

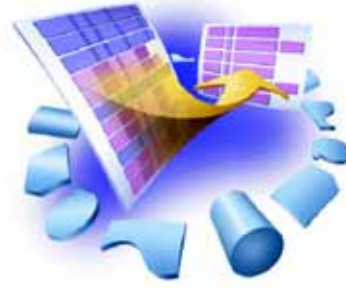


IBM Software Group

## IBM File Manager for z/OS IMS Feature

Program Number 5655-S14

### Tutorial



**ON** DEMAND BUSINESS

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Welcome to the tutorial for the IMS feature of IBM's File Manager for z/OS, one of the IBM zSeries problem determination tools.

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MVS	
MVS/ESA	

Welcome to the tutorial for the IMS feature of IBM's File Manager for z/OS, one of the IBM zSeries problem determination tools.



## File Manager IMS training: sections

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- **Creating templates**
  - About templates and views
  - Create and save a new template
- **Browsing or editing an IMS database with a template**
  - Starting the editor
  - The display formats and zoom
  - Display different segment types
  - Find, change, scope, and locate data
  - Insert, repeat, repeat all, and delete segments
  - Print from the editor
  - End, quit, save, undo, and cancel
  - Commands summary

This section will introduce File manager IMS templates and views. You will see what they are and why you might use them. An example of creating a new template will be presented.



## Templates and views

- Why use templates and views?
  - Ease of use!
    - Work with fields in a segment
    - Select for display:
      - only the segments you want
      - only the fields you want

In the examples from the previous sections, the data shown in IMS segments was not broken out into fields. Segments have been displayed as long strings of characters. You can use File Manager IMS templates and views to make it easier to visualize and work with your data. Using a template and view, you can format segments into fields. You can also specify selection criteria, so that the editor or browser will only display segments that you want to see, and fields that you want to see.



## What does a template do?

- A template maps a layout to each segment in the database
- A layout can be a copybook, multiple copybooks, or part of a copybook

### Copybooks:

- member CUSTADDR

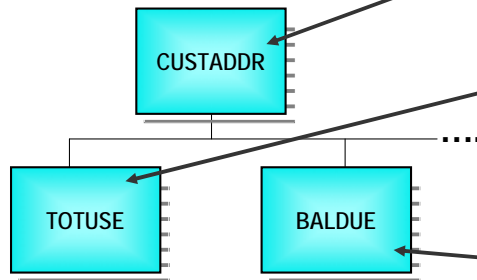
```
01 CUST-LAYOUT.  
05 FLD-A PIC...  
05 FLD-B PIC...
```

- member TOTUSE

```
01 TOT-DATA.  
05 FLD-X PIC...  
05 FLD-Y PIC...
```

- member BALDUE

```
10 FLD-C PIC...  
10 FLD-X PIC...
```



A File Manager IMS template is used to map layouts to each segment in a data base. A layout can be a COBOL or PLI copybook. You can use an entire copybook, combine multiple copybooks, or use only a selected portion of a copybook as a segment layout. Templates map copybooks to segments.



## What does a view do?

- Once you have a template, you can also use a view
- Use a view in browse or edit to:
  - **Select the types of segments** that you want to display
    - Hide the types you do not want to see
  - **Select segments based on data content**, using selection criteria
  - **Select** which **fields** in the layout you want to display
  - Change the order of fields displayed
  - Change field headings
- For any DBD:
  - You will only have one template
  - You can have many views, each with different selection

Once you have created a template for your data base, then you can also use something called a view. A view is used by the browser or editor to select the types of segments that you want to display, and hide all other segment types. It can also be used to select only certain segments based on key values and data values. It can also limit which fields are displayed, so that you only see the fields of interest. And views allow you to do some other things, such as change the order of fields displayed and change the field headings.

For each DBD you use to access a database, you only need to have one template. A template maps copybooks to segments, so one template is all you need for any DBD. But you can have as many views as you like, because you might want to create different views that display different segments and have different selection criteria.

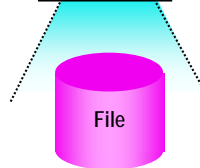


## Templates, views and criteria

### File Manager (base)

Copybook mapping  
Record Selection Criteria

Template



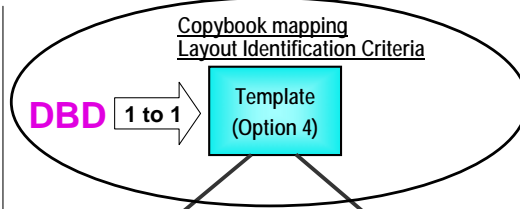
### File Manager / IMS

Copybook mapping  
Layout Identification Criteria

DBD

1 to 1

Template  
(Option 4)



Views  
(Edit/Browse)

Criteria  
(Extract/Load)

Segment Selection Criteria

Segment Selection Criteria  
Relationship Criteria



If you are familiar with File Manager base, you may already be familiar with templates. But the way File Manager IMS uses templates is a little different from File Manager base. In base, a template is used both to provide a layout and to perform data selection. But in IMS, those functions are split out. A template is used only to provide layouts. And selection and formatting is done with a view.



