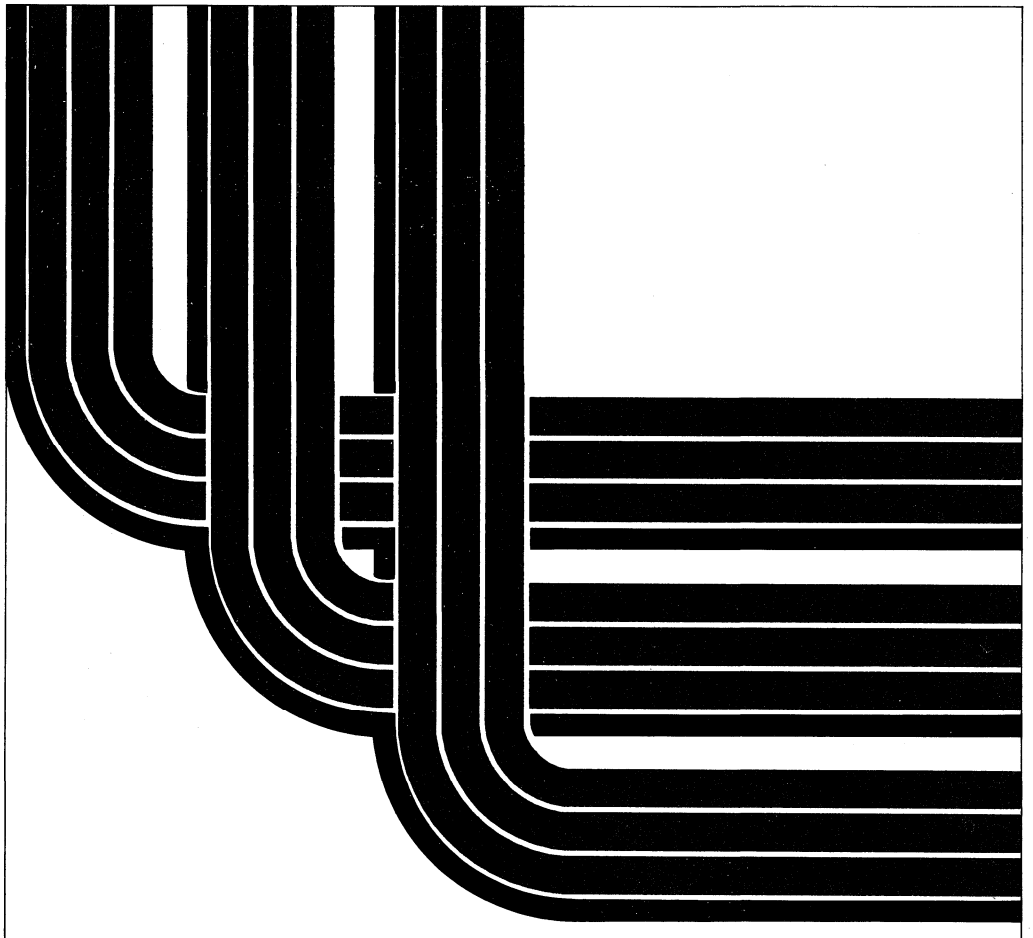
Application System/400

SC09-1339-02

Application Development Tools: Programming Development Manager User's Guide and Reference

Version 2



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Note!

Before using this information and the product it supports, be sure to read the general information under "Notices" on page vii.

Third Edition (September 1993)

This edition applies to Version 2, Release 3, Modification Level 0, of IBM AS/400 Application Development Tools (Program 5738-PW1) and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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About This Manual

The programming development manager (PDM), which is part of the Application Development Tools licensed program, helps you perform a number of useful operations on libraries, objects, and members in a quick and efficient way to enhance your productivity. This manual contains exercises and reference material to help you learn to use the programming development manager. Only the most commonly used options and function keys are explained in detail.

Note: This manual contains examples to help you do common tasks. The contents of the displays illustrated in the examples may differ from the ones you see on your system because the names of your libraries, objects, files, and members may be different from the ones used in the examples. You should also note that, although the text that you are asked to type in the examples throughout this manual is shown in uppercase, you can enter it in uppercase, lowercase, or mixed case.

You may need to refer to other IBM manuals for more specific information about a particular topic. The *Publications Guide*, GC41-9678, provides information on all the manuals in the AS/400 library.

For a list of related publications, see the "Bibliography" on page 215.

Who Should Use This Manual

This manual is intended for application programmers or analysts working in an IBM Application System/400 (AS/400) environment. To use this manual effectively, you must know how to use your workstation, understand and use messages, and have a general knowledge of the AS/400 system.

If you are unfamiliar with your workstation, refer to the specific manual for your workstation. If you are unfamiliar with the AS/400 system, use the *System Concepts*, GC41-9802.

Summary of Changes

The following enhancements were made to PDM:

- Programming development manager supports the CICSMAP member type and the C and BND Integrated Language Environment (ILE) source member types.
- The Work with Objects Using PDM display has two new options, 26=Create Program and 27=Create service program, for creating *PGM and *SRVPGM objects from *MODULE objects. For more information on these options, see "Creating a Program" on page 65.
- The Subset Object List display has new prompts for specifying object sizes. The new prompts are shown in "Showing a Subset of a List of Objects" on page 72.
- The Work with Members Using PDM display has one new option, 15=Create module, with which you can create a *MODULE object for an ILE member type. The option 14=Compile now supports ILE member types. For more information on creating modules, see "Creating Modules" on page 88.
- The Change Defaults display has a second screen, with the prompts *Log option commands* and *Exit lists on ENTER*. For information on using these prompts, see "Logging Option Commands" on page 154 and "Changing the Default Value of the Enter Key in Lists" on page 156.
- The F13=Repeat key can be used to repeat a blank as an option for most PDM lists. For information on this option, see "Using the Repeat Function Key" on page 159.

This manual contains many editorial changes that are not indicated by a vertical bar to the left of the change.

Chapter 1. Introducing the Programming Development Manager

The programming development manager (PDM) tool provides you with a list interface to objects on the AS/400* system. The programming development manager calls other utilities in the Application Development Tools licensed program, such as the source entry utility (SEU), the data file utility (DFU), the screen design aid (SDA), and the report layout utility (RLU).

The programming development manager allows you to work with lists of libraries, objects, and members to perform operations such as copy, delete, and rename. The programming development manager performs these operations by calling commands with known parameter values passed from the list of items you are working with (for example, library name, object name, object type). You can perform many operations without having to know particular commands. Because you can perform operations on more than one item at a time, your productivity is increased. You can also search a member for a character or numeric string and then perform operations on those members that contain the string.

The programming development manager consists of four main functions:

Work with libraries
Work with objects
Work with members
Work with user-defined options

Each of these functions is discussed in detail in later chapters.

If you have the Application Development Manager/400 licensed program installed, you also have access to these functions:

- Work with projects
- Work with groups
- Work with parts

For a complete discussion of these functions, refer to the Application Development Manager/400 library which consists of the *Application Development Manager/400 Introduction and Planning Guide* and the *Application Development Manager/400 User's Guide*.

How Objects Are Organized

A general hierarchical view of the AS/400 system is shown in Figure 1 on page 2. The diagram and the information following the diagram explain the system library, user libraries, objects, files, and members and how they relate to one another. The diagram shows examples of a few object types but does not show or explain them all.

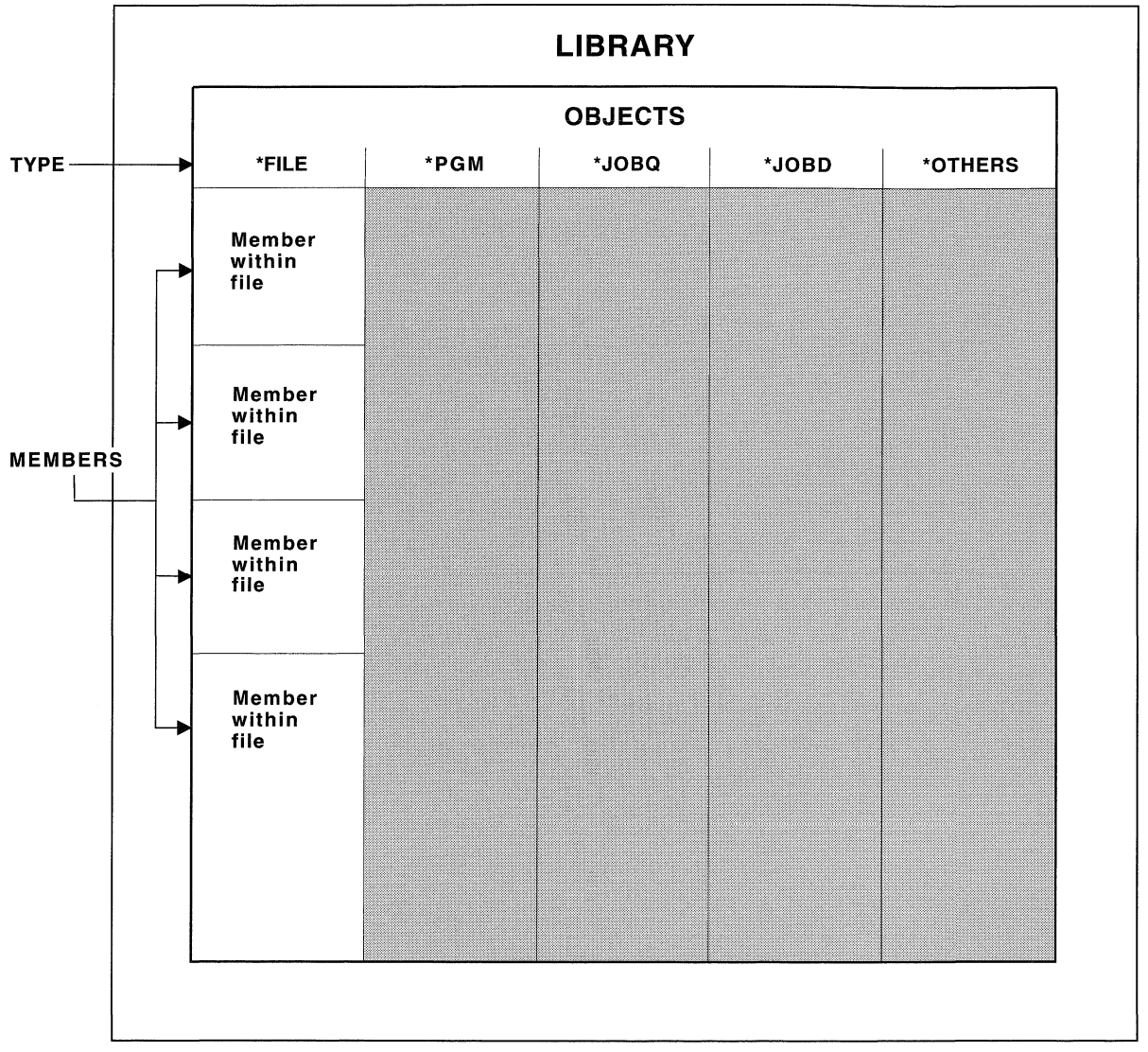


Figure 1. Chart of Object Organization

Objects are the basic unit with which commands perform operations in the AS/400 system.

An object is a named unit that consists of a set of features that describes the object, and a value. The features of an object include its name, type, size, the date it was created, and a text description. The value of an object is the collection of information stored in the object. The value of a program, for example, is the executable code that makes up the program. The value of a file is the collection of records that make up the file.

