serial . . . . .
  Start key . . . . . key or slot
  Skip count . . . . . 0 number of records to be skipped
  Copy count . . . . . ALL number of records to be copied
From Copybook or Template:
  Data set name . . . . . ADLAB.COPYLIB(CUST1)
  Member . . . . . (Blank or pattern for member)
Processing Options:
Copybook/template   Enter "/" to select option
 1 1. Above          - Batch execution           - Advanced member selection
 2. None            - Use proc _____ - Skip member name list
 3. Create dynamic / Ignore length mismatch - REXX member selection: P
 / Edit template   - JCL Source format       - Directory integrity
- Type (1,2,S)    - Binary mode, reclen _____
  
```

10. The Field Selection / Edit panel is displayed. Perform record selection “by field”.

- Type 2 on the command line, then **ENTER**.

```

File Manager                               Field Selection/Edit           Line
Command ==> 2█                               Scroll
----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : _____
2 Sel: _____
Offset _____ 0
Cmd Seq SHC Ref Field Name                               Picture Type Sta
  
```

11. The Record Selection Criteria panel is displayed. Specify criteria as shown below to select only records where the Cust-ID > ‘90000’

```

File Manager                               Record Selection Criteria           Line 1 of 14
Command ==> _____                               Scroll CSR
Cmd Con ( Field Name                               Op Value                               )
<-> - <-----1-----2-----+-----3-----> <-> <-----1-----2----->
*** ***** Top of data *****
___ - CUST-REC
___ AND - CUSTOMER-KEY
___ AND - CUST-ID > '90000' █
___ AND - NAME
___ AND - ACCT-BALANCE
___ AND - ORDERS-YTD
  
```

12. You could save your template if you would exit with PF3. Instead, just run with a “temporary” template:

- Press **PF6** (Run Temporary).

File Manager Mentor Workshop

Lab Exercises



13. A panel is displayed where you can specify information about the output file.

- Type **ADLAB.CUST1.COPY** in the To file field.
- Type **2** (None) in the Copybook/Template usage field.
- Type **1** (Old or Reuse) in the Disposition field.
- Press **ENTER**.

```
Copy from DNET074.ADLAB.CUST1
Command ==> █
More: +
To Partitioned, Sequential or VSAM Data Set, or HFS file:
Data set/path name . . . ADLAB.CUST1.COPY +
Member name (or mask) . . .
Volume serial . . . . .
To Copybook/Template From: DNET074.ADLAB.COPYLIB(CUST1)
Data set name . . . . .
Member . . . . . (Blank or pattern for member)
Processing Options:
Copybook/template usage  Disposition  Enter "/" to select option
 2 1. Above                1 1. Old or Reuse  _ Replace members
   2. None                  2. Mod           _ Edit template mapping
   3. Create dynamic       _ Edit template source
ISPF Packing              _ Binary mode, reclen ____
 1 1. Asis                  _ Stats Off
   2. Pack
   2. Unpack
```

14. You should see a "... **Records Copied**" message. If you did not, try the process again until you are comfortable using the interactive Copy Utility.

Lab Exercise 10

Data Set List (Catalog Services) Utility

In this exercise you will:

- Allocate a non-VSAM file.
 - Define a VSAM file.
 - Define a VSAM file based on a model.
 - Display a list of files.
 - Delete and Define a VSAM file.
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the File Manager menu.

Part 1: Allocate a non-VSAM file

3. Navigate to the Catalog Services Utility. From the File Manager main menu:
 - Type **3** (Utilities) on the command line, then **ENTER**.
 - The “Utility Functions” menu is displayed.
 - Type **4** (Dslist) on the command line, then **ENTER**.
 - The “Catalog Services” panel is displayed.
4. Define a new non-VSAM file:
 - Type **DEF** on the command line.
 - Type **ADLAB.CUST1.NEW** in the Data Set name field.
 - a. Note: Depending on your TSO PROFILE PREFIX setting, you may need to type: \your-id.ADLAB.CUST1.NEW
 - Type **2** (non-VSAM) in Entry Type field.
 - Press **ENTER** .

File Manager Mentor Workshop

Lab Exercises



```

File Manager                               Catalog Services
Command ==> DEF █

blank List catalog entries                 A Alter catalog entry
DEF Define catalog entry                   DEL Delete catalog entry
I Display entry information                 P Print catalog entries

Data Set:
Data set name . ADLAB.CUST1.NEW
Catalog ID . .

Processing Options:
Entry Type                                Sort field
 2 1. Any                                  6. Cluster                11. Page space           1 1. Name
   2. Non-VSAM                             7. Data                   12. Path                 2. Creation date
   3. VSAM                                  8. GDG                    13. User catalog        3. Free space
   4. AIX                                  9. Index                  4. Allocated space

```

5. A pop-up panel is displayed.

- Type 2 (allocate / define).
- Press **ENTER**.

