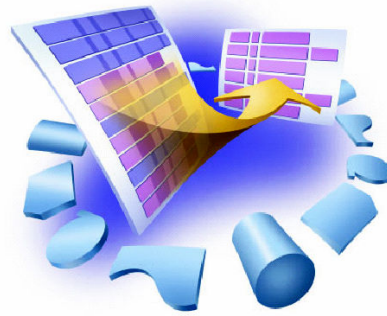


IBM® File Manager
For OS/390® and z/OS®
Version 6
Evaluation Training
January 23, 2006



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January 23, 2006



Course Information

- Course Objectives:
 - After completing this course, you should be able to:
 - Use File Manager to browse and edit data.
 - Format data based on COBOL or PL1 record layouts.
 - Select specific types of records based on different criteria.
 - Create new data in an automated process.
 - Copy data from file to file, regardless of file format.
 - Compare datasets.
 - View the Volume Table of Contents (VTOC).
 - Search or update data globally in PDS(E) datasets.



Agenda



Introduction

Edit and Browse

Templates

Utilities

Create

Print

Copy

Object List

VTOC

Global Find/Change

Compare

Copybook Viewing/Printing

Batch Execution



What IS File Manager?

- Integrated suite of functions to help OS/390 **application developers** work with data across a wide range of formats and storage media: browsing, finding, editing, creating, copying, printing, comparing, and erasing data
- Ideal for creating and working with application test data, or locating problems in application data files
- Functions can be accessed via interactive panels, or called in REXX procedures and batch jobs



Advanced functions

- **Aimed at application developers:**
 - Format VSAM and QSAM data according to definitions
 - in a COBOL copybook, displayed as either:
 - A table, under field column headings
 - A single record per panel, listing field values next to field names
 - Select records with Boolean conditions
 - Select fields
 - Copy selected records and fields between data sets, and insert/reformat fields
 - Create test data according to user-specific patterns
 - Compare data between data sets according to user-specified patterns



Highlights

- Find and change data within particular fields
- Identify fields that contain invalid values
- Edit entire files regardless of size
- Copy or print selected records and fields
- Test data generator based on record layouts
- Compare data between datasets using field level mapping



Agenda



Introduction

••• **Edit and Browse**

Templates

Utilities

Create

Print

Copy

Object List

VTOC

Global Find/Change

Compare

Copybook Viewing/Printing

Batch Execution



Browse and Edit Objectives

- In this Chapter, you will learn the following:
 - File type limitations
 - How to access the Browse and Edit options
 - What are the fields on the File Manager Edit Entry Panel
 - How to format the data using Copybooks or Templates
 - How to use selection criteria to limit the number or types of records
 - How to modify selection criteria
 - How to use primary and line commands in Browse/Edit
 - How to change data views



Browse/Edit File Types

- You can browse and edit files with unlimited size and the following file characteristics:
- Partitioned or Sequential datasets with:
 - fixed or variable records with blocked, unblocked, or undefined formats
 - fixed length records from 10 - 32760 bytes
 - variable length records from 14 - 32752 bytes
- VSAM files
 - ESDS
 - KSDS
 - RRDS (fixed or variable lengths)



File Manager Primary Option Menu

Process Options Help

File Manager

Primary Option Menu

Command ==> 2

0	Settings	Set processing options	User ID . . : DBA022
1	Browse	Browse data	System ID : DEMOMVS
2	Edit	Edit data	Appl ID . . : FMN
3	Utilities	Perform utility functions	Version . . : 6.1.0
4	Tapes	Tape specific functions	Terminal . : 3278
5	Disk/VSAM	Disk track and VSAM CI functions	Screen . . : 1
6	OAM	Work with OAM objects	Date . . . : 2005/12/09
7	Templates	Create, edit, or update templates	Time . . . : 06:40
8	HFS	Access Hierarchical File System	
X	Exit	Terminate File Manager	

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Do you have VTS? Virtual Tape System?



Edit



Process Options Help

File Manager Edit Entry Panel

Command ==>

Input Partitioned, Sequential or VSAM Data Set, or HFS file:

```

Data set/path name 'DBA022.FMDEMO.VSAM' +
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 . . . 'DBA022.FMDEMO.COPYLIB'
Member . . . . . DEMODATA Blank or pattern for member list

```

Processing Options:

Copybook/template	Start position type	Enter "/" to select option
<u>1</u> 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



Edit



Process Options Help

Edit DBA022.FMDEMO.VSAM Rec 0 of 77
 Command ==> Scroll CSR
 Refresh on save N_ Type ESDS Format TABL
 REC-TYPE NAME EMPLOYEE-NO AGE SALARY MONTH(1)
 #2 #3 #4 #5 #6 #7
 AN 1:2 AN 3:20 BI 23:2 BI 25:2 PD 27:4 BI 31:4
 <> <-----1-----> <---+> <---+> <-----> <-----1>

REC-NO	REC-TYPE	NAME	EMPLOYEE-NO	AGE	SALARY	MONTH(1)
000000	****	Top of data	****			
000001	01	Graham Purdy	5512	94	68000	7
000002	01	Al Tortorice	3200	39	53000	15
000003	01	Will Soper	4412	28	68000	5
000004	01	Tyrone Dalais	3312	21	65000	14
000005	02	Grant Sutherland	50309	42373	*****	2571124800
000006	02	Graham Purdy	50309	42373	*****	2571124800
000007	01	Silvano Prez	2312	55	69000	1
000008	01	Liz Rushton	3412	40	65000	14
000009	02	Silvano Prez	55193	38535	*****	2241413184
000010	02	Don Pharoah	55193	38535	*****	2241413184
000011	01	John Nicholls	3412	42	69000	30
000012	01	Anna Waghorn	7812	33	65000	2
000013	01	Merrill Bani	7712	56	58000	18
000014	02	Grant Sutherland	50309	42373	*****	2571124800

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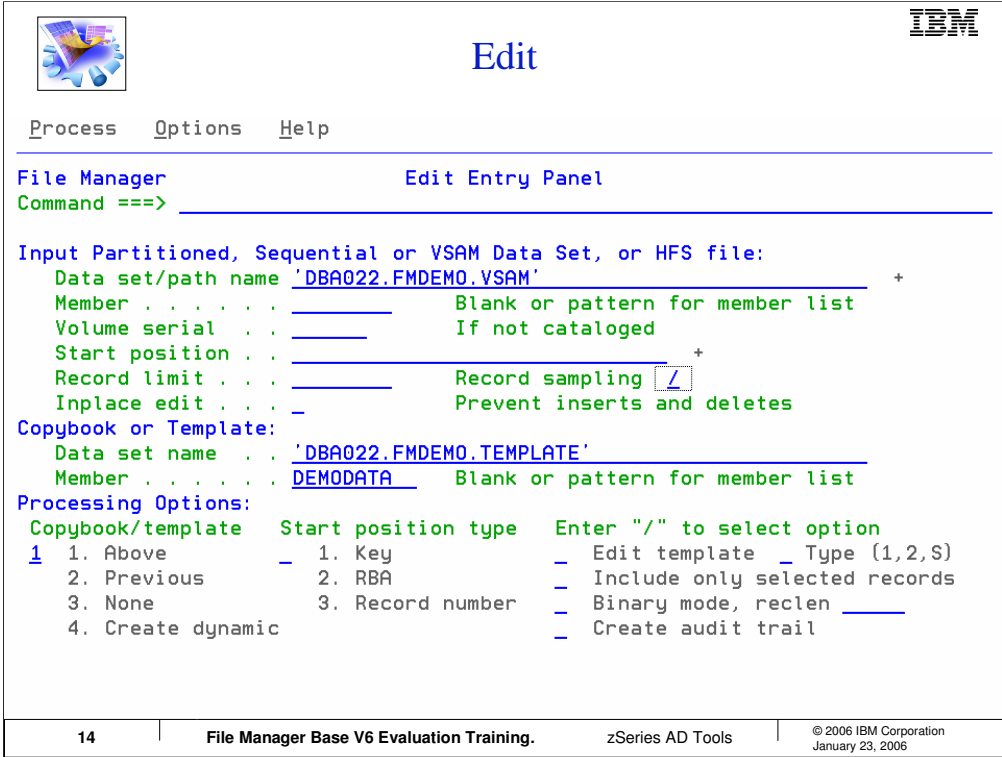
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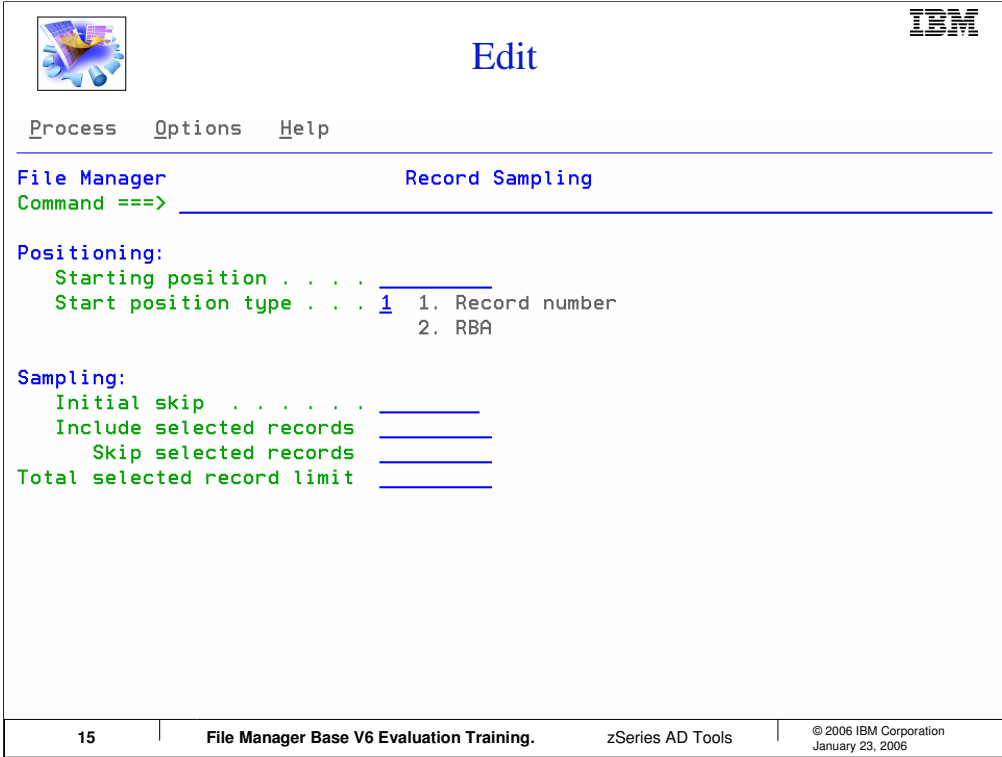