There are many types of objects. For example, the object type of a library is *LIB, the object type of a file is *FILE, and the object type of a program is *PGM.

Objects can also have subtypes known as **attributes**, which are the characteristics of the objects. For example, the attribute of an object of type *PGM could be RPG, to indicate that the program is created using RPG source code. The attribute of an object of type *FILE could be DSPF, to indicate that the file is a display file.

A **library** is a special type of object (object of type *LIB) that is used to group related objects. A library, therefore, is a directory to a group of objects. There are only two types of libraries; *PROD (Production), and *TEST (Test).

Every AS/400 system has a system library named QSYS that is provided in the OS/400* operating system to contain system-oriented objects. QSYS is a large library that points to all the system-oriented objects.

A **file** is an object of type *FILE that has an attribute that describes the type of the file. For example, a source physical file has an attribute of PF-SRC, a data file has an attribute of PF-DTA, and a printer file has an attribute of PRTF. Physical files and logical files both contain members.

A **member** is a subset of records in a physical file (PF-SRC or PF-DTA). Each member conforms to the characteristics of the file. You can define the type of a member, or select a type used with PDM commands.

Special Features

PDM has many special features that make it easy to use. Some of these features are listed below.

List Interface
PDM has displays that list libraries, objects, members, and user-defined options. On these displays, you can perform operations on the items in the list by typing an option in the *Opt* column of the display. You can select different operations, or the same operation, on more than one item in a list at a time.

Selection Lists
You can press F4 in some displays to show a list of items from which you can make your selection. You then select an item and return to the previous display with the prompt filled in with the item of your choice. Refer to Figure 8 on page 8 for the displays from which you can use F4.

User-Defined Options
Using PDM, you can create your own options and use them on list displays in the same way that system options are used. You can create options from commands you use frequently, which saves you from having to type the command each time you want to use it.

Work with Option
Option 12 (Work with) on library and object list displays allows you to work with all the objects in a library or all the members in a file. Simply type 12 next to a library or file on a list display. This option lets you move between different levels of PDM quickly and easily. By pressing F4=Prompt, you can create a subset of the list of members or objects that you want to work with.

Window Program
There is a user-defined option window program that, when called, creates a window in the upper right corner of the display listing all active PDM user-defined options. The source programs for this tool are in library QUSRTOOL, and all information regarding this program is in member TPSINFO in the file QUSRTOOL/QATTINFO.

Changing Defaults

PDM allows you to change defaults such as the run and compile mode (batch or interactive) and the list display mode (full screen mode or not). You can also change the active user-defined options file name, and specify whether you want to be able to change the type and description of members on the Work with Members Using PDM display. You can change the PDM defaults by pressing the F18=Change defaults function key to access the Change Defaults display and making the appropriate changes.

Grouping Displays

Many options in PDM have grouping displays. Grouping displays list all the items for which you selected an option on the previous list display. This allows you to perform the same operation on more than one item at a time. For example, to copy a number of members to a different file or library, you only change the file or library name once on the grouping display. This saves you a considerable amount of typing.

You can choose to perform all the operations on a grouping display interactively, or you can submit them to batch processing by using the F19=Submit to batch function key.

More Options and More Keys

Some of PDM's list displays have more options and function keys available than can be shown on the display. You can press F23=More options and F24=More keys to see the next set of available options and function keys.

Remember Previous Values for Commands

In PDM, the values you enter for certain prompts and for the parameters of certain commands are saved in the user profile, even if you exit from PDM and sign off the system. When working with any of the WRKxxxPDM commands, you can specify that you want to use these saved values by using the *PRV (previous) value. This means that if you want to work with the same list you were working with the last time you used PDM, you just type *PRV for all the parameters. You do not have to remember the values you entered.

For example, to work with the same list of objects, type the following on the command line.

```
WRKOBJPDM LIB(*PRV) OBJ(*PRV) OBJTYPE(*PRV) OBJATR(*PRV)
```

Press Enter, and the object list you last worked with appears.

The LIB parameter on all WRKxxxPDM commands defaults to *PRV, as does the FILE parameter on the WRKMBRPDM command. All other parameters on WRKxxxPDM commands default to *ALL.

For more information on accessing PDM using the WRKxxxPDM commands, see "Starting the Programming Development Manager" on page 11.

You can also use the *PRV value when you are working with the Application Development Manager/400 commands, WRKPRJPDM, WRKGRPPDM, and WRKPARTPDM.

Find String

PDM allows you to search for a character or numeric string in a source or data physical file or member. You can choose to edit, compile or perform any valid option on the members that contain the string. You can also print a list of the members containing the string or print the individual records that contain the string.

Sequence Diagrams

Throughout this manual, there are small diagrams similar to the one shown below. These diagrams show you the sequence of steps to follow to reach different displays in PDM.

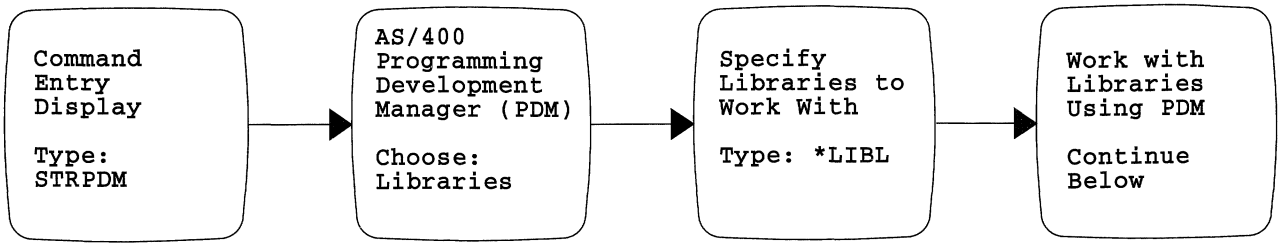


Figure 2. Example of a Menu Sequence Diagram

The sequence diagram consists of several small frames linked by arrows. Each frame represents a display. The name of the display appears at the top of each frame. The bottom of each frame shows you what to type on the display. You must press Enter to go on to the next display.

The words `Continue below` at the bottom of the rightmost frame indicate that additional figures or steps follow the sequence diagram.

The following example shows you a series of instructions that can be replaced by the menu sequence diagram shown in Figure 2:

1. Type STRPDM on any command line. Press Enter, and the AS/400 Programming Development Manager (PDM) menu appears.
2. On the command line, type a 1 to select option 1 (Work with libraries).

```
                AS/400 Programming Development Manager (PDM)

Select one of the following:

     1. Work with libraries
     2. Work with objects
     3. Work with members

     9. Work with user-defined options









Selection or command
===> 1
F3=Exit        F4=Prompt       F9=Retrieve        F10=Command entry
F12=Cancel     F18=Change defaults
                                        (C) COPYRIGHT IBM CORP. 1981, 1993.
```

Figure 3. AS/400 Programming Development Manager (PDM) Menu—Selection 1

3. Press Enter. The Specify Libraries to Work With display appears.

4. On the Specify Libraries to Work With display, specify the type of library list you want to work with. For this example, leave the *Library* prompt at its default value.

```
                    Specify Libraries to Work With

Type choice, press Enter.

  Library  . . . . . . . . . . .   *LIBL_____   *LIBL, name, *generic*, *ALL,
                                                *ALLUSR, *USRLIBL, *CURLIB
```

Figure 4. Specify Libraries to Work With Display

5. Press Enter, and the Work with Libraries Using PDM display appears, listing the libraries you requested, as shown in Figure 5.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  2=Change                  3=Copy        5=Display       7=Rename
  8=Display description     9=Save        10=Restore      12=Work with ...

Opt  Library     Type       Text
__   QSYS        *PROD-SYS  System Library
__   QGPL        *PROD-CUR  General Purpose Library
__   QPDA        *PROD-PRD  Application Development Tools Library
__   QGPL        *PROD-USR  General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR  Application Development Tools Library
__   PAYLIB      *PROD-USR  Payroll Library
__   BATCHLIB    *PROD-USR  Batch Program Library
__   TEXTTOOLS   *PROD-USR  Text Management Tools Library
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh         F6=Add to list
F9=Retrieve      F10=Command entry  F23=More options   F24=More keys
```

Figure 5. Work with Libraries Using PDM Display—Showing the Library List You Specified

List Displays

List displays are displays that show lists of items that you can page through. Figure 6 on page 7 shows a list display.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  2=Change                    3=Copy        5=Display       7=Rename
  8=Display description       9=Save        10=Restore      12=Work with ...

Opt  Library     Type       Text
__   QSYS        *PROD-SYS  System Library
__   QGPL        *PROD-CUR  General Purpose Library
__   QPDA        *PROD-PRD  Application Development Tools Library
__   QGPL        *PROD-USR  General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR  Application Development Tools Library
__   PAYLIB      *PROD-USR  Payroll Library
__   BATCHLIB    *PROD-USR  Batch Program Library
__   TEXTTOOLS   *PROD-USR  Text Management Tools Library
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 6. Example of a List Display

You can perform operations against items in the list by typing a valid option in the *Opt* column. You can type more than one option in the column. If more options are available for the list display than are shown, you can press F23=More options to see the next set.

Function Keys

You can press the function keys that appear on a display to perform particular functions. The function keys available for each display are listed at the bottom of the display. If more function keys are available for a display than are shown, press F24=More keys to see the next set.

```
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 7. Function Key Area of a Display

You can find detailed information for each function in the online information. If you place the cursor on the function key area of any display and press Help, detailed information appears for the function keys available on that display. Figure 8 on page 8 gives a brief description of all the function keys available for PDM.

Figure 8 (Page 1 of 2). Definition of Function Keys

Function Key	Name of Function Key	Description
F1 or Help	Help	Shows additional information about a display, command, or message. Help is active on all PDM displays but is not listed at the bottom of displays.
F3	Exit	Ends the current task and returns to the display on which you began the task without processing any options or changes you entered on input prompts.
F4	Prompt	Provides assistance for the option(s) you select in a list or the command you enter on a command line. For commands, F4 provides an entry display for the parameters relating to that command.
	Prompt	Provides a list of the source or data physical files or job descriptions that you can use for the prompt. The function key can be used with the *To file* prompt on the Copy Members display, the *File* prompt on the Specify Members to Work With display, the *Job description* prompt on the Change Defaults display, and the *Member* prompt on the Specify Option File to Work With display.
F5	Refresh	Changes the prompts back to their original values. F5 rebuilds a list, but does not reposition it, if you are on any one of the PDM displays.
F6	Create	Allows you to create a new library, object, member, or user-defined option if you are working with lists of libraries, objects, members, or user-defined options. If you have the Application Development Manager/400 product installed, this function also lets you create a new project, group, or part if you are working with a list of projects, groups, or parts.
	Add to list	Allows you to add a library to the library list if you are working with a library list. See Chapter 2, "Working with Libraries" on page 17 for an explanation of the differences between a library list and a list of libraries.
F9	Retrieve	Displays the last command you typed on a command line. Press F9 twice to see the next-to-last command you typed, and so on until the command you want to see is displayed.
F10	Command entry	Displays a command entry display. See "Using the Command Entry Function Key" on page 10 for further information.
F11	Display text	Displays a single column of item names with text on list displays.
	Display names	Displays multiple columns of item names without text on list displays. The F11=Display names label changes according to the type of list you are working on, as shown below: **F11=Display names only** List of libraries (*ALL, *ALLUSR) Member list (for data files) **F11=Display names and types** Library list (*LIBL, *USRLIBL) Member list (source files, with member type displayed) Object list **F11=Display names and dates** Member list (source files, with member date displayed)
F12	Cancel	Ends the current task and returns to the previous display without processing any options or changes you entered on the input prompts.