## File Manager IMS training: sections

Page 2 of 4

- Creating templates
  - About templates and views
  - Create and save a new template
- Browsing or editing an IMS database with a template
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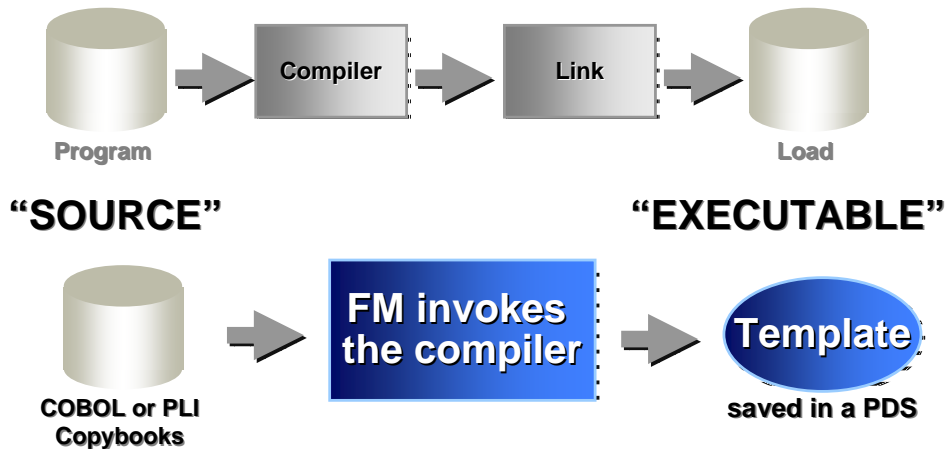
Next, you will see an example of creating a new template.






## Building a template – “conceptually”

- Consider the similarity between compiling a program, and using copybook with FM



The way File Manager creates a template is similar in some ways to compiling a program. If you are a programmer, then you have probably seen flow diagrams like the one shown on the top. To prepare a program, you compile it, link it, and you end up with something called a load module, which is the executable form of the program. File Manager does something similar to create a template. You will specify the COBOL or PLI copybooks that go into the template, File Manager will invoke the compiler automatically, and the result of the process will be a template.



## Create a new template

---

Process   Options   Help


---

FM/IMS Primary Option Menu

Command ==> 4

---

0	Settings	Set processing options	User ID . . : DNET424
1	Browse	Browse data	System ID : DEMOMVS
2	Edit	Edit data	Appl ID . . : FMN1
3	Utilities	Perform utility functions	Version . . : 8.1.0
4	Templates	Template/view/criteria set utilities	Terminal. . : 3278A
X	Exit	Terminate FM/IMS	Screen. . . : 1
			Date. . . . : 2007/10/23
			Time. . . . : 14:28




F1=Help      F2=Split      F3=Exit      F4=CRetriev    F7=Backward    F8=  
 F9=Swap      F10=Actions    F12=Cancel

---

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In this example a new template will be created. Starting from the File manager IMS menu, select option 4, templates. Enter.



## Create a new template

Process Options Help


---

FM/IMS Template/View/Criteria Set Menu

Command ==> 1

---

1	Templates	Create or update template
2	Views	Create, edit, or update view
3	Criteria Sets	Create, edit or update criteria set
4	Template update	Update template(s) utility
5	View update	Update view(s) utility
6	Criteria update	Update criteria set(s) utility



F1=Help    F2=Split    F3=Exit    F4=CRetriev    F7=Backward    F8=  
F9=Swap    F10=Actions    F12=Cancel

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The template, view, and criteria set menu is displayed. Select option 1, templates. Enter.

**Specify DBD and template library**

Process Options Help

FM/IMS Template Entry Panel

Command ==> \_\_\_\_\_

DBD:

Data set name 1 . . . ADLAB.DBDLIB

Data set name 2 . . . \_\_\_\_\_

Member . . . . . USRSCN

Template:

Data set name . . . ADLAB.TEMPLATE

Specify a library where you want to save the template.  
The member name is the same as the DBD name.

Template libraries are PDS or PDSE files, 80 FB.

F1=Help    F2=Split    F3=Exit    F4=CRetriev    F7=Backward    F8=For

F9=Swap    F10=Actions    F12=Cancel

**Enter**

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The Template Entry panel is displayed. Here, specify the DBD that will be used to access the data base by providing a DBD library and member name. Also specify the name of a library where you want the new template to be saved. Be aware that the library must already exist. If you need to create a template library, do that before continuing. Template libraries are PDS or PDSE data sets, with a record length of 80 bytes.