Creating a Template

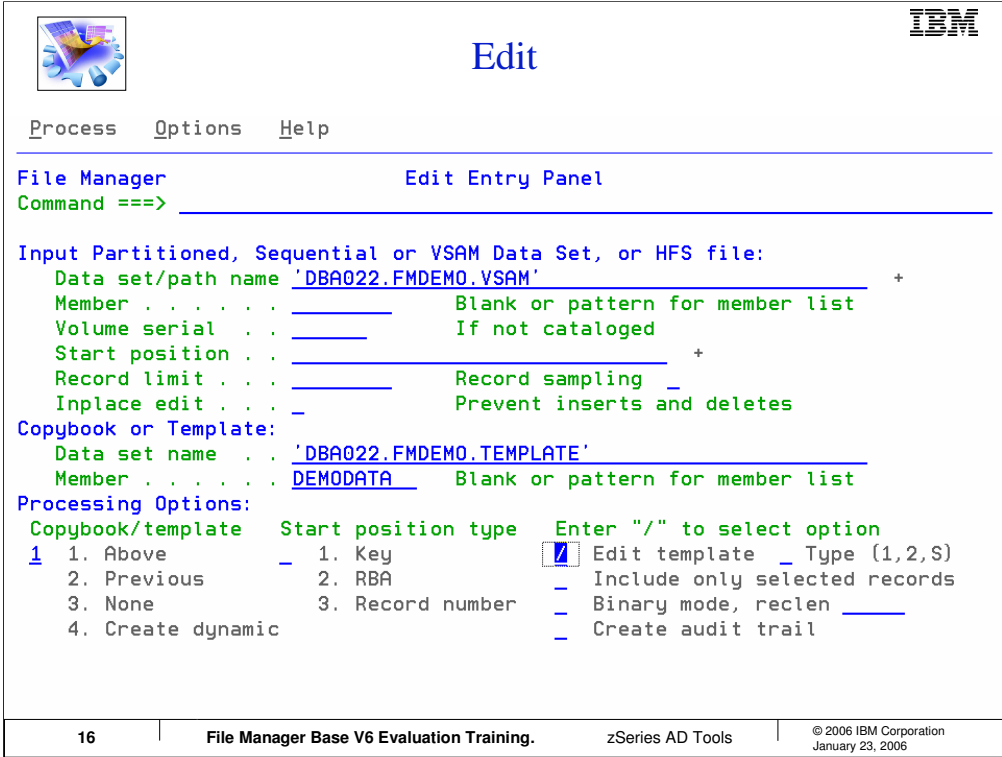


Create Dynamic is unformatted record layout in File-Aid.


We do not update your copybooks.



Create Dynamic is unformatted record layout in File-Aid.
We do not update your copybooks.



Create Dynamic is unformatted record layout in File-Aid.
 We do not update your copybooks.



Edit

Process Options Help

File Manager Record Type Selection Line 1 of 2
 Command ==> _____ Scroll CSR

Processing Option: _ Template for segmented data

Cmd	SIE	Field Name	Prompt	Offset	Length
		**** Top of data ****			
<input checked="" type="checkbox"/>	SIE	REC-TYPE01		0	80
<input type="checkbox"/>	SI	REC-TYPE02		0	80
		**** End of data ****			

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Same here as cross-reference.



Edit



Process Options Help

File Manager Field Selection/Edit Line 1 of 8
Command ==> Scroll CSR

----- Criteria - Enter 1 or 2 to specify expression by field -----

1 Id : #2 = '01' +

2 Sel: #6 < 70000 and #6 > 40000 +

Offset 0

Cmd	Seq	SHC	Ref	Field Name	Picture	Type	Start	Length
				**** Top of data ****				
---	---		1	1 REC-TYPE01		AN	1	80
---	---	S	2	2 REC-TYPE	XX	AN	1	2
---	---	S	3	2 NAME	X(20)	AN	3	20
---	---	S	4	2 EMPLOYEE-NO	9(4)	BI	23	2
---	---	S	5	2 AGE	9(4)	BI	25	2
---	---	S	6	2 SALARY	9(7)	PD	27	4
---	---		7	2 MONTH OCCURS 12 TIMES	9(8)	BI	31	4
---	---		8	2 FILLER	XX	AN	79	2
				**** End of data ****				



Edit



Process Options Help

File Manager Record Type Selection Line 1 of 2
Command ==> _____ Scroll CSR

Processing Option: _ Template for segmented data

Cmd	SIE	Field Name	Prompt	Offset	Length
		**** Top of data ****			
<u>_</u>	SIE	REC-TYPE01		0	80
<u>e</u>	SI	REC-TYPE02		0	80
		**** End of data ****			



Edit



Process Options Help

File Manager Field Selection/Edit Line 1 of 7
Command ==> Scroll CSR

```

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : #2 = '02'
2 Sel:
Offset 0
Cmd Seq SHC Ref Field Name Picture Type Start Length
**** Top of data ****
1 1 REC-TYPE02 AN 1 80
2 2 REC-TYPE XX AN 1 2
3 2 NAME X(20) AN 3 20
4 2 JOB-TITLE X(14) AN 23 14
5 2 ADDR1 X(20) AN 37 20
6 2 ADDR2 X(20) AN 57 20
7 2 POSTCODE X(4) AN 77 4
**** End of data ****

```



Edit



OR



Edit



Process Options Help

File Manager Field Selection/Edit Line 1 of 7
Command ==> 1 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 REC-TYPE-B		AN	1	80
---	---		2	2 REC-TYPE	X	AN	1	1
---	---		3	2 DEPT	X(02)	AN	2	2
---	---		4	2 EMP-NO	9(4)	ZD	4	4
---	---		5	2 NAME	X(17)	AN	8	17
---	---		6	2 MONTH OCCURS 12 TIMES	9(4)	ZD	25	4
---	---		7	2 FILLER	X(08)	AN	73	8
				**** End of data ****				



Edit



Process Options Help

File Manager Record Identification Criteria Line 1 of 8
Command ==> Scroll CSR

```

Cmd Con ( Field Name                               Op Value )
<-> - <-----1-----2-----3-----> <-> <-----1-----2-----
*** **** Top of data ****
   _ REC-TYPE01
   _ AND _ REC-TYPE                               = 01
   _ AND _ NAME
   _ AND _ EMPLOYEE-NO
   _ AND _ AGE
   _ AND _ SALARY
   _ AND _ FILLER
*** **** End of data ****

```

Warning - specifying conditional statements will override existing expression



Edit



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

Member . . . emprec



Edit

Process Options Help

Edit DBA022.FMDEMO.VSAM Rec 0 of 77
 Command ==> sha all off Scroll CSR
 Refresh on save N_ Format TABL

REC-TYPE	NAME	EMPLOYEE-NO	AGE	SALARY
#2	#3	#4	#5	#6
AN 1:2	AN 3:20	BI 23:2	BI 25:2	PD 27:4
<>	<-----1----->	<----+>	<----+>	<-----+>
000000	**** Top of data ****			
000001	01 Graham Purdy	5512	94	68000
000002	01 Al Tortorice	3200	39	53000
000003	01 Will Soper	4412	28	68000
000004	01 Tyrone Dalais	3312	21	65000
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed				
000007	01 Silvano Prez	2312	55	69000
000008	01 Liz Rushton	3412	40	65000
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed				
000011	01 John Nicholls	3412	42	69000
000012	01 Anna Waghorn	7812	33	65000
000013	01 Merrill Bani	7712	56	58000
- - - - - REC-TYPE02 - - - - - 20 Line(s) suppressed				
- - - - - 2 Line(s) not selected				
000036	01 Graham Purdy	5512	94	68000

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File-AID does not support Multi-record type in TABL format. Do this by displaying only what you asked for.



Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Rec 0 of 77
Command ==> x all          Scroll CSR
SHAD Refresh on save N_          Format TABL
          REC-TYPE NAME          EMPLOYEE-NO          AGE          SALARY
          #2          #3          #4          #5          #6
          AN 1:2 AN 3:20          BI 23:2 BI 25:2 PD 27:4
          <>          <-----1----->          <---->          <---->          <----->
000000 **** Top of data ****
000001 01          Graham Purdy          5512          94          68000
000002 01          Al Tortorice          3200          39          53000
000003 01          Will Soper          4412          28          68000
000004 01          Tyrone Dalais          3312          21          65000
000007 01          Silvano Prez          2312          55          69000
000008 01          Liz Rushton          3412          40          65000
000011 01          John Nicholls          3412          42          69000
000012 01          Anna Waghorn          7812          33          65000
000013 01          Merrill Bani          7712          56          58000
000036 01          Graham Purdy          5512          94          68000
000037 01          Al Tortorice          3200          39          53000
000038 01          Will Soper          4412          28          68000
000039 01          Tyrone Dalais          3312          21          65000
000045 01          Silvano Prez          2312          55          69000

```



Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Rec 0 of 77
Command ==> f 7812 #4                      Scroll CSR
SHAD Refresh on save N                      Format TABL
REC-TYPE NAME          EMPLOYEE-NO      AGE  SALARY
#2          #3          #4          #5          #6
AN 1:2  AN 3:20          BI 23:2  BI 25:2  PD 27:4
<>          <-----1----->          <---->  <---->  <----->
000000 **** Top of data ****
000078 **** End of data ****

```

Some shadows are off, so no records displayable



Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Chars 7812 found
Command ==> f all 40 (#2 #4 #5)          Scroll CSR
SHAD Refresh on save N_                  Format TABL
REC-TYPE NAME          EMPLOYEE-NO      AGE  SALARY
#2      #3              #4      #5      #6
AN 1:2  AN 3:20        BI 23:2  BI 25:2  PD 27:4
<>      <-----1----->      <----> <----> <----->
000000 **** Top of data ****
000012 01      Anna Waghorn          7812      33      65000
000078 **** End of data ****

```



Edit



Process Options Help

File Manager Edit ALLANT.FMDEMO.VSAM

Command ==> reset

Scroll CSR

SHAD Type ESDS Refresh on save N

Format TABL

REC-TYPE	NAME	EMPLOYEE-NO	AGE	SALARY
#2	#3	#4	#5	#6
AN 1:2	AN 3:20	BI 23:2	BI 25:2	PD 27:4
<>	<---+-----1----->	<---+>	<---+>	<---+-->
000000	**** Top of data ****			
000013	01 John Levrington	3412	40	67000
000014	01 Liz Rushton	3412	40	66000
000019	01 John Nicholls	3412	40	69000
000021	01 Anna Waghorn	7812	33	65000
000045	**** End of data ****			

Search arg 40 found 3 times



Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Rec 0 of 77
Command ==> sha sup on          Scroll CSR
SHAD Refresh on save N_          Format TABL
REC-TYPE NAME          EMPLOYEE-NO      Type ESDS
#2      #3              #4      #5      #6
AN 1:2  AN 3:20        BI 23:2  BI 25:2  PD 27:4
<>      <-----1----->      <----> <----> <----->
000000 **** Top of data ****
000001 01      Graham Purdy          5512      94      68000
000002 01      Al Tortorice          3200      39      53000
000003 01      Will Soper            4412      28      68000
000004 01      Tyrone Dalais         3312      21      65000
000007 01      Silvano Prez          2312      55      69000
000008 01      Liz Rushton           3412      40      65000
000011 01      John Nicholls         3412      42      69000
000012 01      Anna Waghorn          7812      33      65000
000013 01      Merrill Bani          7712      56      58000
000036 01      Graham Purdy          5512      94      68000
000037 01      Al Tortorice          3200      39      53000
000038 01      Will Soper            4412      28      68000
000039 01      Tyrone Dalais         3312      21      65000
000045 01      Silvano Prez          2312      55      69000

```

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Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Rec 0 of 77
Command ==>                                     Scroll CSR
SHAD Refresh on save N_                         Format TABL
REC-TYPE NAME          EMPLOYEE-NO          Type ESDS
#2          #3          #4          #5          #6
AN 1:2 AN 3:20          BI 23:2 BI 25:2 PD 27:4
<>          <-----1----->          <----+> <----+> <----->
000000 **** Top of data ****
000001 01          Graham Purdy          5512          94          68000
000002 01          Al Tortorice          3200          39          53000
000003 01          Will Soper          4412          28          68000
000004 01          Tyrone Dalais          3312          21          65000
v - - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed
000007 01          Silvano Prez          2312          55          69000
000008 01          Liz Rushton          3412          40          65000
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed
000011 01          John Nicholls          3412          42          69000
000012 01          Anna Waghorn          7812          33          65000
000013 01          Merrill Bani          7712          56          58000
- - - - - REC-TYPE02 - - - - - 20 Line(s) suppressed
000036 01          Graham Purdy          5512          94          68000
000037 01          Al Tortorice          3200          39          53000


```

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Edit

Process Options Help

Edit DBA022.FMDEMO.VSAM Rec 0 of 77

Command ==> for s Scroll CSR

SHAD Refresh on save N_ Format TABL

REC-TYPE	NAME	JOB-TITLE	ADDR1	ADDR2
#2	#3	#4	#5	#6 +
AN 1:2	AN 3:20	AN 23:14	AN 37:20	AN 57
<>	<-----1----->	<-----1----	<-----1----->	<-----


000000 **** Top of data ****

--- REC-TYPE01 --- 4 Line(s) suppressed

000005	02	Grant Sutherland	Developer	22 Montrose St	Thorn
000006	02	Graham Purdy	Developer	256 Hay St	Canni
--- REC-TYPE01 --- 2 Line(s) suppressed					
000009	02	Silvano Prez	Programmer	48 Small Lane	Mt Pl
000010	02	Don Pharoah	Programmer	661 Ayton Way	Flore
--- REC-TYPE01 --- 3 Line(s) suppressed					
000014	02	Grant Sutherland	Developer	22 Montrose St	Thorn
000015	02	Andrew Astle	Developer	44 Eagle Rise	River
000016	02	Graham Purdy	Developer	256 Hay St	Canni
000017	02	Bill Soper	Developer	84 Murchison Rd	Diane
000018	02	Tyrone Dalais	Developer	92 Smith St	Belmo
000019	02	Rod Turner	Manager	184 Alexander Dve	Swan
000020	02	Clive Nealon	Manager	28 Bern Rd	Middl

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If they have to see all record types they can print the file.



Edit

Process Options Help

Edit DBA022.FMDEMO.VSAM Rec 1 of 77
 Command ==> {PF1} Scroll CSR
Type ESDS Format SNGL
Top Line is 1 of 38

Current 01: REC-TYPE01

Ref	Field	Picture	Typ	Start	Len	Data
1	1	REC-TYPE01				
			AN	1	80	
2	2	REC-TYPE				
		XX	AN	1	2	01
3	2	NAME X(20)	AN	3	20	Graham Purdy
4	2	EMPLOYEE-NO				
		9(4)	BI	23	2	5512
5	2	AGE 9(4)	BI	25	2	94
6	2	SALARY				
		9(7)	PD	27	4	68000
7	2	MONTH OCCURS 12 TIMES				
		2 MONTH(1)				
		9(8)	BI	31	4	7
7	2	MONTH(2)				
		9(8)	BI	35	4	0

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If they have to see all record types they can print the file.



Edit



File Manager Tutorial - Edit

Command ==> 8

Edit allows you to create or change data in a data set.

The following topics are presented in sequence by pressing Enter or may be selected by number:

- | | | | |
|---|-------------------------|----|----------------------------------|
| 0 | General information | 8 | Primary commands |
| 1 | Types of data set | 9 | Prefix commands |
| 2 | Edit entry panel | 10 | Labels and line ranges |
| 3 | Data set selection list | 11 | Function keys |
| 4 | Member selection list | 12 | Editing techniques (large files) |
| 5 | Display screen formats | 13 | Editing a template |
| 6 | Scrolling data | 14 | Miscellaneous notes |
| 7 | Data display formats | | |



Edit



File Manager Tutorial - Edit

Command ==> {PF3} █

Primary commands

The following topics are presented in sequence by pressing Enter or may be selected by number:

- 1 Primary commands (general information)
- 2 Miscellaneous commands
- 3 FIND/FE/CHANGE/EXCLUDE commands
- 4 Display mode control commands
- 5 Data editing commands
- 6 Edit control commands
- 7 Changing the logical view (templates)
- 8 Display content commands {JUST, PIC, RDF, REFS, SLOC, STR, TYPE}



Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Structure on
Command ==> hex on                        Scroll CSR
                                           Type ESDS   Format SNGL
                                           Top Line is 3 of 11

Current 01: REC-TYPE02
Ref Field  Picture Typ Start  Len  Data
  2  2 REC-TYPE
      XX      AN    1    2  02
  3  2 NAME  X(20)  AN    3   20  Grant Sutherland
  4  2 JOB-TITLE
      X(14)   AN   23   14  Developer
  5  2 ADDR1 X(20)  AN   37   20  22 Montrose St
  6  2 ADDR2 X(20)  AN   57   20  Thornlie
  7  2 POSTCODE
      X(4)    AN   77    4   6145
*** End of record ***

```



Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Rec 5 of 77
Command ==> for t                          Scroll CSR
                                           Type ESDS   Format SNGL
                                           Top Line is 3   of 29

Current 01: REC-TYPE02
Ref Field  Picture Typ Start  Len  Data
  2  2 REC-TYPE
      XX      AN      1      2  02
                                           FF
                                           02

  3  2 NAME  X(20)  AN      3     20  Grant Sutherland
                                           C989A4EAA88998984444
                                           79153024385931540000

  4  2 JOB-TITLE
      X(14)  AN      23     14  Developer
                                           C8A89998944444
                                           45553675900000

  5  2 ADDR1 X(20)  AN      37     20  22 Montrose St
                                           FF44D99A99A84EA44444

```

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Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          Rec 5 of 77
Command ==> hex off          Scroll CSR
SHAD Refresh on save N_          Format TABL
REC-TYPE NAME          JOB-TITLE          ADDR1          ADDR2
#2          #3          #4          #5          #6 +
AN 1:2    AN 3:20          AN 23:14          AN 37:20          AN 57
<>          <-----1-----> <-----1---> <-----1-----> <-----
000005 02          Grant Sutherland          Developer          22 Montrose St          Thorn
          FF          C989A4EAA88998984444 C8A89998944444 FF44D99A99A84EA44444 E8999
          02          79153024385931540000 45553675900000 22004653962502300000 38695

000006 02          Graham Purdy          Developer          256 Hay St          Canni
          FF          C988894DA98A444444444 C8A89998944444 FFF4C8A4EA4444444444 C8998
          02          79181407494800000000 45553675900000 25608180230000000000 31559

- - - - - REC-TYPE01 - - - - - 2 Line(s) suppressed

000009 02          Silvano Prez          Programmer          48 Small Lane          Mt Pl
          FF          E89A8994D98A44444444 D9989898944444 FF44E98994D898444444 DA4D9
          02          29351560795900000000 79679144590000 48002413303155000000 43073