Figure 8 (Page 2 of 2). Definition of Function Keys

Function Key	Name of Function Key	Description
F13	Repeat	Repeats an option typed in the *Opt* list area for an item on a list display for the remaining items in the list. The option is repeated downward for all other items on the list for which the option is valid. Preceding items in the list, ahead of the current item, are ignored.
F14	Display date	Displays the dates on which members in a list were last changed.
	Display type	Displays the types of the members in a list.
F15	Sort date	Displays a list sorted by the date members were last changed.
	Sort name	Displays a list sorted by member name.
	Exit without saving changes	Exits from the Work with User-Defined Options display without saving changes.
F16	User options	Shows the Work with User-Defined Options display so that you can work with the current user-defined options. The active user-defined options file is shown on the Change Defaults display.
F17	Subset	Creates a subset of a list. PDM presents a display that allows you to specify which items to include in the subset of the list.
F18	Change defaults	Displays the Change Defaults display, on which you can change the global values used by PDM. For example, you can change the active user-defined options file or determine whether you want to run jobs in batch mode or interactively.
F19	Submit to batch	Allows you to submit a job to batch for each of the items listed on every page of the current display. This function key is available on all grouping displays, that is, on all Copy, Rename, Delete, or Move displays. **Note:** The F19 function key is not available when working with user-defined options.
F21	Print list	Prints the current form of a list. If the list displayed is a subset, only the subset of the list is printed. The spooled file created for the list is sent to the output queue specified in the current job. It can be viewed through the WRKSPLF command.
F23	More options	Shows the next set of options available for the display.
F24	More keys	Shows the next set of function keys available for the display.
Enter	Enter	Submits information on the display for processing. Leaves the list display if you requested no action.
Page down (Roll up)	Page down (Roll up)	Moves the list forward to show additional list items.
Page up (Roll down)	Page up (Roll down)	Moves the list backward to show additional list items.
Print	Print	Prints information currently shown on the display.
SysReq	System Request	Interrupts the job you are working on. You can then press Enter to show a menu from which you can choose to perform a number of tasks.

Entering Commands in the Programming Development Manager

You can enter commands in PDM by using either the command line or the F10=Command entry function key.

Using the Command Line

Some displays have a command line that is above the function keys as shown in Figure 9.

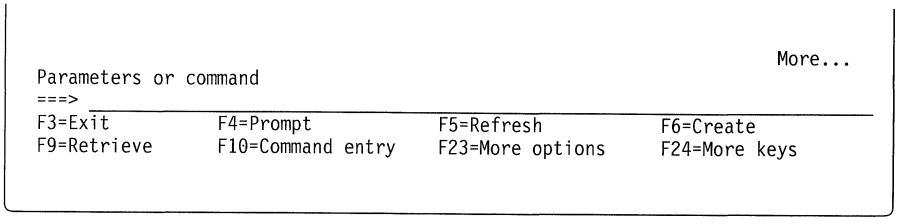


Figure 9. Command Line

You can type any valid command or parameter on this line. If you do not type any options in the *Opt* column of a list display, PDM checks whether or not you typed a command on the command line and, if you have, runs it. If you type options in the *Opt* column of the list, PDM checks to see whether or not the command line contains parameters for the options. You can also type commands with parameters on the command line.

Note: The AS/400 Programming Development Manager (PDM) menu has a command line, but you cannot type parameters on this menu. You can only type selections or commands.

Using the Command Entry Function Key

You can also use the F10=Command entry function key on the AS/400 Programming Development Manager (PDM) menu and on list displays to enter commands.

Press F10=Command entry, and a command entry display appears. You can enter commands on the command entry display, or you can view any other commands you entered during the current session by pressing the Page Up key. To retrieve a command you entered previously to the current line of the command entry display, position the cursor on the command and press F9=Retrieve. When you finish entering commands, press F3=Exit on the command entry display to return to the display on which you pressed F10=Command entry.

On PDM displays with a command line, you can retrieve commands you previously typed on the command entry display or on the command line by pressing F9=Retrieve. Keep pressing F9=Retrieve until the command you want is retrieved to the command line of the display. Then press Enter to process the command.

Starting the Programming Development Manager

You can start PDM in any one of several ways:

- Using the AS/400 Main Menu
- Using the STRPDM command
- Using the WRKLIBPDM command
- Using the WRKOBJPDM command
- Using the WRKMBRPDM command

If you have the Application Development Manager/400 product installed, you can also start PDM using the WRKPRJPDM, WRKGRPPDM, and WRKPARTPDM commands. See the *Application Development Manager/400 User's Guide* for more information.

Using the AS/400 Main Menu

To access PDM from the AS/400 Main Menu, do the following:

1. Type a 5 on the command line to select option 5 (Programming) from the AS/400 Main Menu.

```
MAIN                              AS/400 Main Menu

Select one of the following:

     1. User tasks
     2. Office tasks
     3. General system tasks
     4. Files, libraries, and folders
     5. Programming
     6. Communications
     7. Define or change the system
     8. Problem handling
     9. Display a menu
    10. Information Assistant options
    11. PC Support tasks

    90. Sign off

Selection or command
===> 5_____________________________________________________________________

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
F23=Set initial menu
(C) COPYRIGHT IBM CORP. 1980, 1993.
```

Figure 10. AS/400 Main Menu

2. Press Enter. The Programming menu is displayed.
3. Type a 2 on the command line to select option 2 (Programming development manager (PDM)).

```
PROGRAM                          Programming

Select one of the following:

     1. Programmer menu
     2. Programming Development Manager (PDM)
     3. Utilities
     4. Programming language debug
     5. Structured Query Language (SQL) pre-compiler
     6. Question and answer

     8. Copy screen image
     9. Cross System Product/Application Execution (CSP/AE)

    50. System/36 programming

    70. Related commands

Selection or command
===> 2
F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
F16=AS/400 Main menu
(C) COPYRIGHT IBM CORP. 1980, 1993.
```

Figure 11. Programming Menu

4. Press Enter. The AS/400 Programming Development Manager (PDM) menu appears. You can select one of the options from this menu to work with libraries, objects, members, or user-defined options.
5. Press F3=Exit to leave PDM.

Using the STRPDM Command

To access PDM using the STRPDM command, do the following:

1. Type STRPDM on any command line.
2. Press Enter, and the AS/400 Programming Development Manager (PDM) menu appears.

```
                AS/400 Programming Development Manager (PDM)

Select one of the following:

     1. Work with libraries
     2. Work with objects
     3. Work with members

     9. Work with user-defined options




Selection or command
===> 1
F3=Exit          F4=Prompt        F9=Retrieve        F10=Command entry
F12=Cancel       F18=Change defaults
                                        (C) COPYRIGHT IBM CORP. 1981, 1993.
```

Figure 12. AS/400 Programming Development Manager (PDM) Menu

3. To select one of the options on this menu, type the number of the option on the command line and press Enter.

   Depending on the option you select, the display that appears next allows you to specify the library, object, member, or user-defined options file with which you want to work.

   For this example, select option 1 (Work with libraries). The Specify Libraries to Work With display appears, allowing you to select the libraries with which you want to work.

4. To work with all the libraries that start with BA, type BA* in the *Library* prompt.

```
                    Specify Libraries to Work With

Type choice, press Enter.

  Library  . . . . . .  BA*_____   *LIBL, name, *generic*, *ALL,
                                   *ALLUSR, *USRLIBL, *CURLIB
```

Figure 13. Specify Libraries to Work With Display

5. Press Enter, and the Work with Libraries Using PDM display appears, listing the libraries you requested, as shown in Figure 14.

```
                      Work with Libraries Using PDM

List type  . . . . . .  *ALL_____      Position to . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete       5=Display
  7=Rename       8=Display description     9=Save         10=Restore ...

Opt  Library     Type      Text
__   BACKLIB     *PROD     Library for backups
__   BAR         *PROD
__   BAS         *PROD
__   BATCHFIX    *PROD     Library with batch programs

                                                                  Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
This is a subsetted list.
```

Figure 14. Work with Libraries Using PDM Display—Showing Libraries Starting with BA

Note: The Work with Libraries Using PDM display can look like Figure 14, or it can be shown in full screen mode - without function keys or options listed. The mode of list displays is determined by your entry in the *Full screen mode* prompt on the Change Defaults display. For more information, refer to "Changing List Displays to Full Screen Mode" on page 153. The display can also be shown in multiple column format. For more information, refer to "Changing List Displays to Multiple Column Format" on page 171.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.
7. Press F3=Exit to leave PDM.

Using the WRKLIBPDM Command

If you want to work with a specific list of libraries, you can use the WRKLIBPDM command to go directly to the Work with Libraries Using PDM display.

For example, to display a list of all libraries starting with BA, do the following:

1. Type WRKLIBPDM LIB(BA*) on any command line.

   Note: To work with the libraries in the list of libraries you worked with the last time you used PDM, type the WRKLIBPDM command on the command line without specifying any parameters.

2. Press Enter, and the Work with Libraries Using PDM display appears, as shown in Figure 15.

```
                        Work with Libraries Using PDM

List type . . . . . *ALL_____      Position to . . . . . _________

Type options, press Enter.
  2=Change        3=Copy                    4=Delete        5=Display
  7=Rename        8=Display description     9=Save          10=Restore ...

Opt  Library     Type      Text
__   BACKLIB     *PROD     Library for backups
__   BAR         *PROD
__   BAS         *PROD
__   BATCHFIX    *PROD     Library with batch programs

                                                                   Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 15. Work with Libraries Using PDM Display—Showing Libraries You Specified

Notice that the display that appears in Figure 14 on page 13 is the same as the one you see on your display now.

3. Press F3=Exit to leave PDM.

You can find more information about the WRKLIBPDM command in the online help information.

Using the WRKOBJPDM Command

By using the WRKOBJPDM command, you can go directly to the Work with Objects Using PDM display.

For example, for a list of all the CLP programs in the ATEST library that start with CHG, do the following:

1. Type the following on any command line:

   ```
   WRKOBJPDM LIB(ATEST) OBJ(CHG*) OBJTYPE(*PGM) OBJATR(CLP)
   ```

   Note: To work with **all** the objects in the library you worked with the last time you used PDM, type the WRKOBJPDM command on the command line without specifying any parameters.

2. Press Enter, and the Work with Objects Using PDM display appears, as shown in Figure 16.

```
                          Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy       4=Delete      5=Display      7=Rename
  8=Display description       9=Save        10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages

                                                                    Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 16. Work with Objects Using PDM Display—Showing the Object List You Specified

3. Press F3=Exit to leave PDM.

   You can find more information about the WRKOBJPDM command in the online help information.

Note: You can also access the Work with Objects Using PDM display by selecting option 12 (Work with) from the Work with Libraries Using PDM display. For more information on option 12, see "Working with Objects in a Library" on page 29.

Using the WRKMBRPDM Command

By using the WRKMBRPDM command, you can go directly to the Work with Members Using PDM display.

For example, for a list of all members in the CMDSRC file in the ATEST library with a type of CMD that start with C, use the following steps:

1. Type the following on any command line:

   ```
   WRKMBRPDM FILE(ATEST/CMDSRC) MBR(C*) MBRTYPE(CMD)
   ```

   Note: To work with **all** the members in the file and library you worked with the last time you used PDM, type the WRKMBRPDM command on the command line without specifying any parameters.