Notice that you do not enter a member name for the template, even though the template will be a PDS member. Here is why. For any DBD, you only need one template. So there is a one to one correlation between DBDs and templates. File Manager will always assume that the template has the same name as the DBD. In this example, the DBD is called USRSCN, so the template will have the same member name. Enter is pressed to continue.



## Copybook libraries (the "LIBLIST")

Library List

```
Command ==> _
F
C Library data sets:                                     U CSR
T Data set name 1 'DNET424.ADLAB.COPYLIB'
                2
                3
C                4
*                5
                6
                7
                8
                9
                10
                11
                12
*
```

One or more libraries where the copybooks that contain the IMS segment layouts can be found.

F1=Help F2=Split F3=Exit F9=Swap F12=Cancel

Enter

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Next, you are presented with a library list panel. If your copybooks reside in more than one library, you can specify the various library names here. Enter to continue.

## Specify copybooks for each segment

The screenshot shows the 'Template Specification' panel in File Manager. It features a menu bar with 'Process', 'Options', and 'Help'. Below the menu, the text 'FM/IMS' and 'Template Specification' are visible. A 'Command' field contains '===>' and a 'Scroll CSR' button is on the right. The main area displays a table with columns: 'Cmd RI Segment member', 'Layout member', 'Segment Lib description', and '01 Field name'. The table lists segments like CUSTADDR, TOTUSE, PRMUSE, OFFUSE, OFFDTL, BALDUE, and BALHIST. Callouts provide instructions: 'Enter the name of the copybook that will lay out each segment' points to the 'Layout member' column; 'You can optionally enter segment descriptions for your own use' points to the 'Segment Lib description' column; and 'If the copybook does not already contain a 01 level name, you can optionally specify a name: - change the "01" field to Y - enter the field name Leave it blank, and FM will make up a name if needed' points to the '01 Field name' column.

Cmd	RI	Segment	Layout member	Segment Lib description	01 Field name
***	***	Top of data	***		
---		CUSTADDR			N
---		TOTUSE			N
---		PRMUSE			N
---		OFFUSE			N
---		OFFDTL			N
---		BALDUE			N
---		BALHIST			N
***	***	End			

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Next the Template specification panel is displayed. File Manager examined the DBD to determine the names of each segment, which are shown. For each segment, enter the name of the copybook that will lay out the segment in the “layout member” column. You can also enter a description in the “layout description” column, but that is optional.

File Manager will assume that each of the copybooks you provide begin with an 01 group level item. If a copybook does not start with an 01 item, you should change the N to Y in the 01 column. If you specify a Y in the 01 column, you can also optionally enter a field name that File Manager will use for the group name of the copybook.

**Specify copybooks for each segment**

Process Options Help

FM/IMS Template Specification

Command ==> \_\_\_\_\_ Scroll CSR

Template DNET424.ADLAB.TEMPLATE(USRSCN)

Cmd	RI	Segment	Layout member	Segment Lib description	01 Field name
***	****	Top of data	****		
---		CUSTADDR	CUSTADDR		N
---		TOTUSE	TOTUSE		N
---		PRMUSE	PRMUSE		N
---		OFFUSE	OFFUSE		N
---		OFFDTL	OFFDTL		N
---		BALDUE	BALDUE		N
---		BALHIST	B*		N
***	****	End of data	****		

F1=Help F2=Split F3=Exit F4=CRetriev F6=LibList F7=U  
F8=Down F9=Swap F12=Cancel

Enter

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In this example, the names of the copybooks were typed into the Layout member column. If you are not sure about the names of the copybooks, there is an easy way to see a list of copybooks. If you leave a layout member field blank, or type one with an asterisk wildcard character, a list of matching copybooks will be displayed. Notice the last copybook in the list was specified as B asterisk. Enter to continue.



## Copybook member list

Process Options Help

File Manager **BALHIST Member Selection** Row 1 of 5  
Command ==> Scroll CSR

DSNAME DNET424.ADLAB.COPYLIB

Sel	Name	Prompt	Alias-of	Size	Created	Changed	ID
	BALCRR			13	07/10/28	07/10/28 15:40:15	DNET424
	BALDTL			32	03/04/18	05/05/01 08:43:21	DNET100
	BALDUE			7	03/04/18	05/05/01 08:43:28	DNET100
	BALHIST			33	07/10/28	07/10/28 15:43:10	DNET424
	BALPAST			19	07/10/28	07/10/28 15:40:27	DNET424

\*\*\*\* End

Select a copybook from the list

Line commands:  
**S** select member  
**B** browse member  
**V** view member  
**E** edit member

F1=Help F2=Split F3=Exit F4=CRetriev F5=RFind F6=D  
F7=Up F8=Down F9=Swap F12=Cancel

Enter

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A list of matching copybook member names is displayed. You can browse, view, or edit any member in the list with a line command. Select the copybook you want with an S line command. Enter.