```

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Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM                      Rec 6 of 77
Command ==> c all 65000 60000                          Scroll CSR
SHAD Refresh on save N_                                Format TABL
REC-TYPE NAME          EMPLOYEE-NO  AGE  SALARY
#2      #3              #4      #5      #6
AN 1:2  AN 3:20        BI 23:2 BI 25:2 PD 27:4
<>      <-----1----->  <----> <----> <----->
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed
000007 01      Silvano Prez          2312   55   69000
000008 01      Liz Rushton           3412   40   65000
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed
000011 01      John Nicholls         3412   42   69000
000012 01      Anna Waghorn          7812   33   65000
000013 01      Merrill Bani          7712   56   58000
- - - - - REC-TYPE02 - - - - - 20 Line(s) suppressed
000036 01      Graham Purdy           5512   94   68000
000037 01      Al Tortorice           3200   39   53000
000038 01      Will Soper             4412   28   68000
000039 01      Tyrone Dalais          3312   21   65000
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed
000045 01      Silvano Prez          2312   55   69000
000047 01      Liz Rushton           3412   40   65000

```



Edit



Process Options Help

```

Edit          DBA022.FMDEMO.VSAM          6 string(s) changed
Command ==>
SHAD Refresh on save N_
REC-TYPE NAME          EMPLOYEE-NO      Type ESDS
#2          #3          #4          #5          #6
AN 1:2     AN 3:20     BI 23:2  BI 25:2  PD 27:4
<>         <-----1----->         <----> <----> <----->
000000 **** Top of data ****
000001 01      Graham Purdy             5512      94      68000
000002 01      Al Tortorice             3200      39      53000
000003 01      Will Soper                4412      28      68000
000004 01      Tyrone Dalais             3312      21      60000
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed
000007 01      Silvano Prez              2312      55      69000
000008 01      Liz Rushton               3412      40      60000
- - - - - REC-TYPE02 - - - - - 2 Line(s) suppressed
000011 01      John Nicholls             3412      42      69000
000012 01      Anna Waghorn              7812      33      60000
000013 01      Merrill Bani              7712      56      58000
- - - - - REC-TYPE02 - - - - - 20 Line(s) suppressed
000036 01      Graham Purdy             5512      94      68000
000037 01      Al Tortorice             3200      39      53000

```

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File Manager Base V6 Evaluation Training.

zSeries AD Tools

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Find and Change commands

- Entering strings in FIND and CHANGE:
 - Find abc or Change abc xyz
 - not case sensitive
 - Find 'abc' or Change 'abc' 'xyz'
 - not case sensitive
 - can contain quotes or commas, or be a null value
 - Find C'aBc' or Change C 'aBc' C 'XyZ'
 - case sensitive
 - can contain quotes or commas, or be a null value
 - Find X'C1' or Change X'E7'
 - can contain any hex values



Find and Change commands

- Limiting the columns or fields searched
 - The default is search all columns
- Find abc #5 or Change abc xyz #5
 - Searches only in one column
 - Uses column reference number shown in TABL and SNGL format
- Find abc (#5 #12 #3) or Change abc xyz (#5 #12 #3)
 - Searches in specified columns
 - Separate with either commas or spaces:
(#5,#12,#3) or (#5 #12 #3)
- Find abc #15(2) or Change abc xyz #15(2)
 - Searches in the array element in specified column and subscript
 - Use only with specified columns
 - Separate with either commas or spaces:
(#5,#12,#3) or (#5 #12 #3)



Find and Change commands

- Changing the scope
 - The default is search all rows
- Find all abc or Change all abc xyz
Find all abc #5 or Change all abc xyz #5
 - Searches all rows
- Other parms that affect scope:
 - FIRST first occurrence, starting at first row forward
 - LAST last occurrence, starting from last row backward
 - NEXT next occurrence, forward from current location
 - PREV previous occurrence, backward from current location
 - .label1 .label2 between two predefined row labels
 - X or NX excluded, or not excluded rows only



Shadow, Exclude, View, Sort, Locate

- SHADOW – Turn shadow lines off and on.
 - SHAdow all off
- EXCLUDE - Remove records from the display.
 - eXclude ALL
- VIEW - Change column headings to reflect different record types.
- SORT - Sort data on key value or field numbers in ascending or descending order.
 - Sort #3 a #5 d
- LOCATE – Search on a field name.
 - Locate employee



Advanced Template Processing



Advanced Template Processing



Process Options Help

File Manager

Primary Option Menu

Command ==> 7

0	Settings	Set processing options	User ID . . : DBA022
1	Browse	Browse data	System ID : DEMOMVS
2	Edit	Edit data	Appl ID . . : FMN
3	Utilities	Perform utility functions	Version . . : 6.1.0
4	Tapes	Tape specific functions	Terminal . : 3278
5	Disk/VSAM	Disk track and VSAM CI functions	Screen . . : 1
6	OAM	Work with OAM objects	Date . . . : 2005/12/09
7	Templates	Create, edit, or update templates	Time . . . : 08:40
8	HFS	Access Hierarchical File System	
X	Exit	Terminate File Manager	



Advanced Template Processing

Process Options Help

File Manager Template Workbench

Command ==> cc

CC Create template from copybook	E Edit field/record in template
CM Create template from model	U Update template from copybook
MC Map from copybook	MT Map from template

Copybook:

Data set name . 'ALLANT.FMDEMO.COPYLIB' _____

Member _____

Template:

Data set name . 'ALLANT.TEMPLATE' _____

Member TEMPTST

Model Template:

Data set name . 'MDUCK.P17147.B442.TEMPLATE' _____

Member TEST

Processing Options:

Enter "/" to select option

Advanced copybook selection



Advanced Template Processing

```
Library List
-----
Command ==> _____
F
C Library data sets:
C Data set name 1 'ALLANT.FMDEMO.COPYLIB'
C                2 'DAVALLE.FMDEMO.CPYLIB3'
M                3 _____
C                4 _____
C                5 _____
C                6 _____
T                7 _____
M                8 _____
M                9 _____
P                10 _____
                11 _____
                12 _____
```




Advanced Template Processing

Process Options Help

```
File Manager                               Copybook Member Selection
Command ==>                               Scroll CSR
DSNAME DAVALLE.FMDEMO.CPYLIB3
Sel Name Prompt Alias-of Size Created Changed ID
-- ALL 5 04/07/11 04/07/18-03:48:52 DAVALLE
-- COPYCOB3 25 01/02/23 01/02/23-00:41:00 ALLANT
|s COPY1 31 00/05/11 01/02/23-00:35:43 ALLANT
-- COPY1A 31 03/01/23 03/01/23-06:05:31 ALLANT
|s COPY2 17 00/10/17 02/05/01-19:57:07 ALLANT
|s COPY3 31 01/04/20 01/04/20-01:02:52 ALLANT
|s COPY4 24 01/05/09 01/05/09-02:40:23 ALLANT
|s COPY5 33 00/05/11 02/11/14-22:17:14 ALLANT
-- FMNAFCPY 31 01/08/13 01/08/13-22:33:07 ALLANT
-- FMNAFCP2 32 01/08/13 01/08/13-22:36:04 ALLANT
-- INSHIRE 3 01/05/22 01/06/07-07:41:46 SSAND
-- INSUB 2 01/05/22 01/06/07-07:46:16 SSAND
-- LETRBOX 4 01/05/22 01/05/22-15:07:52 SSAND
-- LINKSTR 5 01/05/22 01/06/07-07:39:35 SSAND
-- LINKSUB 49 SSAND
-- NSTREET 44 SSAND
-- SHIRE 45 SSAND
-- SHIRENP 5 01/05/22 01/06/20-14:30:38 SSAND
```

Select members and hit PF3 to continue



Advanced Template Processing

Process Options Help

File Manager Copybook Selection

Command ==> {PF3} Scroll CSR

Cmd Member Lib 01 Field Name

*** **** Top of data ****

—	<u>COPY1</u>	1	—	_____
—	<u>COPY2</u>	1	—	_____
—	<u>COPY3</u>	1	—	_____
—	<u>COPY4</u>	1	—	_____
—	<u>COPY5</u>	1	—	_____

*** **** End of data ****



Advanced Template Processing

```
Process  Options  Help
-----
File Manager                Template Workbench                Template saved
Command ==> _____

CC Create template from copybook      E Edit field/record in template
CM Create template from model         U Update template from copybook
MC Map from copybook                  MT Map from template

Copybook:
  Data set name . 'ALLANT.FMDEMO.COPYLIB'
  Member . . . . .
Template:
  Data set name . 'ALLANT.TEMPLATE'
  Member . . . . . TEMPTEST
Model Template:
  Data set name . 'MDUCK.P17147.B442.TEMPLATE'
  Member . . . . . TEST

Processing Options:
Enter "/" to select option
/ Advanced copybook selection
```



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..❖ **Utilities**

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Copy

Object List

VTOC

Global Find/Change

Compare

Copybook Viewing/Printing

Batch Execution



Utility Objectives

- In this Chapter, you will learn the following:
 - How to create new test data (test data generation)
 - How to copy records/fields between files using layout mapping
 - How to use the Catalog Services
 - How to access and use the Volume Table of Contents (VTOC)
 - How to find or change data throughout PDS(E) datasets
 - How to compare two datasets



Utilities



Process Options Help

File Manager

Primary Option Menu

Command ==> 3

0	Settings	Set processing options	User ID . . : DBA022
1	Browse	Browse data	System ID : DEMOMVS
2	Edit	Edit data	Appl ID . . : FMN
3	Utilities	Perform utility functions	Version . . : 6.1.0
4	Tapes	Tape specific functions	Terminal . : 3278
5	Disk/VSAM	Disk track and VSAM CI functions	Screen . . : 1
6	OAM	Work with OAM objects	Date . . . : 2005/12/09
7	Templates	Create, edit, or update templates	Time . . . : 08:42
8	HFS	Access Hierarchical File System	
X	Exit	Terminate File Manager	



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Utilities – Data Creation



Process Options Help

File Manager Utility Functions

Command ==> 1

- | | | |
|----|-------------|------------------------------------|
| 0 | DBCS | Set DBCS data format for print |
| 1 | Create | Create data |
| 2 | Print | Print data |
| 3 | Copy | Copy data |
| 4 | Dslist | Catalog services |
| 5 | VTOC | Work with VTOC |
| 6 | Find/Change | Search for and change data |
| 7 | AFP | Browse AFP data |
| 8 | Storage | Browse user storage |
| 9 | Printdsn | Browse File Manager print data set |
| 10 | Loadlib | View load module information |
| 11 | Compare | Compare data |
| 12 | Audit trail | Print audit trail report |
| 13 | Copybook | View and Print |



Utilities



Process Options Help

File Manager Data Create Utility

Command ==>

More: +

Output Partitioned, Sequential or VSAM Data Set, or HFS file:

```

Data set/path name . . . FMDEMO.STUFF2 +
Member . . . . . _____ (Blank or pattern for member list)
Volume serial . . . . . _____ (If not cataloged)
Record length . . . . . _____ Optional record length for RECFM V
Records . . . . . 25 number of records
Fillchar . . . . . _____ char or hex value, AN, BIN, or RAND
Key position . . . . . _____ if sequence field desired
Key length . . . . . 8 length from 1 to 9
Key increment . . . . . 10 increment value
Like data set . . . . . 'DBA022.APA.DATA'

```

Copybook or Template:

```

Data set name . . . . . FMDEMO.COPYLIB
Member . . . . . DEMODATA (Blank or pattern for member list)

```

Processing Options:

Disposition	Copybook or template	Enter "/" to select option
<u>2</u> 1. Old/Reuse	<u>1</u> 1. Above	<u>/</u> Edit template <u>s</u> Type (1,2,S)
2. Mod	2. Previous	<u>-</u> Batch execution
ISPF Packing	3. None	<u>-</u> Binary mode, reclen _____



Utilities



Process Options Help

Allocate ALLANT.DEMO.STUFF2

Command ==> _____

New Data Set Organization:

Select option	Instructions
<u>6</u> 1. KSDS	The above data set does not exist.
2. ESDS	To define or allocate a new data set select a data set organization and press ENTER or press PF3/EXIT or PF12/CANCEL to return without allocation.
3. RRDS	
4. VRRDS	
5. LDS	
6. Non VSAM ----->	For a new non VSAM data set only, enter a data set name below to copy existing allocation attributes.
7. IAM KS	
8. IAM ESDS	

Existing Partitioned or Sequential Data Set:

Data set name fmdemo.data
Volume serial _____



Utilities



Process Options Help

Allocate ALLANT.DEMO.STUFF2

Command ==>

Specify a model data set, SMS class names, or leave blank for defaults:

Like data set . . . _____
Volume serial . . . MVS4WA
Data class . . . _____ leave blank for default
Storage class . . . BASE leave blank for default
Management class STANDARD leave blank for default

Space Requirements:

Space unit . . . TRKS 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 . . . 84
Block size . . . 27998 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



Utilities



Process Options Help

File Manager Field Selection/Edit Line 1 of 8
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 REC-TYPE01		AN	1	80
---	---	S	2	2 REC-TYPE	XX	AN	1	2
---	---	S	3	2 NAME	X(20)	AN	3	20
e	---	S C	4	2 EMPLOYEE-NO	9(4)	BI	23	2
---	---	S	5	2 AGE	9(4)	BI	25	2
---	---	S	6	2 SALARY	9(7)	PD	27	4
---	---		7	2 MONTH OCCURS 12 TIMES	9(8)	BI	31	4
---	---		8	2 FILLER	XX	AN	79	2
				**** End of data ****				



Utilities



Process Options Help

File Manager Field Attributes

Command ==> _____

Fixed Attributes:

Field name	EMPLOYEE-NO
Type	BI
Start	23
Length	2

Use Attributes:

Output width	_____
Leading zeros	<u>NO</u> YES or NO

Create Attributes:

Start value	<u>1000</u>
End value	_____
Increment	<u>10</u>
Cycle	_____



Utilities



Process Options Help

File Manager Data Create Utility 25 record(s) written
Command ==>

Output Partitioned, Sequential or VSAM Data Set:

Data set name DEMO.STUFF2
 Member _____ (Blank or pattern for member list)
 Volume serial _____ (If not cataloged)
 Record length 80 _____ Optional record length for RECFM V
 Records 25 _____ number of records
 Fillchar _____ char or hex value, AN, BIN, or RAND
 Key position _____ if sequence field desired
 Key length 8 _____ length from 1 to 9
 Key increment 10 _____ increment value

Copybook or Template:

Data set name 'ALLANT.TEMPLATE'
 Member TEMP4 _____ (Blank or pattern for member list)

Processing Options:

Disposition	Copybook or template	Enter "/" to select option
<u>2</u> 1. Old/Reuse	<u>1</u> 1. Above	_ Edit template
2. Mod	2. Previous	_ Batch execution
	3. None	
	4. Create dynamic	



Utilities



Process Options Help

File Manager Edit ALLANT.DEMO.STUFF2

Command ==>

Scroll CSR

Format TABL

REC-TYPE	NAME	EMPLOYEE-NO	AGE	SALARY
#2	#3	#4	#5	#6
AN 1:2	AN 3:20	BI 23:2	BI 25:2	PD 27:4
<>	<-----1----->	<---->	<---->	<---->
000000	**** Top of data ****			
000001		1000	0	0
000002		1010	0	0
000003		1020	0	0
000004		1030	0	0
000005		1040	0	0
000006		1050	0	0
000007		1060	0	0
000008		1070	0	0
000009		1080	0	0
000010		1090	0	0
000011		1100	0	0
000012		1110	0	0
000013		1120	0	0
000014		1130	0	0



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Utilities - Copying Data

- You can copy data between files regardless of file format
- You can use COBOL or PL1 record layouts to map fields
- You can reformat fields, changing field definitions and lengths
- Your "TO" dataset does not need to be pre-allocated



Utilities - Copying Data



Process Options Help

File Manager

Utility Functions

Command ==> 3

- | | | |
|----|-------------|------------------------------------|
| 0 | DBCS | Set DBCS data format for print |
| 1 | Create | Create data |
| 2 | Print | Print data |
| 3 | Copy | Copy data |
| 4 | Dslist | Catalog services |
| 5 | VTOC | Work with VTOC |
| 6 | Find/Change | Search for and change data |
| 7 | AFP | Browse AFP data |
| 8 | Storage | Browse user storage |
| 9 | Printdsn | Browse File Manager print data set |
| 10 | Loadlib | View load module information |
| 11 | Compare | Compare data |
| 12 | Audit trail | Print audit trail report |
| 13 | Copybook | View and Print |



Utilities – Copying Data



Process Options Help

File Manager

Copy Utility

Command ==>

From Partitioned, Sequential or VSAM Data Set, or HFS file:

Data set/path name . . . 'DBA022.FMDEMO.VSAM' +
 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 'DBA022.FMDEMO.TEMPLATE'
 Member demodata (Blank or pattern for member)

Processing Options:

Copybook/template Enter "/" to select option

<u>1</u>	1. Above	-	Batch execution	-	Advanced member selection
	2. None	-	Use proc _____	-	Skip member name list
	3. Create dynamic	-	Ignore length mismatch	-	REXX member selection: <u>P</u>
-	Edit template	-	JCL Source format	-	Exclusive (DISP=OLD)
<u>2</u>	Type (1,2,S)			-	Report PDS record counts
				-	Binary mode, reclen _____



Utilities – Copying Data



Process Options Help

Copy from DBA022.FMDEMO.VSAM

Command ==> _____

More: +

To Partitioned, Sequential or VSAM Data Set, or HFS file:

Data set/path name . . . 'DBA022.FMDEMO.COPY2' +
Member name (or mask) . . . _____
Volume serial _____

To Copybook/Template From: DBA022.FMDEMO.TEMPLATE (DEMODATA)

Data set name FMDEMO.COPYLIB
Member COPYNEW (Blank or pattern for member)

Processing Options:

Copybook/template usage	Disposition	Enter "/" to select option
<u>1</u> 1. Above	<u>1</u> 1. Old or Reuse	- Replace members
2. None	2. Mod	<input checked="" type="checkbox"/> Edit template mapping
3. Create dynamic		- Edit template source
ISPF Packing		- Binary mode, reclen _____
<u>1</u> 1. Asis		- Stats Off
2. Pack		
3. Unpack		
4. None		



Utilities – Copying Data



Process Options Help

File Manager Field Mapping Line 1 of 9
Command ==> Scroll CSR

To DBA022.FMDEMO.COPYLIB(COPYNEW)
From DBA022.FMDEMO.TEMPLATE(DEMODATA)

Cmd	Lv	To Field Name	Type	Len	Lv	From Field Name	Type	Len
		**** Top of data ****						
—	1	REC-TYPE01	AN	84	1	REC-TYPE01	AN	80
—	2	REC-TYPE	AN	2	2	REC-TYPE	AN	2
<u>s</u> —	2	SURNAME	AN	20				
—	2	EMPLOYEE-NO	BI	2	2	EMPLOYEE-NO	BI	2
—	2	AGE	BI	2	2	AGE	BI	2
—	2	SALARY	PD	4	2	SALARY	PD	4
<u>e</u> —	2	SERIAL-NUM	ZD	4				
—	2	MONTH	BI	4	2	MONTH	BI	4
—	2	FILLER	AN	2	2	FILLER	AN	2
		**** End of data ****						



Utilities – Copying Data



Process Options Help

File Manager From Field Mapping

Command ==> _____ Scroll CSR

To template/copybook : DBA022.FMDEMO.COPYLIB (COPYNEW)

From template/copybook : DBA022.FMDEMO.TEMPLATE (DEMODATA)

To field : #3 SURNAME

From field :

Corresponding(Y/N) . . : N (Auto map for group items).

Sel	Ref	Lvl	From Field	Typ	Start	Length
			**** Top of data ****			
___	D	--	Delete "From field"			
___	1	1	REC-TYPE01	AN	1	80
___	2	2	REC-TYPE	AN	1	2
<u>s</u> ___	3	2	NAME	AN	3	20
___	4	2	EMPLOYEE-NO	BI	23	2
___	5	2	AGE	BI	25	2
___	6	2	SALARY	PD	27	4
___	7	2	MONTH(12)	BI	31	4
___	8	2	FILLER	AN	79	2
			**** End of data ****			



Utilities – Copying Data



Process Options Help

File Manager Field Attributes

Command ==>

Fixed Attributes:

Field name	SERIAL-NUM
Type	ZD
Start	31
Length	4

Use Attributes:

Heading	_____
Output width	_____
Leading zeros	<u>NO</u> YES or NO

Create Attributes:

Start value	<u>1000</u> _____
End value	_____
Increment	<u>10</u> _____
Cycle	_____



Utilities – Copying Data



Process Options Help

File Manager

Field Mapping

Command ==>

Scroll CSR

TO DBA022.FMDEMO.COPYLIB (COPYNEW)				FROM DBA022.FMDEMO.TEMPLATE (DEMODATA)			
Cmd	Lv	Field name	Type Len	Lv	Field name	Type Len	
		**** Top of data ****					
---	1	REC-TYPE01	AN 84	1	REC-TYPE01	AN 80	
---	2	REC-TYPE	AN 2	2	REC-TYPE	AN 2	
---	2	SURNAME	AN 20	2	NAME	AN 20	
---	2	EMPLOYEE-NO	BI 2	2	EMPLOYEE-NO	BI 2	
---	2	AGE	BI 2	2	AGE	BI 2	
---	2	SALARY	PD 4	2	SALARY	PD 4	
---	2	SERIAL-NUM	ZD 4		*** create data ***		
---	2	MONTH	BI 4	2	MONTH	BI 4	
---	2	FILLER	AN 2	2	FILLER	AN 2	
		**** End of data ****					



Utilities – Copying Data



Process Options Help

File Manager

Copy Utility

Command ==>

From Partitioned, Sequential or VSAM Data Set, or HFS file:

```

Data set/path name . . . 'DBA022.FMDEMO.VSAM' +
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 . . . . . 'DBA022.FMDEMO.TEMPLATE'
Member . . . . . DEMODATA (Blank or pattern for member)

```

Processing Options:

```

Copybook/template Enter "/" to select option
 1 1. Above      _ Batch execution      _ Advanced member selection
 2 2. None       _ Use proc _____ _ Skip member name list
 3 3. Create dynamic _ Ignore length mismatch _ REXX member selection: P
  _ Edi                                     P=OLD)
 2 Typ 66 record(s) copied: 0 truncated: 0 fields truncated ord counts
                                         eclen _____

```



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Utilities - Catalog Services

- The following line commands are available from this screen:
 - ALTER Alters parameters
 - COPY Copy one dataset to another
 - DEFINE Defines new entry similar to selected entry
 - DELETE Deletes the entry
 - LIST Lists the parameters for the entry
 - BROWSE Browses dataset
 - EDIT Edits dataset
 - PRINT Invokes Print Utility for this entry
 - VIEW Invokes AFP Print browse (non-VSAM only)
 - EXTENTS List statistics and extents for dataset



Utilities - Catalog Services



Process Options Help

```

File Manager                               Data Set List                               Line 18 of 23
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
        DBA022.FMDEMO.STUFF.DATA           DATA DMPU19 2005.343
        DBA022.FMDEMO.TEMPLATE             NVSAM DMPU15 2004.020
copy    DBA022.FMDEMO.VSAM                 ESDS      2004.020
        DBA022.FMDEMO.VSAM.DATA           DATA DMPU08 2004.020
        DBA022.FMDEMO.VSAM2              ESDS      2004.338
        DBA022.FMDEMO.VSAM2.DATA          DATA DMPU05 2004.338
**** End of data ****

```



Utilities - Catalog Services



Process Options Help

Copy from DBA022.FMDEMO.VSAM

Command ==> _____

More: +

To Partitioned, Sequential or VSAM Data Set, or HFS file:

Data set/path name . . . 'DBA022.FMDEMO.COPYVSAM' +
 Member name (or mask) . _____
 Volume serial _____

To Copybook/Template From: DBA022.FMDEMO.TEMPLATE (DEMODATA)

Data set name 'DBA022.FMDEMO.TEMPLATE'
 Member NEWCOPY (Blank or pattern for member)

Processing Options:

Copybook/template usage	Disposition	Enter "/" to select option
<u>1</u> 1. Above	<u>1</u> 1. Old or Reuse	- Replace members
2. None	2. Mod	- Edit template mapping
3. Create dynamic		- Edit template source
ISPF Packing		- Binary mode, reclen _____
<u>1</u> 1. Asis		- Stats Off
2. Pack		
3. Unpack		
4. None		



Utilities - Catalog Services



Process Options Help

Allocate DBA022.FMDEMO.COPYVSAM

Command ==> _____

New Data Set Organization:

Select option	Instructions
<input checked="" type="checkbox"/> 1. KSDS	The above data set does not exist.
<input type="checkbox"/> 2. ESDS	To define or allocate a new data set select a data set organization and press ENTER or press PF3/EXIT or PF12/CANCEL to return without allocation.
<input type="checkbox"/> 3. RRDS	
<input type="checkbox"/> 4. VRRDS	
<input type="checkbox"/> 5. LDS	
<input type="checkbox"/> 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 'DBA022.FMDEMO.VSAM'
Volume serial _____



Utilities - Catalog Services



Process Options Help

File Manager VSAM Define

Command ==>

VSAM Catalog Entry:

Data set name . . . 'DBA022.FMDEMO.COPYVSAM'
Catalog ID

More: +

Basic Information:

VSAM data type . . ESDS Expiration date
Data component

VSAM Cluster Attributes:

CI size 20480 size of the data control intervals
Buffer space 40960 buffer space to be allocated at open time
Shr cross region . . 1 cross system 3 Reuse Y
Recovery Y Spanned N Erase N

VSAM Data Allocation:

Allocation unit . . CYL REC, KB, MB, TRK, or CYL
Space primary . . . 2 secondary 1

Recs
Free Press ENTER to define the catalog entry or EXIT to cancel
Volu

SMS Definitions:

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Utilities - VTOC

- The following line commands are available from the Display VTOC panel ... Just type them in over the file name:
 - BROWSE File Manger Browse
 - EDIT File Manger Edit
 - EXTENTS Displays information on the Extents for the dataset indicated the entry
 - LIST Lists the parameters for the entry
 - PRINT File Manger Print Utility
 - VIEW Displays an AFP dataset (LIST3820 format) using the File Manager AFP Utility
 - DELETE Delete a dataset
 - CATALOG Catalog a dataset
 - UNCATALOG Uncatalog a dataset



Utilities - VTOC



Process Options Help

File Manager Utility Functions

Command ==> 5

- 0 DBCS Set DBCS data format for print
- 1 Create Create data
- 2 Print Print data
- 3 Copy Copy data
- 4 Dslist Catalog services
- 5 VTOC Work with VTOC
- 6 Find/Change Search for and change data
- 7 AFP Browse AFP data
- 8 Storage Browse user storage
- 9 Printdsn Browse File Manager print data set
- 10 Loadlib View load module information
- 11 Compare Compare data
- 12 Audit trail Print audit trail report
- 13 Copybook View and Print



Utilities - VTOC

IBM

Process Options Help

File Manager

Display VTOC

Command ==>

More:

+

blank Display data set list P Print data set list
V Display VTOC list PV Print VTOC list
 PC Print VTOC and data set list

Enter one or both of the parameters below:

Data set name . . . DBA022.**

Volume serial . . . *

Processing Options:

Enter "/" to select option

- Batch execution
- YY/MM/DD date format (default: YYYY.DDD)
- Repeat data set name for each extent

Sort data set list by

- 1 1. Name
- 2. Volser
- 3. Extent/Begin-end
- 4. Size/Tracks
- 5. Type/Dsorg
- 6. Recfm
- 7. Lrecl

Sort volume list by

- 1 1. Volser
- 2. Device address (unit)
- 3. Device type
- 4. SMS storage group
- 5. Capacity/tracks
- 6. Utilization/tracks
- 7. Utilization percentage

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Utilities - VTOC



Process Options Help

- 1. Browse
- 2. View
- 3. Print
- 4. Extents
- 5. Info
- 6. Edit
- 7. Copy
- 8. Delete
- 9. Rename/Alter
- 10. Catalog
- 11. Uncatalog
- 12. Refresh
- 13. Exit