2. Press Enter, and the Work with Members Using PDM display appears, as shown in Figure 17.

```
                          Work with Members Using PDM

File  . . . . . .   CMDSRC____
  Library . . . .     ATEST_____          Position to  . . . . .   __________

Type options, press Enter.
  2=Edit         3=Copy       4=Delete       5=Display      6=Print
  7=Rename       8=Display description       9=Save         13=Change text ...

Opt  Member      Type         Text
__   CHGSYSL     CMD_______   Command definition source to change a library____
__   CP          CMD_______   Command definition source for CP command_________
__   CRTHELP     CMD_______   Create help text_____________________________
__   CRTO        CMD_______   Command definition source to create an object____
__   CRTP        CMD_______   Command definition source to create a file_______


                                                                        Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt             F5=Refresh            F6=Create
F9=Retrieve      F10=Command entry     F23=More options      F24=More keys
This is a subsetted list.
```

Figure 17. Work with Members Using PDM Display—Showing Member List You Specified

   If you have the authority, you can change the type and the text of the members on the display by typing over the values in these prompts. The member type, however, **must** match what is in the member. For example, a member of type CMD should contain CMD source code. Changing the member type does not change the member itself.

   Whether or not you can change the type and text of members is determined by the value entered in the *Change type and text* prompt on the Change Defaults display. For further information, see "Restricting the Ability to Change Member Type and Text" on page 150.

3. Press F3=Exit to leave PDM.

   You can find more information about the WRKMBRPDM command in the online help information.

Note: You can also access the Work with Members Using PDM display by selecting option 12 (Work with) from the Work with Objects Using PDM display. For more information on this option, see "Working with Members in a Physical File" on page 70.

Chapter 2. Working with Libraries

You can perform several operations such as copy, delete, and rename on individual libraries or a group of libraries at a time. These operations increase your productivity and save time. You can perform operations on different libraries by typing the desired option next to each library in the list display.

Concepts of Library List and List of Libraries

There is a difference between a library list and a list of libraries. The type of list you work with depends on your entry for the *Library* prompt on the Specify Libraries to Work With display, or for the LIB parameter of the WRKLIBPDM command. Some of the function keys and options available on the Work with Libraries Using PDM display differ depending on the type of list you are working with. The differences between a library list and a list of libraries are outlined below.

Library List

A library list is an ordered list of library names used to find an object. The library list indicates the libraries to be searched and the order of search. A library list makes it easier for you to work with objects. Assuming the object you are searching for is in one of the libraries on the library list, you do not have to specify the library name when searching for that object. The OS/400 operating system searches through the library list by starting from the top, and continues until it finds the object you are looking for.

The portions of a library list are:

System Portion
The system portion of the library list contains objects used by the system. The maximum number of libraries here is 15.

Product Libraries
Product libraries may be included in the library list. The product libraries are used to support languages and utilities that are dependent on libraries other than the system library, QSYS, to process their commands.

Current Library
The current library can be, but does not have to be, a duplicate of any library in the user portion of the library list. The current library value, *CURLIB, can be used on most commands as a library name to represent whatever library has been specified as the current library for the job.

User Portion
The user portion of the library list contains those objects referred to by the system's users and applications. The user portion, and the product and current libraries, may be different for each job on the system. The maximum number of libraries in the user portion of the library list is 25.

You see a library list when you select one of the following for the *Library* prompt on the Specify Libraries to Work With display or for the LIB parameter of the WRKLIBPDM command:

- *LIBL for a list of all libraries in your library list
- *USRLIBL for a list of all libraries in the user portion of your library list

To see a Work with Libraries Using PDM display that shows a library list, follow the steps below:

1. Select the displays as shown in the following sequence diagram:

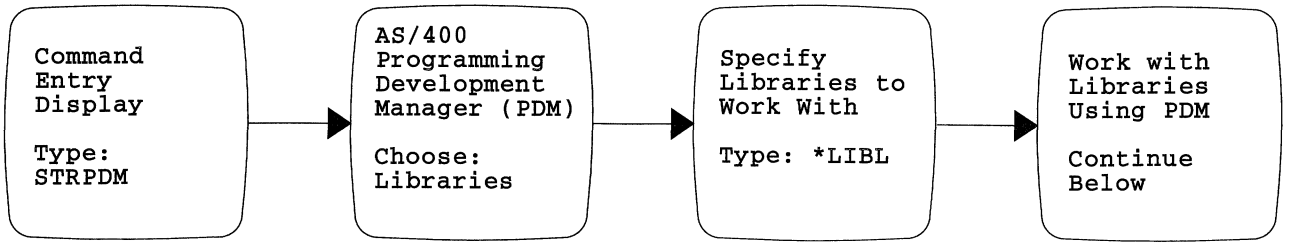


Figure 18. Working with Libraries in the Library List

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  2=Change                    3=Copy       5=Display       7=Rename
  8=Display description       9=Save       10=Restore      12=Work with ...

Opt  Library     Type        Text
__   QSYS        *PROD-SYS   System Library
__   QGPL        *PROD-CUR   General Purpose Library
__   QPDA        *PROD-PRD   Application Development Tools Library
__   QGPL        *PROD-USR   General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR   Application Development Tools Library
__   PAYLIB      *PROD-USR   Payroll Library
__   BATCHLIB    *PROD-USR   Batch Program Library
__   TEXTTOOLS   *PROD-USR   Text Management Tools Library
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 19. Work with Libraries Using PDM Display—a Library List

Notice that the *List type* prompt has *LIBL as its value. This indicates that you are working with a library list.

Note: A library list is also displayed if you type *USRLIBL for the *Library* prompt on the Specify Libraries to Work With display.

Because library lists are not sorted alphabetically, there is no *Position to* prompt on the Work with Libraries Using PDM display. The F17=Subset function key is also not available on the Work with Libraries Using PDM display because when you are working with library lists this function would distort your view of the list and the search order. PDM searches the entire library list when performing a search, and displaying a subset of the list could be misleading. Some of the options and other function keys are also different from those available when you are working with a list of libraries.

You can add libraries to, or remove libraries from your library list. When you remove a library from the library list, you do **not** delete it from the system. You are simply taking it off the library list. You can also change the search order by changing the position of libraries in your library list. When you change the library list, it is only changed for the current session. When you sign off and sign back onto PDM, the library list is the way it was before you changed it.

For more information on working with a library list, refer to the *CL Programmer's Guide*.

2. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

List of Libraries

A list of libraries is an alphabetic list of all the libraries, or of a subset of all the libraries, on the system. You see a list of libraries when you select one of the following values for the *Library* prompt on the Specify Libraries to Work With display, or for the LIB parameter on the WRKLIBPDM command:

- *ALL displays a list of all libraries in the system.
- *ALLUSR displays a list of all non-system libraries, including a list of all user-defined libraries.
- *CURLIB displays a list containing only the current library.
- Library name displays a list containing only the library you specify.
- Generic name displays a list containing libraries that meet specific criteria. The generic name can be in one of the following formats:

  ABC*
  Displays a list of all items that begin with the characters ABC for example, ABC, ABCD, or ABCTEST.

  ***ABC**
  Displays a list of all items ending with the characters ABC. For example, ABC, DABC, or TESTABC.

  B
  Displays a list of all items that have the character B anywhere in the name. For example, B, BALL, or ABCD.

  A*C
  Displays a list of all items that begin with the character A and end with the character C. For example, AC, ABC, or AZZZC.

  "a*"
  Displays a list of all items within quotation that start with a. For example, "a", "aB", or "aD".

  ****ALL**
  Displays a list of all items ending with ALL. For example, ALL, BALL, or TESTALL. The double asterisk is needed in this case because, ALL is defined as the value to display a list of all libraries.

Accessing a Work with Libraries Using PDM Display

To access a Work with Libraries Using PDM display that shows a list of all the libraries that start with an A, follow the steps below:

1. Choose the displays as shown in the following sequence diagram:

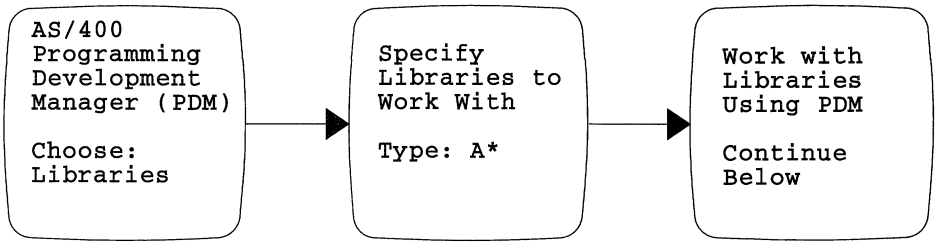


Figure 20. Working with a List of Libraries

```
                        Work with Libraries Using PDM

List type . . . . . .   *ALL_____      Position to . . . . .   _________

Type options, press Enter.
  2=Change        3=Copy                      4=Delete        5=Display
  7=Rename        8=Display description       9=Save          10=Restore ...

Opt  Library     Type      Text
__   ANEW        *PROD     Newest copy of Dept. 642 library
__   AOLD        *PROD     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642

                                                                      Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 21. Work with Libraries Using PDM Display—a List of Libraries

Notice the *List type* prompt has *ALL as its value. This indicates that you are working with a list of libraries. The *List type* prompt defaults to *ALL on the Work with Libraries Using PDM display if you specify *ALL, *CURLIB, a library name, or a generic name for the *Library* prompt on the Specify Libraries to Work With display. When you work with lists of libraries, the *List type* prompt can also have the value *ALLUSR.

Because lists of libraries are displayed in alphabetical order, there is a *Position to* prompt on the Work with Libraries Using PDM display. You can also create a subset of a list of libraries using the F17=Subset function key on the Work with Libraries Using PDM display. You can also create a library when you are working with lists of libraries.

2. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Note: To use the options on the Work with Libraries Using PDM display, you must have authority in the library with which you are working.

Creating a Library

You can create a library if you are working with a list of libraries (list type *ALL or *ALLUSR). The following example shows how to create a library using PDM:

1. Choose the displays as shown in the following sequence diagram:

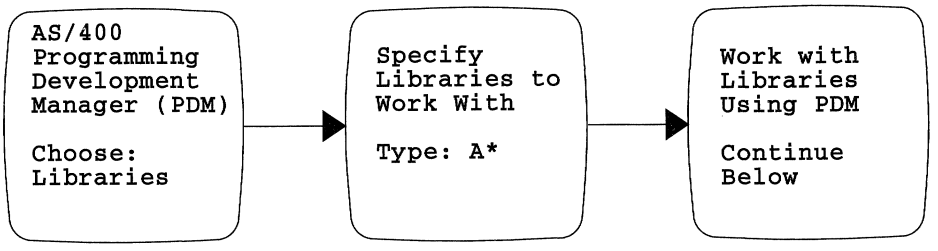


Figure 22. Working with Libraries That Start with an A

```
                        Work with Libraries Using PDM

List type . . . . . .   *ALL_____      Position to . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy                      4=Delete       5=Display
  7=Rename       8=Display description       9=Save         10=Restore ...

Opt  Library     Type      Text
__   ANEW        *PROD     Newest copy of Dept. 642 library
__   AOLD        *PROD     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642
                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 23. Work with Libraries Using PDM Display—before the Create Operation

2. To create a library, press F6=Create on the Work with Libraries Using PDM display. The prompt display for the CRTLIB command appears. This is a system display and not a PDM display.
3. Type the appropriate information for each prompt. If you are unsure of the information to type for any of the prompts, press Help. This example creates a library called ANEXAMP.