```

Catalog Entry Type
Command ==>
Select the type of data set entry
to define:
2 █ 1. Non-VSAM (define only)
   2. Non-VSAM (allocate/define)

```

- The Non-VSAM allocate panel is displayed. Enter file specifications as shown below. Your system may have special requirements for Volume Serial or SMS classes. Ask you instructor for assistance if needed.

```

File Manager                               Non-VSAM Allocate
Command ==>
Non-VSAM Data Set:
Data set name . . 'DNET074.ADLAB.CUST1.NEW' █
Specify a volume, SMS class names, or leave blank for defaults:
Volume serial . . .
Data class . . . leave blank for default
Storage class . . . leave blank for default
Management class . . . leave blank for default
Space Requirements:
Space unit . . . CYLS BLKS, TRKS, CYLS, KB, or MB
Primary units . . 1 quantity of above units
Secondary units . 1 quantity of above units
Directory blocks 0 leave blank for SMS default
Record format . . VB if new format: U,F,V, or D, with B,S,A,M
Record length . . 600
Block size . . . 27600 physical output block size
Library type . . . LIBRARY, PDS, or blank for default
Expiration date . . . yyyy.ddd, blank for default

```

File Manager Mentor Workshop

Lab Exercises



6. You should see a “Define Completed” message.

Part 2: Define a VSAM File

7. From the Catalog Services Utility panel, define a new VSAM file:

- Type **DEF** on the command line.
- Type **ADLAB.CUST1.VSAM** in the Data Set name field.
- Type **3** (VSAM) in Entry Type field.
- Press **ENTER**.

```
File Manager                               Catalog Services          DEFINE completed
Command ==> DEF █

blank List catalog entries                A Alter catalog entry
DEF Define catalog entry                 DEL Delete catalog entry
I Display entry information              P Print catalog entries

Data Set:
Data set name . ADLAB.CUST1.vsam
Catalog ID . .

Processing Options:
Entry Type                                Sort field
3_ 1. Any                                6. Cluster                11. Page space   1 1. Name
2. Non-VSAM                             7. Data                   12. Path         2. Creation date
3. VSAM                                  8. GDG                    13. User catalog 3. Free space
4. QDS                                   9. Index                  14. ...          4. ...
```

8. A pop-up panel is displayed.

- Type **1** (KSDS). This will define a Key-Sequenced Data Set (KSDS) VSAM file.
- Press **ENTER**.

```
----- Catalog Entry Type -----
Command ==>

Select the type of data set
entry to define:

1 █ 1. KSDS
    2. ESDS
    3. RRDS
    4. VRRDS
    5. LDS
    6. AIX
    7. Path
```

File Manager Mentor Workshop

Lab Exercises



9. The VSAM Define panel is displayed. **Enter file specifications as shown below.** Your system may also have special requirements. You can scroll down and up to see all available options.
- Press **ENTER** to define the file.

```
File Manager                               VSAM Define                               Top of data
Command ==> █

VSAM Catalog Entry:
Data set name . . . 'DNET074.ADLAB.CUST1.VSAM'
Catalog ID . . . . .

Basic Information:
VSAM data type . . KSDS           Expiration date . . .
Data component . . .
Index component . . .

VSAM Cluster Attributes:
Key length . . . . 5             Key offset . . . . 0
CI size . . . . .             size of the data control intervals
Buffer space . . . . .         buffer space to be allocated at open time
Shr cross region . . .         cross system . . . . . Reuse . . . . .
Recovery . . . . .           Spanned . . . . .       Erase . . . . .
Writecheck . . . . .

VSAM Data Allocation:
Allocation unit . . . cyl       REC, KB, MB, TRK, or CYL
Space primary . . . 1           secondary . . . . . 1
Resize average . . . . .       maximum . . . . .
```

10. You should see a “Define Completed” message.

Part 3: View a File List

11. Note: To see a list of files, enter a file name *with a wildcard*.
- The wildcards are:
 - ** (2 asterisks) is a wildcard for any number of qualifiers
 - * (1 asterisk) is a wildcard for a single qualifier
 - % is a wildcard for a single character
 - For example, to see a list of file names that includes ‘ABC.ADLAB.CUST1’, you could enter any of the following:
 - 'ABC.**
 - 'ABC.AD**
 - 'ABC.*.CUST1
 - 'ABC.AD*.%U%%1
 - If you do NOT begin the name with a single quote, then your id *may* be appended as the high level qualifier *depending on your TSO PROFILE PREFIX setting*.
 - If you DO begin the name with a single quote, then your id will NOT be appended as the high level qualifier, regardless of your TSO PROFILE PREFIX setting.

File Manager Mentor Workshop

Lab Exercises



12. Display a list of files beginning with your-id.ADLAB :

- Type 'your-id.ADLAB.** in the Data Set name field. (Notice the single quote at the beginning).
- Type 1 (Any) in the Entry Type field.
- Press ENTER.