```

Display VTOC Data Set List                               Line 596 of 768
                                                         Scroll CSR
      DSN 'DBA022.**'
      ts 696      VSAM 369      non-VSAM 327
      Available N/A      Utilized N/A
      --- sorted by NAME      A - Ext      Begin-end
      20...25...30...35...40... seq Volume      Cyl-hd      Cyl-hd
      DATA      0 DMPU13      560 0      560 12
      F.DATA      0 DMPU19      242 0      243 14
      LATE      0 DMPU15      785 0      785 1
      1 DMPU15      785 2      785 2
      2 DMPU15      785 3      785 3
      3 DMPU15      785 4      785 4
      4 DMPU15      134 12      134 12
      DBA022.FMDEMO.VSAM.DATA      0 DMPU08      2765 0      2766 14
      DBA022.FMDEMO.VSAM2.DATA      0 DMPU05      50 9      50 9
      DBA022.FMIMS.COPYLIB      0 DMPU16      1093 0      1095 6
      1 DMPU16      1095 7      1095 14
      DBA022.FMIMS.CRITERIA      0 SCR915      40 9      40 9
      DBA022.FMIMS.CRITERIA      0 DMPU23      40 9      40 9
      DBA022.FMIMS.DB.DJ1E      0 DMPU06      29 4      29 4

```

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Utilities – Global Find/Change

- The following primary commands are available with the Find/Change Utility.
 - (COLx parameters are optional)
- **FIND** string col1 col2
 - Where string can be:
 - xxxx no blanks or commas
 - 'xxxx' blanks and commas are allowed, but case is ignored
 - C'xxxx' same as above, but case is taken into account
 - X'xxxx' any valid hexadecimal character string
- **CHANGE** string1 string2 col1 col2
 - Where the same rules for string apply



Utilities – Global Find/Change



Process Options Help

File Manager

Utility Functions

Command ==> 6

- | | | |
|----|-------------|------------------------------------|
| 0 | DBCS | Set DBCS data format for print |
| 1 | Create | Create data |
| 2 | Print | Print data |
| 3 | Copy | Copy data |
| 4 | Dslist | Catalog services |
| 5 | VTOC | Work with VTOC |
| 6 | Find/Change | Search for and change data |
| 7 | AFP | Browse AFP data |
| 8 | Storage | Browse user storage |
| 9 | Printdsn | Browse File Manager print data set |
| 10 | Loadlib | View load module information |
| 11 | Compare | Compare data |
| 12 | Audit trail | Print audit trail report |
| 13 | Copybook | View and Print |



Utilities – Global Find/Change



Process Options Help

File Manager Find/Change Utility Row 1 of 7
Command ==> f disp=shr Scroll CSR

Input Partitioned, Sequential or VSAM Data Set:

Data set name . FMDEMO.JCL
Member COB* (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 Listing Option ISPF Packing
/ JCL Source format Immediate change 1 1. Long 1 1. Asis
_ Use REXX proc Batch execution 2. Summary 2. Pack
_ REXX no update Exclusive (DISP=OLD) 3. Unpack
_ Advanced member selection Stats off 4. None
5. Skip

Process List:

Sel	Name	Prompt	Alias-of	Size	Created	Changed	ID
-	COBBATCH	Selected		27	01/06/21	03/10/13 17:06:28	DBA022
-	COBBDB2	Selected		31	02/10/17	03/10/13 17:06:42	DBA022



Utilities – Global Find/Change

File Edit Edit_Settings Menu Utilities Compilers Test Help

```
EDIT          ALLANT.SPFTEMP1.CNTL          Columns 00001 00072
Command ==>  sub          Scroll ==> PAGE
***** ***** Top of Data *****
000001 //ALLANT01 JOB (FAL),'TORTORICE',NOTIFY=&SYSUID
000002 //*TEP1 EXEC PGM=DITTO
000003 //*
000004 //FILEMGR EXEC PGM=FMNMAIN
000005 //STEPLIB DD DSN=FMN.V5R1M0.SFMNMOD1.DRAUG23,DISP=SHR
000006 //* DD DSN=IGY.SIGYCOMP,DISP=SHR
000007 //SYSPRINT DD SYSOUT=*
000008 //FMNTSPRT DD SYSOUT=*
000009 //SYSTEM DD SYSOUT=*
000010 //SYSIN DD *
000011 $$FILEM FCH ,
000012 $$FILEM MEMBER=*NC*,
000013 $$FILEM PACK=ASIS,
000014 $$FILEM JCL=YES,
000015 $$FILEM DSNIN=ALLANT.FMDEMO.CNTL
000016 BNDS 1 80
000017 CAPS OFF
000018 f dsn=idi & disp=shr
000019 /+
```



Utilities – Global Find/Change



Menu Utilities Compilers Help

```
BROWSE ALLANT.SRCHFOR.LIST Line 00000000 Col 001 080
Command ==> Scroll ==> PAGE
***** Top of Data *****
IBM File Manager for z/OS
Find/Change Listing DSN: ALLANT.DEMO.CNTL

COBOLA          ----- STRING(S) FOUND/CHANGED -----
Record Number
  52 //COBOL.SYSPRINT DD DSN=IDI.DEMO.TEST.LISTINGS(COBOLA),DISP=SHR
  61 //GO.IDILCOB DD DSN=IDI.DEMO.TEST.LISTINGS,DISP=SHR
  62 //GO.IDIHIST DD DSN=IDI.DEMO.TEST.HIST,DISP=SHR

COBOLCMP        ----- STRING(S) FOUND/CHANGED -----
Record Number
  31 //STEPLIB DD DISP=SHR,DSN=IDI.LOAD.OLD
  33 //IDILANGX DD DISP=SHR,DSN=IDI.IDILANGX

COBOL22         ----- STRING(S) FOUND/CHANGED -----
Record Number
  57 //COB2.SYSPRINT DD DSN=IDI.DEMO.TEST.LISTINGS(COBOL22),DISP=SHR
  65 //GO.IDILCOB DD DSN=IDI.DEMO.TEST.LISTINGS,DISP=SHR
  66 //GO.IDIHIST DD DSN=IDI.DEMO.TEST.HIST,DISP=SHR
```



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--> **Compare**

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Utilities - Compare

- Compare two datasets
- Use record mode or formatted mode
- Use selection criteria
- Display only the changes or show all records
- Results in display mode or hex mode



Utilities - Compare

Process Options Help

File Manager Utility Functions

Command ==> 11

0	DBCS	Set DBCS data format for print
1	Create	Create data
2	Print	Print data
3	Copy	Copy data
4	Dslist	Catalog services
5	VTOC	Work with VTOC
6	Find/Change	Search for and change data
7	AFP	Browse AFP data
8	Storage	Browse user storage
9	Printdsn	Browse File Manager print data set
10	Loadlib	View load module information
11	Compare	Compare data
12	Audit trail	Print audit trail report
13	Copybook	View and Print



Utilities



Process Options Help

File Manager Compare Utility

Command ==>

"Old" Partitioned, Sequential or VSAM Data Set:

Data set name FMDEMO.VSAM

Member _____ (Blank or pattern for member list)

Volume serial _____

Start key _____ key or slot

Skip count _____ number of records to be skipped

Compare count ALL number of records to be compared

"Old" Copybook or Template:

Data set name 'ALLANT.TEMPLATE'

Member TEMP1

Processing Options:

Copybook/template usage Enter "/" to select option

1 1. Above _ Edit template

2. Previous _ Batch execution

3. None

4. Create dynamic



Utilities



Process Options Help

File Manager Compare Utility

Command ==>

"New" Partitioned, Sequential or VSAM Data Set:

Data set name FMDEMO.COMPNEW

Member _____ (Blank or pattern for member list)

Volume serial _____

Start key _____ key or slot

Skip count 0 number of records to be skipped

Compare count ALL number of records to be compared

"New" Copybook or Template:

Data set name 'ALLANT.TEMPLATE'

Member TEMP1

Processing Options:

Copybook/template usage Enter "/" to select option

1 1. Above _ Edit template

2. Previous

3. None

4. Create dynamic



Utilities



Process Options Help

File Manager **Compare Utility**

Command ==>

More:

Compare Options:

Compare type

- 2 1. Record
- 2. Formatted

Synchronization

- 1 1. One-to-one
- 2. Read-ahead
- 3. Keyed

Listing type

- 2 1. Summary
- 2. Delta
- 3. Matching
- 4. Long
- 5. None

Processing Options:

Enter "/" to select option

- Edit template mapping
- / Clear print data set

ISPF Packing

- 1 1. Unpack if packed
- 2. None
- 3. Skip

Listing Options:

Enter "/" to select option

- / Wide listing
- Show hex chars
- / Highlight changes
- Show field attributes

Template Reporting Options:

Enter "/" to select option

- Show template layouts
- Show template criteria



Utilities



Process Options Help

File Manager

Compare Utility

Command ==>

More: -

- 4. Long
- 5. None

Processing Options:

Enter "/" to select option

- Edit template mapping
- / Clear print data set

ISPF Packing

- 1 1. Unpack if packed
- 2. None
- 3. Skip

Listing Options:

Enter "/" to select option

- / Wide listing
- Show hex chars
- / Highlight changes
- Show field attributes

Template Reporting Options:

Enter "/" to select option

- / Show template layouts
- / Show template criteria
- / Show mapped fields
- / Show unmapped fields
- / Show array elements
- Show start/end as hex offset
- Show length in hex

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Process Options Help

File Manager Mapping Record Type Selection

Command ==> _____ Scroll CSR

Cmd	Field name	Len	Field name	Len
	NEW ALLANT.TEMPLATE(TEMP1)		OLD ALLANT.TEMPLATE(TEMP1)	
	**** Top of data ****			
<u>e</u>	REC-TYPE01	80	REC-TYPE01	80
<u>—</u>	REC-TYPE02	80	REC-TYPE02	80
	**** End of data ****			



Utilities



Process Options Help

File Manager

Field Mapping

Command ==>

Scroll CSR

NEW ALLANT.TEMPLATE(TEMP1)				OLD ALLANT.TEMPLATE(TEMP1)				
Cmd	Lv	Field name	Type	Len	Lv	Field name	Type	Len
		**** Top of data ****						
___	1	REC-TYPE01	AN	80	1	REC-TYPE01	AN	80
___	2	REC-TYPE	AN	2	2	REC-TYPE	AN	2
___	2	NAME	AN	20	2	NAME	AN	20
___	2	EMPLOYEE-NO	BI	2	2	EMPLOYEE-NO	BI	2
___	2	AGE	BI	2	2	AGE	BI	2
___	2	SALARY	PD	4	2	SALARY	PD	4
___	2	MONTH	BI	4	2	MONTH	BI	4
___	2	FILLER	AN	2	2	FILLER	AN	2
		**** End of data ****						



Utilities



Process Options Help

Formatted Comparison Options

F
C
C
P

Command ==> _____

Specify additional options for formatted comparison.

- Ignore leading blanks in character fields . . . █
- Ignore trailing blanks in character fields . . . -
- Match reformatted character fields -
- Ignore case in character fields -

Press ENTER to perform formatted comparison.
Press EXIT or CANCEL to return to the options panel.

ion

/ Clear print data set

- Show hex chars
- / Highlight changes
- Show field attributes



Utilities



Process Options Help

File Manager Print Browse Line 1
 Command ==> Scroll CSR
 Col 1

-----1-----2-----3-----4-----5-----6-----7-----8
 IBM File Manager for z/OS and OS/390

CURRENT SET FUNCTION VALUES:

```

PRINTOUT=SYSOUT=T  HEADERPG=YES  ASCII=NO      RECLIMIT=(1,*)
PRINTLEN=132      PAGESKIP=NO  PAD=ON       EOD=
PAGESIZE=60      DATAHDR=YES  DBCSPRT=OFF  LANGUAGE=ENGLISH
PRTRTRANS=ON     DUMP=UPDOWN  TAPELBL=SL   CYLHD=ABSOLUTE
SMFNO=000
PRINTDSN=ALLANT.FMN.LISTA
  
```

```

IBM File Manager for z/OS and OS/390
* * * * Formatted comparison with one-to-one synchronization
* * New data set: ALLANT.FMDEMO.VSAM
* *           using template ALLANT.TEMPLATE(TEMP1)
* * Old data set: ALLANT.FMDEMO.DATA
* *           using template ALLANT.TEMPLATE(TEMP1)
  
```



Utilities



Process Options Help

File Manager Print Browse

Line 19

Command ==>

Scroll CSR

Col 1

-----1-----2-----3-----4-----5-----6-----7-----8

New data set fields:		REC-TYPE	NAME	EMPLOYEE-NO	AGE	SALAR
Old data set fields:		REC-TYPE	NAME	EMPLOYEE-NO	AGE	SALAR
ID	NREC-#	OREC-#	<>	<-----1----->	<---->	<---->
I	000005		01	Tyrone Dalais	3312	21 6500
D		000006	01	Tyrone Dalais	3312	21 6000
I	000011		01	Silvano Prez	2312	50 6500
D		000012	01	Silvano Prez	2312	50 6000
I	000021		01	Anna Waghorn	7812	33 6500
D		000022	01	Anna Waghorn	7812	33 6000

IBM File Manager for z/OS and OS/390

Comparison summary:

Old data set records processed: 35



Utilities



Process Options Help

File Manager Print Browse Line 37
Command ==> Scroll CSR

Col 1

```

-----1-----2-----3-----4-----5-----6-----7-----8
      New data set records processed:      35
      Matching records found:             32
      New records not selected:           9
      Old records not selected:           10
      Old data set records deleted:        3
      New data set records inserted:       3
      Total changed records:              3
      Paired changes:                     3
      Non-paired old data set record deletions: 0
      Non-paired new data set record insertions: 0

```

```

Synchronization: One-to-one
Comparison type: Formatted
Listing type: Delta
Listing options: Wide listing
Highlight changes

```

IBM File Manager for z/OS and OS/390



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Process Options Help

File Manager Copybook View and Print

Command ==>

Copybook or Template:

Data set name FMDEMO.COPYLIB
Member DEMORED Blank or pattern for member list

Processing Options:

View/Print Option
1 1. View
2. Print

Enter "/" to select option
- Batch Execution
/ Show array elements
- Show start/end as hex offset
/ Show length in hex
/ Show template criteria



Utilities



Process Options Help

File Manager DBA022.FMDEMO.COPYLIB(DEMOREDF) Line 1 of 31
Command ==> Scroll CSR

1 Print Layout

Ref	Field Name	Picture	Type	Start	End	Length
	**** Top of data ****					
1	1 REC-TYPE01		AN	1	80	80
2	2 REC-TYPE	XX	AN	1	2	2
3	2 NAME	X(20)	AN	3	22	20
4	2 EMPLOYEE-NO	9(4)	BI	23	24	2
5	2 AGE	9(4)	BI	25	26	2
6	2 SALARY	9(7)	PD	27	30	4
7	2 MONTH OCCURS 12 TIMES					
7	2 MONTH(1)	9(8)	BI	31	34	4
7	2 MONTH(2)	9(8)	BI	35	38	4
7	2 MONTH(3)	9(8)	BI	39	42	4
7	2 MONTH(4)	9(8)	BI	43	46	4
7	2 MONTH(5)	9(8)	BI	47	50	4
7	2 MONTH(6)	9(8)	BI	51	54	4
7	2 MONTH(7)	9(8)	BI	55	58	4
7	2 MONTH(8)	9(8)	BI	59	62	4

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➔ **Batch Execution**



Batch Execution

- Many File Manager utility screens allow for the generation of batch JCL:
 - 3.1 Create dataset utility
 - 3.2 Print dataset utility
 - 3.3 Copy dataset utility
 - 3.5 VTOC utility
 - 3.6 Find/Change utility
 - 3.11 Compare
- You can also generate your own JCL for batch execution.



Batch Execution



- For example, to print the first 20 records in hexadecimal format from a test file:

```
//STEP0001 EXEC      PGM=FILEMGR
//STEPLIB DD      DSN=SYS1.SFMNMOD1,DISP=SHR
//SYSPRINT DD     SYSOUT=*
//SYSIN  DD       *
$$FILEM DSP DSN=MUCKWO.TEST.DATA,
$$FILEM          FORMAT=HEX,NLRECS=20
/*
```



Batch Execution

- All control cards must begin with the characters, `$$FILEM`, in column 1-7
- They are followed by a blank in column 8 and
- a command name and its related parameters (if any)
- Each statement may be continued on another line
- as long as each line ends with a comma and the
- next line begins with `$$FILEM`
- If not otherwise specified, the input/output DD file names are `DDIN` and `DDOUT`



Batch Execution

```
//STEP0001 EXEC      PGM=FILEMGR
//SYSPRINT DD       SYSOUT=*
//DDIN  DD          DSN=MDUCKWO.TEST.FILE1,DISP=SHR
//DDOUT DD          DSN=MDUCKWO.TEST.FILE2,DISP=OLD
//FMNEXEC DD        DSN=MDUCKWO.REXX.EXEC,DISP=SHR
//SYSIN  DD          *
$$FILEM DSC TCIN=MDUCKWO.CPY.COBCOPY(HOSTDATA),
$$FILEM  TCOUT=MDUCKWO.CPY.COBCOPY(NEWHOST),
$$FILEM  PROC=HOSTREXX
$$FILEM EOJ
/*
```

The proc shown, HOSTREXX, can be found in the FMNEXEC DD statement PDS in member HOSTREXX. It consists of REXX exec statements.



Batch Execution

- You have many sub-parameters available for the Data Set Copy (DSC) command:

INPUT	input file ddname
DSNIN	input dataset name (member)
OUTPUT	output file ddname
DSNOUT	output dataset name (member)
POSITION	number of logical records to be skipped 0
KEY	key value
NLRECS	number of records to copy ALL
CORRESP	YES NO
REPLACE	YES NO
TCIN	input file template or copybook member
TCOUT	output file template or copybook member
PROC	REXX member in DD FMNEXEC or * for inline REXX
VOLSERIN	input file volume serial name
VOLSEROUT	output file volume serial name
MEMBER	input PDS file member name
DISP	MOD OLD output file disposition
SPACE	n (n,m) space in tracks where n=primary, m=extents



Batch Execution

```
//STEP0001 EXEC PGM=FILEMGR
//SYSPRINT DD      SYSOUT=*
//DDIN  DD          DSN=MDUCKWO.SAMPLE.DATASET,DISP=SHR
//DDOUT DD          DSN=MDUCKWO.SAMPLE2.DATA,DISP=SHR
//OUT01 DD          DSN=MDUCKWO.SAMPLE3.DATA,DISP=SHR
//SYSIN  DD          *
$$FILEM DSC PROC=*
  outrec = change(outrec,'Grant Sutherland','Fred Bloggs  ')
  if prtcnt() < 10 then print(outrec,'hex')
      /* Print the first 10 output records in hex */
  if fld(1,2) = 01 then do;
    tally(27,4,P,'Salary Total ')
    tally(31,4,B,'Total Month 1 Payment')
    write(out01) /* Write 01s to OUT01 */
    exit drop /* Don't write 01s to the default, DDOUT, file */
  end
  if fld(1,2) = 02 then
    exit /* Write 02s to DDOUT */
  else
    exit drop /* Don't write any other records */
/+
/*
```



Batch Execution



This example changes all occurrences of 'YPE' to 'ORK' in the VSAM file, 'MDUCKWO.KSDS.BASE' :

```
//FMBATCH EXEC PGM=FILEMGR
...//SYSIN DD *
$$FILEM DSEB DSNIN=MDUCKWO.KSDS.BASE, $$FILEM
PROC=*

filerc = 0
do while filerc = 0
  outrec=change(outrec,'YPE','ORK',0)
  update()
  filerc = down(1)
end

/+
//*
```



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- [Latest PTFs for Application Performance Analyzer for z/OS](#)

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In Debug Tool V6.1 new usability enhancements and new functions have been added. In particular, Breakpoints, monitors, and settings can now be saved and restored across debug sessions independent of the environment in which Debug Tool is running. You can now set an AT ENTRY breakpoint without Debug Tool knowing about the program ahead of time. This enhancement makes it easier to specify breakpoints. Debug Tool can now debug C and C++ programs compiled with the new DEBUG compile option. Support has been added to debug PL/I applications where the programs in the application are compiled with a mixture of new and old IBM PL/I compilers. Debug Tool now supports the side file facility for PL/I, much like the support that has been available for COBOL for some time.



AD Tools



- IBM Fault Analyzer
- IBM File Manager
- IBM Debug Tool
- IBM Application Performance Analyzer
- IBM Workload Simulator
- IBM File Export
- ISPF Productivity Tool
- Application Time Facility

Verify the data here.