4. When you have finished typing the information, press Enter. The Work with Libraries Using PDM display appears again, as shown in Figure 24.

```
                        Work with Libraries Using PDM

List type . . . . . *ALL_____      Position to . . . . . _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete       5=Display
  7=Rename       8=Display description     9=Save         10=Restore ...

Opt  Library     Type      Text
__   ANEW        *PROD     Newest copy of Dept. 642 library
__   ANEXAMP     *PROD     An example library
__   AOLD        *PROD     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642
                                                                  Bottom
Parameters or command
===>
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
Library ANEXAMP created.
```

Figure 24. Work with Libraries Using PDM Display—after the Create Operation

Notice that the library you created, ANEXAMP for this example, is now in the list. You may have to page down the list of libraries to find it.

Note: If you create a library with a name that does not match the values you specified on the Specify Libraries to Work With display, it is not shown in the list. For this example, library ANEXAMP conforms to the values you selected (it starts with an A), so it is shown in the list after it is created.

Also notice the message at the bottom of the display indicating that the library was created.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Note: If there are no options typed in the *Opt* column of the list display, no commands or parameters typed on the command line, and no input prompts changed, then pressing Enter on a list display that is not nested has the same effect as pressing F3=Exit: the AS/400 Programming Development Manager (PDM) menu is shown again. A nested display occurs when you choose the Work with option on either the Work with Libraries Using PDM display, or the Work with Objects Using PDM display. Refer to "Working with Objects in a Library" on page 29 or "Working with Members in a Physical File" on page 70 for an example of nested displays.

Deleting Libraries

Using PDM, you can delete libraries you no longer need by selecting the Delete option. You can delete more than one library in a list at a time. PDM has a confirmation display where you verify that you have chosen the correct libraries to delete. You can delete libraries only from a list of libraries and **not** from a library list. The following example shows you how to delete the libraries ANEXAMP and AOLD:

1. Choose the displays as shown in the following sequence diagram:

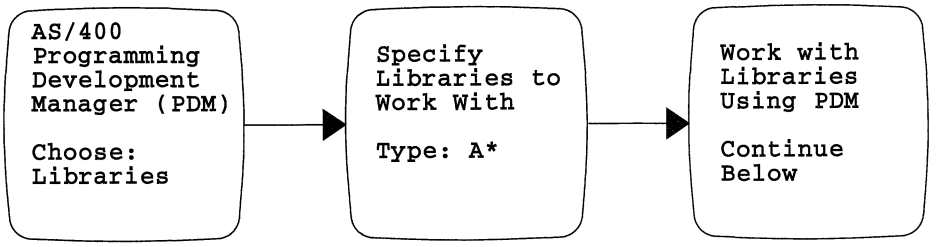


Figure 25. Working with Libraries That Start with an A

2. On the Work with Libraries Using PDM display, type 4 (Delete) next to each library you want to delete. For this example, type 4 beside the libraries ANEXAMP and AOLD.

```
                        Work with Libraries Using PDM

List type . . . . . .   *ALL_____      Position to . . . . .   _________

Type options, press Enter.
  2=Change        3=Copy                      4=Delete        5=Display
  7=Rename        8=Display description       9=Save          10=Restore ...

Opt  Library     Type      Text
__   ANEW        *PROD     Newest copy of Dept. 642 library
4_   ANEXAMP     *PROD     Example library
4_   AOLD        *PROD     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642
                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 26. Work with Libraries Using PDM Display—Choosing Libraries to Delete

3. Press Enter, and the Confirm Delete of Libraries display appears, as shown in Figure 27 on page 24.

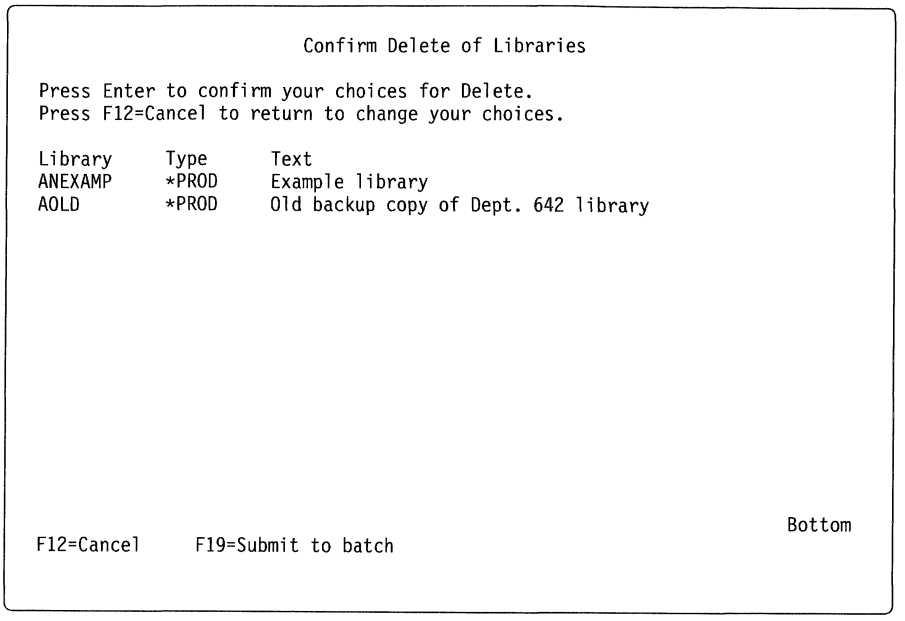


Figure 27. Confirm Delete of Libraries Display—Listing Libraries to Delete

Notice that this grouping display lists each of the libraries you chose to delete. If you choose a large number of libraries to delete, you may have to page down the list to view them all.

4. Make sure that you want to delete all the libraries listed. If you do not want to delete some of the libraries, press F12=Cancel to return to the previous display and change your selections. If you do want to delete all the libraries listed, press Enter or, to delete the libraries in batch mode, press F19=Submit to batch. If you are deleting a very large library, or a number of libraries, you should submit the job to batch. The Work with Libraries Using PDM display reappears after the system processes your request.

   Note: When you press Enter or F19=Submit to batch, the libraries on every page of the Confirm Delete of Libraries display are deleted, not just the ones on the page that is currently displayed.

5. The libraries you chose to delete are no longer in the list.

   Notice the message at the bottom of the display indicating that library ANEXAMP is deleted. Because you deleted two libraries, there is a second message waiting, which is indicated by the + at the far right of the display. Put the cursor on the message line and press the Page Down key. The second message is displayed, indicating that library AOLD is deleted.

```
                        Work with Libraries Using PDM

List type . . . . . *ALL_____      Position to . . . . . _________

Type options, press Enter.
  2=Change       3=Copy                      4=Delete       5=Display
  7=Rename       8=Display description       9=Save         10=Restore ...

Opt  Library     Type      Text
__   ANEW        *PROD     Newest copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642


                                                                  Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
Library ANEXAMP deleted.                                              +
```

Figure 28. Work with Libraries Using PDM Display—after the Delete Operation

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Renaming Libraries

You can rename libraries using option 7 (Rename) on the Work with Libraries Using PDM display. You can rename an individual library or a group of libraries at a time. The following example shows you how to rename a library:

1. Choose the displays as shown in the following sequence diagram:

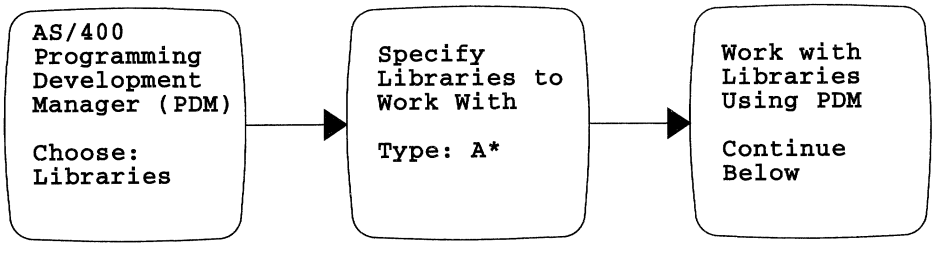


Figure 29. Working with Libraries That Start with an A

2. On the Work with Libraries Using PDM display, type 7 (Rename) next to each library you want to rename. For this example, select the library ANEW to rename.

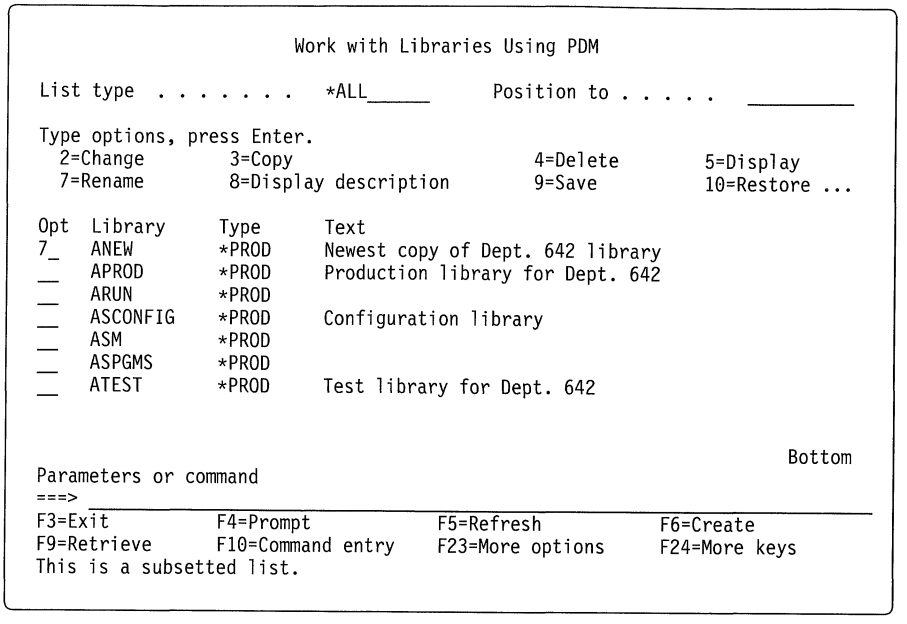


Figure 30. Work with Libraries Using PDM Display—Choosing a Library to Rename

3. Press Enter, and the Rename Libraries display appears, as shown in Figure 31.

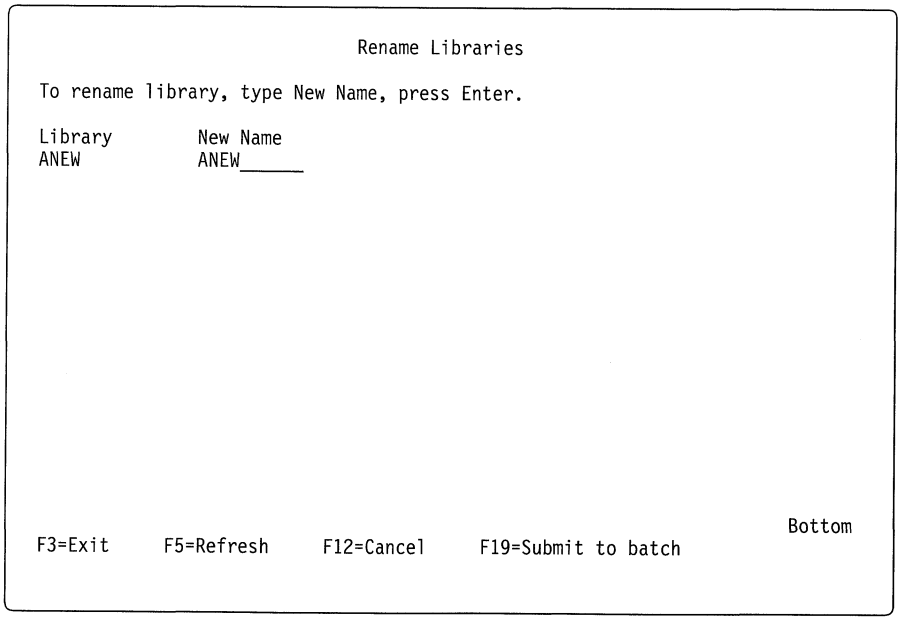


Figure 31. Rename Libraries Display—Listing the Library to Rename

This display lists each library you chose to rename on the previous display. You may have to page down the list to see all the libraries. The library names under *New Name* are initially the same as the ones under *Library*, so that you do not have to retype the entire name if you only want to change a few characters.

4. Type the new name of the library under the column heading *New Name* for each library listed.