## You can edit or view a copybook

Process Options Help

FM/IMS Template Specification

Command ==> \_\_\_\_\_ Scroll CSR

Template DNET424.ADLAB.TEMPLATE(USRSCN)

Cmd	RI	Segment	Layout member	Lib	Segment description	01 Field name
***	***	Top of data				***
V		CUSTADDR	CUSTADDR	1		N
		TOTUSE	TOTUSE	1		N
		PRMUSE	PRMUSE	1		N
		OFFUSE	OFFUSE	1		N
		OFFDTL	OFFDTL	1		N
		BALDUE	BALDUE	1		N
		BALHIST	BALDTL	1		N
***	***	End of data				***

**Enter**

F1=Help F2=Split F3=Exit  
F8=Down F9=Swap F12=Cancel

Note the Lib "1". Copybooks were found in the first library

Frequently used line commands:  
**S** edit (select) copybook  
**V** or **B** view or browse copybook  
**E** edit template layout  
**X** extended copybook options  
**U** update (re-read copybooks)


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Now all of the segments have been mapped to copybooks. You can view a copybook from this screen with a V line command. Here, V is typed next to the CUSTADDR segment. Enter.



## You can edit or view a copybook

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW      DNET424.ADLAB.COPYLIB(CUSTADDR) - 01.01      Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** ***** Top of Data *****
000001      01 SEGA-CUSTOMER-ACCOUNT.
000002      03 SEGA-ACCOUNT-NUM          PIC X(10).
000003      03 SEGA-CUSTOMER-PHONE-NB    PIC X(10).
000004      03 SEGA-CUSTOMER-NAME        PIC X(30).
000005      03 SEGA-CUSTOMER-ADDRESS     PIC X(40).
***** ***** Bottom of Data *****
```



F1=Help    F2=Split    F3=Exit    F4=IPT View    F5=Rfind    F6=Rchange  
F7=Up      F8=Down     F9=Swap    F10=Left     F11=Right    F12=Retrieve

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And the selected copybook is displayed in the ISPF viewer. PF3 to return.



## Create a new template

Process Options Help

---

FM/IMS Template Specification

Command ==> \_\_\_\_\_ Scroll CSR

Template DNET424.ADLAB.TEMPLATE(USRSCN)

Cmd	RI	Segment	Layout member	Lib	Segment description	01 Field name	
***	****	Top of data					****
—	I	CUSTADDR	CUSTADDR	1			
—	I	TOTUSE	TOTUSE	1			
—	I	PRMUSE	PRMUSE	1			
—	I	OFFUSE	OFFUSE	1			
—	I	OFFDTL	OFFDTL	1			
—	I	BALDUE	BALDUE	1		N	
—		BALHIST	BALDTL				
***	****	End of data					**

F1=Help F2=Split  
F8=Down F9=Swap

Hint: If a copybook has changed, use the **Update** command or **U** line command to re-read from the copybook concatenation.

Frequently used line commands:

**S** edit (select) copybook

**V** or **B** view or browse copybook

**E** edit template layout

**X** extended copybook options

**U** update (re-read copybooks)

**PF3**

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When copybooks for all of the segments have been specified, press PF3 to continue.



## A new template was created

Process	Options	Help
FM/IMS	Template Entry Panel	Template saved
Command ==>	_____	
DBD:	_____	
Data set name 1 . . .	ADLAB.DBDLIB _____	
Data set name 2 . . .	_____	
Member . . . . .	USRSCN _____	
Template:	_____	
Data set name . . . .	ADLAB.TEMPLATE _____	
F1=Help	F2=Split	F3=Exit
F9=Swap	F10=Actions	F12=Cancel
F4=CRetriev	F7=Backward	F8=Forward

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The template has been created. Notice the “template saved” message. Once you have created a template, you can use it in the browser or editor to format the segments in the data base. Continue with the next section to see how to do that. That is the end of this section, an introduction to File manager IMS templates and views, and how to create a template.



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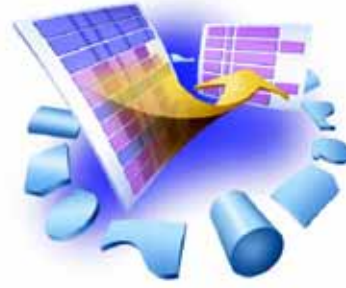


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