```
File Manager                               Catalog Services
Command ==> █

blank List catalog entries                A Alter catalog entry
DEF Define catalog entry                 DEL Delete catalog entry
I Display entry information              P Print catalog entries

Data Set:
Data set name . 'DNET074.ADLAB.**
Catalog ID . .

Processing Options:
Entry Type                               Sort field
1 1. Any                                1 1. Name
2 2. Non-VSAM                           2 2. Creation date
3 3. VSAM                                3 3. Free space
4 4. AIX                                  4 4. Allocated space
5 5. Alias                                6 6. Cluster
7 7. Data                                7 7. Data
8 8. GDG                                  8 8. GDG
9 9. Index                                9 9. Index
10 10. OAM                               10 10. OAM
11 11. Page space                        11 11. Page space
12 12. Path                               12 12. Path
13 13. User catalog                      13 13. User catalog

Enter "/" to select option
_ Batch execution _ with list
_ Include Additional Qualifiers
```

13. A file list is displayed.

```
File Manager                               Data Set List                               Line 1 of 60
Command ==> █                               Scroll CSR
Catalog ID ''                               Types ALL
--- Data Set Name --- sorted by NAME --- Entry Prim M Created
Command 1...5...10...15...20...25...30...35...40... type volume V YYYY.DDD
DNET074.ADLAB.COPYLIB NVSAM DMPU04 2005.245
DNET074.ADLAB.CUSTFILE NVSAM DMPU12 2005.245
DNET074.ADLAB.CUSTFILE.SEG NVSAM
DNET074.ADLAB.CUST1 NVSAM
DNET074.ADLAB.CUST1.COPY NVSAM
DNET074.ADLAB.CUST1.NEW NVSAM
DNET074.ADLAB.CUST1.SAVE NVSAM
DNET074.ADLAB.CUST1.VSAM KSDS
DNET074.ADLAB.CUST1.VSAM.DATA DATA
DNET074.ADLAB.CUST1.VSAM.INDEX INDEX DMPU10 2006.102
DNET074.ADLAB.CUST2.SAVE NVSAM DMPU17 2006.038
```

It is OK if you have a different set of files than shown here.

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Lab Exercises



Tip: Save time by using a model to define a new VSAM file.

- Before you use the DEF command to define a new VSAM file, use the I command to get information about an existing VSAM data set. The attributes from the model file are retained and displayed on the allocation panels.
- If you use the DEL command to delete a VSAM file, the attributes of the file are retained. If you immediately do a DEF command after processing a DEL command, you can easily re-define the file with very little typing.

Tip: What line commands are available from the Data Set List?

- An easy way to see a list of line commands is to select the Process menu (put the cursor on the word "PROCESS" in the upper left corner of the panel, then ENTER).

Lab Exercise 11

Find and Change Utility

In this exercise you will:

- Use the Find/Change Utility to scan member in a PDS for text strings.
1. Log on to TSO (if you are not already logged on).
 2. Navigate to the Find / Change Utility. From the File Manager main menu:
 - Type **3** (Utilities) on the command line, then **ENTER**.
 - The “Utility Functions” menu is displayed.
 - Type **6** (Find/Change) on the command line, then **ENTER**.
 - The “Find/Change Utility” panel is displayed.
 3. Specify the file and members to be searched:
 - Type **ADLAB.SOURCE** in the Data Set name field.
 - Type ***** in the Member field.
 - Press **ENTER** .

File Manager Mentor Workshop

Lab Exercises



```

Process  Options  Help
-----
File Manager                               Find/Change Utility
Command ==> _____ Scroll CSR

Input Partitioned, Sequential or VSAM Data Set:
  Data set name . ADLAB.SOURCE
  Member . . . . * _____ (Blank - selection, pattern - process list)
  Volume serial . _____ (If not cataloged)
  Record count . _____ (Number of records to be searched)
- Additional options
Listing data set . SRCHFOR.LIST

Enter "/" to select option
  _ JCL Source format           _ Immediate change   1 1. Long      1 1. Asis
  _ Use REXX proc * _____  _ Batch execution   2. Summary     2. Pack
  _ REXX no update             / Directory integrity 3. Unpack
  _ Advanced member selection  _ Stats off         4. None
  _ CAPS initially on         _ CAPS initially on 5. Skip