```
                              Rename Libraries

To rename library, type New Name, press Enter.

Library         New Name
ANEW            AOLD_____
```

Figure 32. Rename Libraries Display—Showing the New Name of the Library

5. Press Enter, and the Work with Libraries Using PDM display reappears after the system processes your request, as shown in Figure 33.

   A message appears at the bottom of the display indicating that the library has been renamed.

```
                        Work with Libraries Using PDM

List type . . . . . .  *ALL_____      Position to . . . . .  _________

Type options, press Enter.
  2=Change        3=Copy                      4=Delete        5=Display
  7=Rename        8=Display description       9=Save          10=Restore ...

Opt  Library     Type      Text
__   AOLD        *PROD     Newest copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration Library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642

                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Object ANEW in QSYS type *LIB renamed AOLD.
```

Figure 33. Work with Libraries Using PDM Display—after the Rename Operation

6. Check the list for the library you renamed. The library you renamed may have changed position in the list because a list of libraries is sorted alphabetically. If you renamed the library to a name that did not match the selection values you entered on the Specify Libraries to Work With display (for example, if you renamed the library BNEW), it does not appear in the list. If you are working with a library list, the library that is renamed does not change position because a library list is not sorted alphabetically.

   Note: You cannot rename library QSYS or library QTEMP, and you cannot rename libraries on your library list in batch mode.

7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing Libraries

You can change the type and text description of libraries using option 2 (Change) on the Work with Libraries Using PDM display. The following example shows you how to change the type and text of the library you renamed in the previous section:

1. Choose the displays as shown in the following sequence diagram:

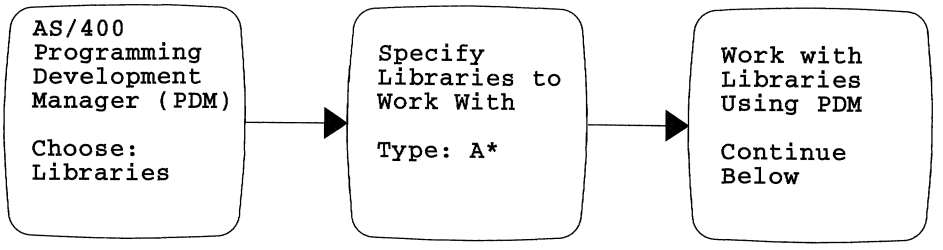


Figure 34. Working with Libraries That Start with an A

2. On the Work with Libraries Using PDM display, type 2 (Change) next to each library you want to change. For this example, type 2 (Change) next to the library AOLD.

```
                        Work with Libraries Using PDM

List type . . . . . .  *ALL_____      Position to . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete       5=Display
  7=Rename       8=Display description     9=Save         10=Restore ...

Opt  Library     Type      Text
2_   AOLD        *PROD     Newest copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642


                                                                  Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 35. Work with Libraries Using PDM Display—Choosing a Library to Change

3. Press Enter. The prompt display for the CHGLIB command appears. This is a system display, not a PDM display.
4. Change the AOLD library type to *TEST and change the text to:

   `Old backup copy of Dept. 642 library`

5. Press Enter, and the Work with Libraries Using PDM display reappears after the system has processed your request, as shown in Figure 36 on page 29.

   A message appears at the bottom of the display indicating that the library is changed. Notice that the type and text of the library AOLD are now different.

```
                        Work with Libraries Using PDM

List type . . . . . *ALL_____      Position to . . . . . _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete        5=Display
  7=Rename       8=Display description     9=Save          10=Restore ...

Opt  Library     Type      Text
__   AOLD        *TEST     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642

                                                                   Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Object description changed for AOLD in QSYS type *LIB.
```

Figure 36. Work with Libraries Using PDM Display—after the Change Operation

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Working with Objects in a Library

Using PDM, you can work with all the objects in one or more libraries by using option 12 (Work with). Press F4=Prompt to go to the Specify Objects to Work With display to create a subset of the list of objects that you want to work with. The following example shows you how to work with all the objects starting with an A in the libraries APROD and ATEST.

1. Choose the displays as shown in the following sequence diagram:

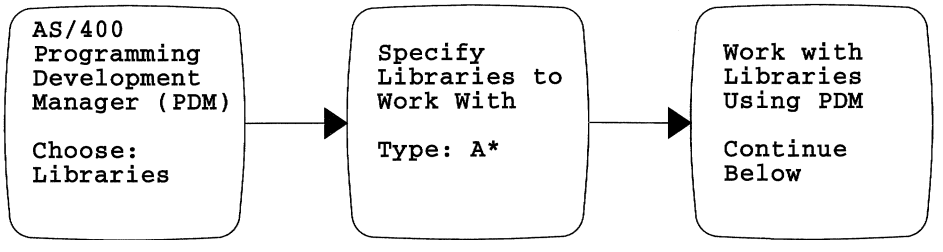


Figure 37. Working with Libraries That Start with an A

2. On the Work with Libraries Using PDM display, press F23=More options.

   The Work with Libraries Using PDM display reappears, this time showing the remaining set of available options, as shown in Figure 38 on page 30.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *ALL_____      Position to . . . . .   _________

Type options, press Enter.
  12=Work with               13=Change text ...
```

Figure 38. Work with Libraries Using PDM Display—Showing Additional Options for a List of Libraries

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required but you should use it until you are familiar with PDM.

3. On the Work with Libraries Using PDM display, type 12 (Work with) next to each library you want to work with. For this example, you want to work with all the objects starting with an A in the libraries APROD and ATEST.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *ALL_____      Position to . . . . .   _________

Type options, press Enter.
  12=Work with               13=Change text ...


Opt  Library     Type      Text
__   AOLD        *TEST     Old backup copy of Dept. 642 library
12   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
12   ATEST       *PROD     Test library for Dept. 642


                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
This is a subsetted list.
```

Figure 39. Work with Libraries Using PDM Display—Choosing Libraries to Work With

4. If you press Enter, the Work with Objects Using PDM display appears, showing all the objects in the first library you chose. For this example, press F4=Prompt. The Specify Objects to Work With display appears, allowing you to create a subset of the list of objects to work with, as shown in Figure 40 on page 31.

```
                    Specify Objects to Work With

Type choices, press Enter.

  Library . . . . . .   APROD_____   *CURLIB, name

  Object:
    Name  . . . . . .   A*_______    *ALL, name, *generic*
    Type  . . . . . .   *ALL_____    *ALL, *type
    Attribute . . . . . *ALL_____    *ALL, attribute, *generic*,
                                     *BLANK

F3=Exit     F5=Refresh     F12=Cancel
```

Figure 40. Specify Objects to Work With Display—Prompting the Work With Option

5. Press Enter, and the Work with Objects Using PDM display appears, as shown in Figure 41. You can now select any of the options shown for objects in the list. For more information on working with objects in a library, refer to Chapter 3, "Working with Objects" on page 47.

```
                        Work with Objects Using PDM

Library . . . . .   APROD_____       Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   AACTS       *PGM        CLP         Program to maintain accounts
__   AWAYWEGO    *PGM        CLP         5 - 10 minute warning for backups

                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 41. Work with Objects Using PDM Display—Listing Objects in First Library

6. When you finish working with all the objects that start with an A in the library APROD, press Enter. Any options that are typed in the *Opt* column, commands typed on the command line, or changes made to input prompts will be processed before PDM proceeds to the next library.

The Specify Objects to Work With display appears for the second library ATEST in the *Library* prompt. Select the criterion for the subset, A*, and then press Enter. The Work With Objects Using PDM display appears, as shown in Figure 42.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST____        Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete      5=Display      7=Rename
  8=Display description        9=Save        10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ADMBACK     *PGM        CLP         Program for administration backups

                                                                      Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 42. Work with Objects Using PDM Display—Listing Objects in Second Library

7. When you finish working with the objects in the second library, press Enter. The Work with Libraries Using PDM display reappears.
8. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Copying Libraries

Using PDM, you can copy groups of libraries or individual libraries. The following example shows you how to copy two libraries, AOLD and APROD:

1. Choose the displays as shown in the following sequence diagram:

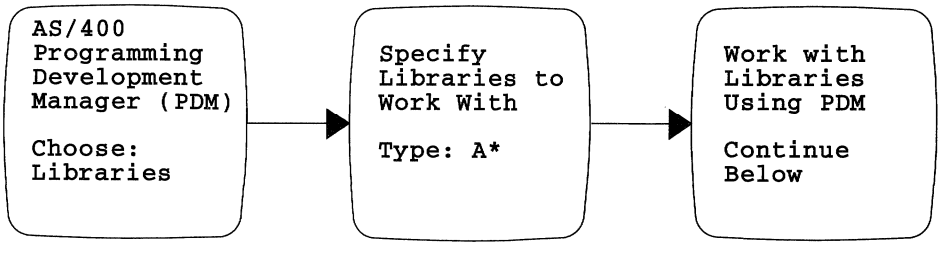


Figure 43. Working with Libraries That Start with an A

2. On the Work with Libraries Using PDM display, type 3 (Copy) next to each library you want to copy.

```
                        Work with Libraries Using PDM

List type . . . . . *ALL_____      Position to . . . . . _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete       5=Display
  7=Rename       8=Display description     9=Save         10=Restore ...

Opt  Library     Type      Text
3_   AOLD        *TEST     Old backup copy of Dept. 642 library
3_   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642

                                                                   Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
This is a subsetted list.
```

Figure 44. Work with Libraries Using PDM Display—Choosing the Libraries to Copy

3. Press Enter, and the Copy Libraries display appears, as shown in Figure 45.

```
                              Copy Libraries

To copy library, type New Name, press Enter.

Library         New Name
AOLD            AOLD_____
APROD           APROD____

                                                                   Bottom
F3=Exit     F5=Refresh     F12=Cancel     F19=Submit to batch
```

Figure 45. Copy Libraries Display—Listing Libraries to Copy

Notice that this display lists each library you chose to copy in the previous display. You may have to page down the list to see all the libraries. The library names under *New Name* are initially the same as the ones under *Library*, so that you do not have to retype the entire name if you only want to change a few characters in the name of the target library.

4. Type the names of the libraries to which you want to copy the AOLD and APROD libraries under the *New Name* column heading next to each library. For this example, copy AOLD to BOLD and copy APROD to BPROD.

```
                                Copy Libraries

To copy library, type New Name, press Enter.

Library         New Name
AOLD            BOLD_____
APROD           BPROD____
```

Figure 46. Copy Libraries Display—Showing Where to Copy the Libraries

5. Press Enter, and the Work with Libraries Using PDM display reappears. In this example, on the Specify Libraries to Work With display, you specified that you wanted to work with all the libraries that start with an A. Because BOLD and BPROD do not begin with an A, they are therefore not included in the list.

   Note: If you want to check that BOLD and BPROD have been created, press F12=Cancel. The Specify Libraries to Work With display reappears. To work with libraries that start with B, type B in the *Library* prompt, and then press Enter. The Work with Libraries Using PDM display appears again, this time listing the libraries that start with B. Page down the list until you find the libraries BOLD and BPROD.

   If you are working with a library list, the libraries you copied are not included in the list. If you want to include them on the library list, you must add them. For information on adding libraries to a library list, see "Adding a Library to Your Library List" on page 41.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Copying to a Library That Already Exists

If you attempt to copy a library to a library that already exists, a confirmation display appears, allowing you to either cancel the copy request or delete the existing library and then perform the copy operation. For example, you can try to copy library ATEST to library APROD, but a library named APROD already exists. You can delete the existing copy of APROD and then copy ATEST to APROD, or you can cancel the copy request.

Follow this example to copy library ATEST to library APROD and then cancel the copy request:

1. Choose the displays as shown in the sequence diagram in Figure 47.

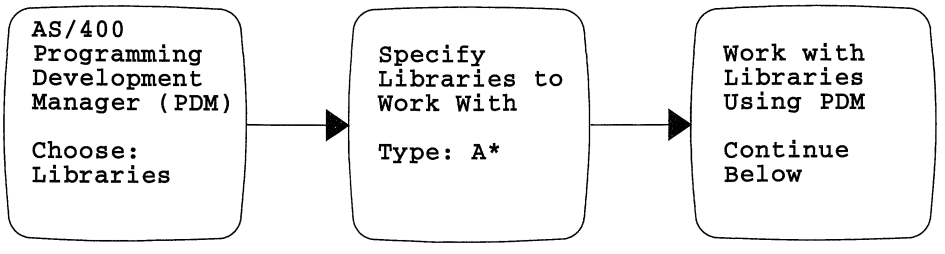


Figure 47. Working with Libraries That Start with an A

2. On the Work with Libraries Using PDM display, type 3 (Copy) next to the library you want to copy.

```
                        Work with Libraries Using PDM

List type  . . . . . .  *ALL_____      Position to . . . . .  _________

Type options, press Enter.
  2=Change        3=Copy                      4=Delete        5=Display
  7=Rename        8=Display description       9=Save          10=Restore ...

Opt  Library     Type      Text
__   AOLD        *TEST     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
3_   ATEST       *PROD     Test library for Dept. 642


                                                                      Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 48. Work with Libraries Using PDM Display—Choosing the Library to Copy

3. Press Enter, and the Copy Libraries display appears, as shown in Figure 49.

```
                              Copy Libraries

To copy library, type New Name, press Enter.

Library         New Name
ATEST           ATEST_____
```

Figure 49. Copy Libraries Display—Listing the Library to Copy

The Copy Libraries display lists each library you selected to copy in the previous display. If you choose a large number of libraries to copy, you may have to page down the list to see them all.

4. The *New Name* column initially has the same value as the *Library* column. Change the library name in the *New Name* column to the library name you want to copy to. For this example, type APROD in the *New Name* column.

```
                              Copy Libraries

To copy library, type New Name, press Enter.

Library         New Name
ATEST           APROD_____
```

Figure 50. Copy Libraries Display—Showing Where to Copy the Library

5. Press Enter, and the Confirm Copy of Library display appears, as shown in Figure 51 on page 36.

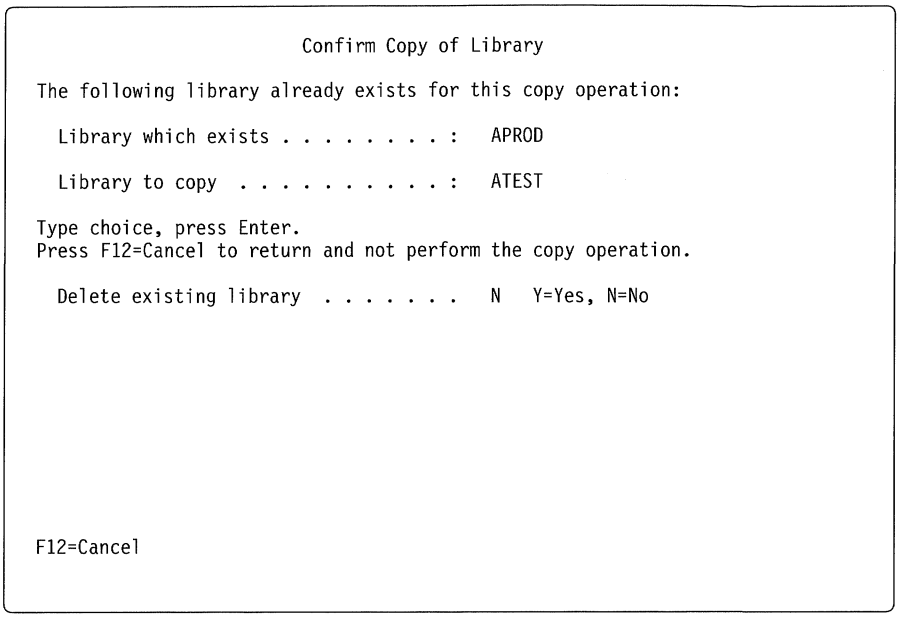


Figure 51. Confirm Copy of Library Display—The Library Already Exists

6. The display indicates that the library you are trying to copy to already exists. You have three choices:
   - You can cancel the copy request and return to the Work with Libraries Using PDM display by pressing F12=Cancel. Any pending options are not processed, but are still displayed on the list.
   - You can bypass the copy request by typing N (No) in the *Delete existing library* prompt. The next pending option, if there is one, is performed.
   - You can delete the existing library and continue with the copy operation by typing Y (Yes) in the *Delete existing library* prompt.

   For this example, type N (No) next to the *Delete existing library* prompt to bypass the copy operation.
7. Press Enter, and the Work with Libraries Using PDM display reappears. Library ATEST is not copied to library APROD. Notice the message at the bottom of the display indicating that library APROD already exists.
8. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Displaying the Description of Libraries

When using PDM, you can display information such as the size of a library, and the time and date a library was created, last changed, last saved, and last restored. The following example shows you how to display the description of the library APROD.

1. Choose the displays as shown in the following sequence diagram:

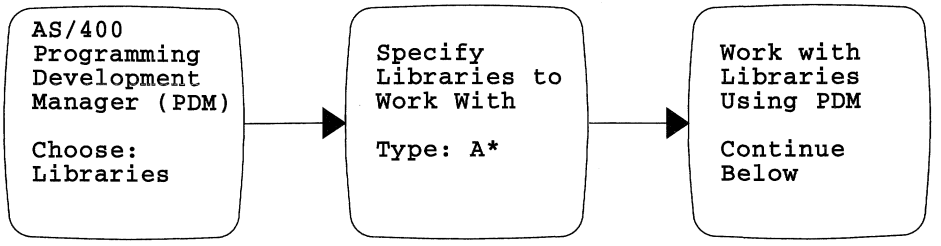


Figure 52. Working with Libraries That Start with an A

2. To display the description of a library, type 8 (Display description) next to the library for which you want to display descriptive information which, in this example, is the library APROD.

```
                        Work with Libraries Using PDM

List type . . . . . .   *ALL_____      Position to . . . . .   _________

Type options, press Enter.
  2=Change        3=Copy                      4=Delete        5=Display
  7=Rename        8=Display description       9=Save          10=Restore ...

Opt  Library     Type      Text
__     AOLD      *TEST     Old backup copy of Dept. 642 library
8_     APROD     *PROD     Production library for Dept. 642
__     ARUN      *PROD
__     ASCONFIG  *PROD     Configuration library
__     ASM       *PROD
__     ASPGMS    *PROD
__     ATEST     *PROD     Test library for Dept. 642

                                                                      Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 53. Choosing the Library to Display

3. Press Enter. The display for the DSPOBJD command appears, showing information relating to the library APROD. This is a system display and not a PDM display.
4. When you finish viewing this display, press F3=Exit to return to the Work with Libraries Using PDM display.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Showing a Subset of a List of Libraries

When working with a list of libraries, you can show a subset of a list of libraries using the *Library*, *Library type*, and *Text* prompts on the Subset Library List display. You can use these prompts in any combination or by themselves to create a subset of a list of libraries. The next two sections show examples of creating a subset of a list of libraries using the F17=Subset function key.

Specifying the Library Name and Library Type

You can create a subset of a list of libraries using the *Library* and *Library type* prompts on the Subset Library List display. For example, you can list all of the libraries of type *PROD that start with an A. The following example shows you how to display such a list of libraries:

1. Choose the displays as shown in the following sequence diagram:

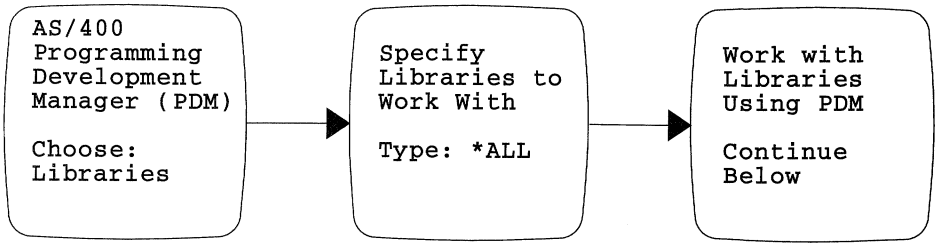


Figure 54. Working with All the Libraries

2. On the Work with Libraries Using PDM display, press F24=More keys.

   The Work with Libraries Using PDM display reappears, showing the next set of function keys available on the list of libraries display, as shown in Figure 55.

```
                                                                More...
Parameters or command
===> _____________________________________________________________________
F11=Display names only      F12=Cancel            F13=Repeat
F16=User options            F23=More options      F24=More keys
```

Figure 55. Work with Libraries Using PDM Display—Second Set of Function Keys for a List of Libraries

3. Press F24=More keys again, and the Work with Libraries Using PDM display reappears, this time showing the remaining set of function keys for a list of libraries display, as shown in Figure 56.

```
                                                                More...
Parameters or command
===> _____________________________________________________________________
F17=Subset              F18=Change defaults
F21=Print list          F23=More options        F24=More keys
```

Figure 56. Work with Libraries Using PDM Display—Third Set of Function Keys for a List of Libraries

Note: You do not have to display the additional function keys and options when you use them. Steps 2 and 3 are not required, but you should use them until you are familiar with PDM.

4. On the Work with Libraries Using PDM display, press F17=Subset to create a subset of the list. The Subset Library List display appears.
5. In the *Library* prompt, type in the generic name to show a subset of the list. You can use any one of the formats for the generic name listed on page 19. For this example, type A* for the *Library* prompt, *PROD for the *Library type*

prompt, and leave the *Text* prompt at *ALL for a list of all the libraries that start with an A and that are of type *PROD.

```
                          Subset Library List

Type choices, press Enter.

  Library . . . . . .  A*_______   *ALL, name, *generic*

  Library type . . . . .  *PROD____   *ALL, *PROD, *TEST

  Text . . . . . .  *ALL_____________________________________________
```

Figure 57. Subset Library List Display—Specifying Libraries to Include in Subset List

6. Press Enter, and the Work with Libraries Using PDM display appears, showing a subset of the list of libraries, as shown in Figure 58. Only libraries whose names start with an A, that are of type *PROD, are shown in the subset of the list.

```
                        Work with Libraries Using PDM

List type . . . . . .  *ALL_____      Position to . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete       5=Display
  7=Rename       8=Display description     9=Save         10=Restore ...