Process List:
Sel Name      Prompt      Alias-of      Size Created  Changed      ID
**** End of data ****

```

- A member list is displayed at the bottom of the panel. You *may* have to turn off your PF key display (with the PFSHOW OFF command) to see it.

Tip: Advanced member selection

- You can wildcard the member name to get just the members you want in the list. For example, use wildcards like: ABC* or AB%%EF
- If you select the “Advanced member selection” option with a slash (/) and leave the member name blank, you can select a range of members, or select based on creation dates, last updated dates, or user id.

- You can make the member list larger:
 - Put your cursor on the - (minus) next to the words: “Additional Options” as shown.
 - Press ENTER.

File Manager Mentor Workshop

Lab Exercises



```

File Manager                               Find/Change Utility                               Row 3 of 56
Command ==> _____                               Scroll CSR

Input Partitioned, Sequential or VSAM Data Set:
  Data set name . ADLAB.SOURCE
  Member . . . . . * _____ (Blank - selection, pattern - process list)
  Volume serial . _____ (If not cataloged)
  Record count . . ALL _____ (Number of records to be searched)
+ Additional options
Listing data set . SRCHFOR.LIST

Enter "/" to select option
_ JCL Source format           _ Immediate change      1 1. Long      1 1. Asis
_ Use REXX proc _____    _ Batch execution      2. Summary    2. Pack

```

- The options are hidden, and the member list is larger. The minus (-) became a plus (+). If you want to see the options again, put your cursor on the Plus, then Enter.

Tip: What line commands are available in the Member List?

- Use the S line command to Select, or Un-Select a member. It is a toggle.
- Use the E line command to edit a member.
- Use the B line command to browse a member.
- Use the V line command to view a member.

6. Use a Find (F) command to find all members that contain either of the text strings: “this” or “that”:

- Type **F THIS OR THAT** on the command line, then **ENTER**.

```

File Manager                               Find/Change Utility                               Row 1 of 56
Command ==> f this or that _____                               Scroll CSR

Input Partitioned, Sequential or VSAM Data Set:
  Data set name . ADLAB.SOURCE
  Member . . . . . * _____ (Blank - selection, pattern - process list)
  Volume serial . _____ (If not cataloged)
  Record count . . ALL _____ (Number of records to be searched)
+ Additional options
Process List:
Sel Name      Prompt      Alias-of      Size Created  Changed      ID
_ @FILECHK Selected
_ @SYSINFO Selected
_ @VSAMDEF Selected
_ ADSORT Selected          39 06/03/03 06/03/03 17:41:15 DNET074
_ ADSTAT Selected          95 06/03/03 06/03/03 17:40:49 DNET074
_ OSAMPRU Selected

```

- A report is displayed that shows the members and lines where the text strings were found. You can scroll through the report to see all of the “hits”. Statistics are reported at the bottom.

File Manager Mentor Workshop

Lab Exercises



```

BROWSE      DNET074.SRCHFOR.LIST                               Line 00000000 Col 001 080
Command ==> █
***** Top of Data *****
IBM File Manager for z/OS
Find/Change Listing DSN: DNET074.ADLAB.SOURCE

@FILECHK          ----- STRING(S) FOUND/CHANGED -----
Record Number
  1  /* This REXX exec will determine if a file exists      */

@VSAMDEF          ----- STRING(S) FOUND/CHANGED -----
Record Number
  1  /* This REXX exec will define a vsam kds cluster      */
  
```

7. Exit the report:
 - Press **PF3**.
8. The File/Change Utility panel is displayed again. Notice that the Process List now only contains the members that were “hits”. If you were to issue additional Find commands against other strings, the Process List would continue to get smaller.

```

File Manager      Find/Change Utility                          Row 1 of 23
Command ==> █      Scroll CSR_

Input Partitioned, Sequential or VSAM Data Set:
  Data set name . . . ADLAB.SOURCE
  Member . . . . . * (Blank - selection, pattern - process list)
  Volume serial . . . (If not cataloged)
  Record count . . . ALL (Number of records to be searched)
+ Additional options
Process List:
Set Name      Prompt      Alias-of      Size Created  Changed      ID
- @FILECHK    Selected
- @VSAMDEF    Selected
- ADSORT      Selected      39 06/03/03  06/03/03  17:41:15  DNET074
- ASAM1       Selected
- ASAM2       Selected      132 06/03/01  06/03/01  22:32:43  DNET074
- ATCDEM0     Selected
- ATCDEM2     Selected
- ATCDEM4
- ATCDEM5
- CDAT1
  
```

75 occurrences found in 23 members, 0 skipped

9. Note: To change data in files, you can use the Change command. For example: C ABCD ZYXW. Many options from the editor’s Change command are available. For example: C ABC XYZ 5 20 will search only from columns 5 through 20 when looking for data.

Tip: The Find/Change Utility isn’t just for PDS files.

- You can use this utility to find and change records in sequential files and VSAM files also.