Opt  Library     Type      Text
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642


                                                                  Bottom
Parameters or command
===> ____________________________________________________________________
F17=Subset              F18=Change defaults
F21=Print list          F23=More options        F24=More keys
This is a subsetted list.
```

Figure 58. Work with Libraries Using PDM Display—Showing the Subset of the List

Notice the *List type* prompt is still *ALL. The *List type* prompt indicates the type of list that is displayed (library list or list of libraries), and not what you typed for the *Library* prompt on the Subset Library List display.

7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Specifying the Text

Another useful way to create a subset of a list of libraries is by using only the *Text* prompt. For example, you can list all the libraries for Department 642. The following example shows you how to create a subset of a list of libraries for Department 642 only, by using the *Text* prompt.

1. Choose the displays as shown in the following sequence diagram:

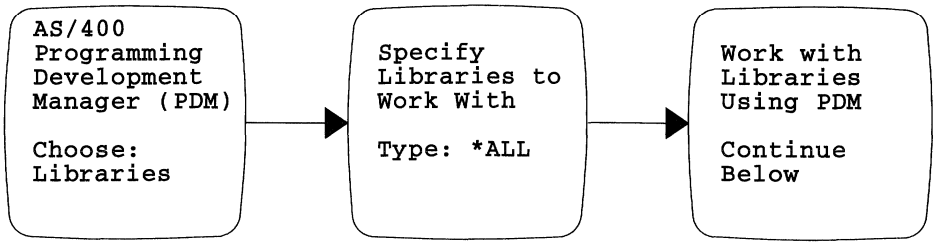


Figure 59. Working with All the Libraries

2. On the Work with Libraries Using PDM display, press F24=More keys **twice**.

   The Work with Libraries Using PDM display reappears, showing the third set of available function keys, as shown in Figure 60.

```
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F17=Subset              F18=Change defaults
F21=Print list          F23=More options        F24=More keys
```

Figure 60. Work with Libraries Using PDM Display—Third Set of Function Keys for a List of Libraries

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. On the Work with Libraries Using PDM display, press F17=Subset to create a subset of the list. The Subset Library List display appears.
4. In the *Text* prompt, type 642 to indicate you want to display a subset of the list that includes all items with 642 in their text field. Leave the *Library* and *Library type* prompts at *ALL.

```
                          Subset Library List

Type choices, press Enter.

  Library  . . . . . .   *ALL_____   *ALL, name, *generic*

  Library type . . . . .  *ALL_____   *ALL, *PROD, *TEST

  Text . . . . . .  642_____________________________________________
```

Figure 61. Subset Library List Display—Using Text Prompt to Create a Subset List

5. Press Enter, and the Work with Libraries Using PDM display appears, showing a subset of the list of libraries that lists all Department 642 libraries, as shown in Figure 62 on page 41.

```
                        Work with Libraries Using PDM

List type . . . . . *ALL_____      Position to . . . . . _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete          5=Display
  7=Rename       8=Display description     9=Save            10=Restore ...

Opt  Library     Type      Text
__   AOLD        *TEST     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ATEST       *PROD     Test library for Dept. 642
__   ETEST       *TEST     Test library for Dept. 642

                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F17=Subset              F18=Change defaults
F21=Print list          F23=More options        F24=More keys
This is a subsetted list.
```

Figure 62. Work with Libraries Using PDM Display—the Subset List of Dept. 642 Libraries

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing the Library List

When working with libraries, you can change the library list (list types of *LIBL or *USRLIBL) by adding libraries to the library list, moving a library within the library list, or removing libraries from the library list. The following three sections explain each of these options.

Note: The changes you make to the library list are only temporary. When you sign off and sign back onto PDM, the library list is the same as it was before you changed it. For information on making permanent changes to the library list, refer to the *CL Reference*.

Adding a Library to Your Library List

When working with libraries in PDM, you can add an existing library only to a library list. The following example shows you how to add the library APROD to the library list:

1. Choose the displays as shown in the following sequence diagram:

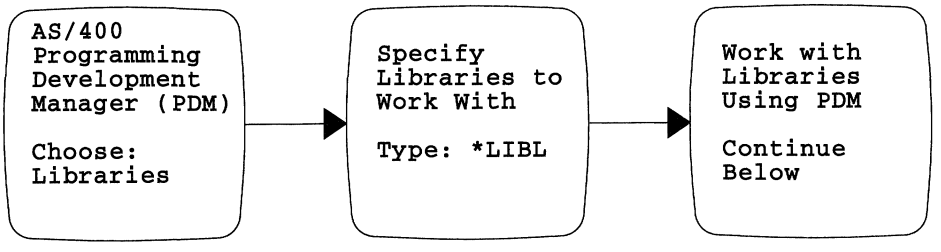


Figure 63. Working with Libraries in Your Library List

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  2=Change                    3=Copy       5=Display       7=Rename
  8=Display description       9=Save       10=Restore      12=Work with ...

Opt  Library     Type        Text
__   QSYS        *PROD-SYS   System Library
__   QGPL        *PROD-CUR   General Purpose Library
__   QPDA        *PROD-PRD   Application Development Tools Library
__   QGPL        *PROD-USR   General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR   Application Development Tools Library
__   PAYLIB      *PROD-USR   Payroll Library
__   BATCHLIB    *PROD-USR   Batch Program Library
__   TEXTTOOLS   *PROD-USR   Text Management Tools Library
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 64. Work with Libraries Using PDM Display—Library List before Library Is Added

2. To add a library to the library list, press F6=Add to list on the Work with Libraries Using PDM display. The prompt display for the ADDLIBLE command appears. This is an AS/400 system display.
3. Enter the appropriate information for the prompt. For this example, add APROD to the library list. If you are not sure of what to type for the prompt, press Help.
4. When you have entered the appropriate information for the prompt, press Enter. The Work with Libraries Using PDM display reappears, as shown in Figure 65.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  2=Change                    3=Copy       5=Display       7=Rename
  8=Display description       9=Save       10=Restore      12=Work with ...

Opt  Library     Type        Text
__   QSYS        *PROD-SYS   System Library
__   QGPL        *PROD-CUR   General Purpose Library
__   QPDA        *PROD-PRD   Application Development Tools Library
__   APROD       *PROD-USR   Production Library for Dept. 642
__   QGPL        *PROD-USR   General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR   Application Development Tools Library
__   PAYLIB      *PROD-USR   Payroll Library
__   BATCHLIB    *PROD-USR   Batch Program Library
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Library list changed.
```

Figure 65. Work with Libraries Using PDM Display—Library List after Adding APROD Library

Notice that the library APROD is now included in the library list. You may have to page down the list to find the library you added if you chose to add the library to the end of the list. In this example, APROD is added to the top of the user portion of the library list, fourth in the list. QSYS, QGPL, and QPDA are before APROD, because APROD is a user library, and user libraries are listed after any system library, the current library, and product libraries.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing the Position of a Library in Your Library List

If you are working with a library list, you can move user libraries anywhere in the user portion of the library list. If you do not specify the library name when you are searching for an object in a library, the position of a library in the library list determines the order in which that library is searched. For example, if you have a library that contains test code, you can place it at the top of the library list so that test code is searched first.

The following example shows you how to move the library APROD in the library list:

1. Choose the displays as shown in the following sequence diagram:

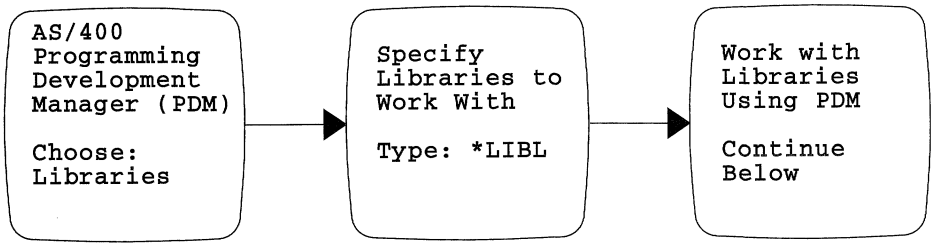


Figure 66. Working with Libraries in Your Library List

2. On the Work with Libraries Using PDM display, press F23=More options.

   The Work with Libraries Using PDM display reappears, this time showing the remaining set of available options for a library list, as shown in Figure 67.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL____

Type options, press Enter.
  13=Change text          20=Move within list          21=Move before
  22=Move after           23=Remove from list ...
```

Figure 67. Work with Libraries Using PDM Display—Additional Options for a Library List

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Type option 20 (Move within list) next to the library you want to move, in this example, the library APROD. Type either option 21 (Move before) or option 22 (Move after) in the position to which you want to move the library. For this example, type 22 (Move after) beside the library PAYLIB to move the library APROD to a position after PAYLIB.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  13=Change text          20=Move within list          21=Move before
  22=Move after           23=Remove from list ...

Opt  Library     Type       Text
__   QSYS        *PROD-SYS  System Library
__   QGPL        *PROD-CUR  General Purpose Library
__   QPDA        *PROD-PRD  Application Development Tools Library
20   APROD       *PROD-USR  Production Library for Dept. 642
__   QGPL        *PROD-USR  General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR  Application Development Tools Library
22   PAYLIB      *PROD-USR  Payroll Library
__   BATCHLIB    *PROD-USR  Batch Program Library
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 68. Work with Libraries Using PDM Display—Moving the APROD Library

4. Press Enter, and the Work with Libraries Using PDM display appears again with the library APROD in its new position, as shown in Figure 69.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  13=Change text          20=Move within list          21=Move before
  22=Move after           23=Remove from list ...

Opt  Library     Type       Text
__   QSYS        *PROD-SYS  System Library
__   QGPL        *PROD-CUR  General Purpose Library
__   QPDA        *PROD-PRD  Application Development Tools Library
__   QGPL        *PROD-USR  General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR  Application Development Tools Library
__   PAYLIB      *PROD-USR  Payroll Library
__   APROD       *PROD-USR  Production Library for Dept. 642
__   BATCHLIB    *PROD-USR  Batch Program Library
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Library list changed.
```

Figure 69. Work with Libraries Using PDM Display—after APROD Library Is Moved

Notice the message at the bottom of the display indicating that the library list is changed.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Removing a Library from Your Library List

When working with libraries in PDM, you can remove a library from your library list. This does not delete the library from the system: it just removes it from your library list. The following example shows you how to remove the library APROD you added to the library list in "Adding a Library to Your Library List" on page 41 from the library list.

1. Choose the displays as shown in the following sequence diagram:

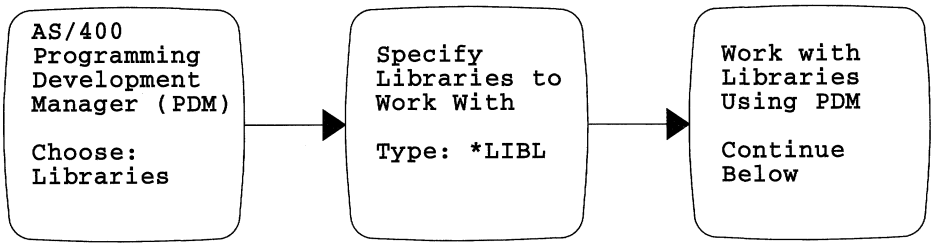


Figure 70. Working with Libraries in Your Library List

2. On the Work with Libraries Using PDM display, press F23=More options.

   The Work with Libraries Using PDM display reappears, showing the remaining options available, as shown in Figure 71.

```
                      Work with Libraries Using PDM


List type  . . . . . .   *LIBL____

Type options, press Enter.
  13=Change text          20=Move within list          21=Move before
  22=Move after           23=Remove from list ...
```

Figure 71. Work with Libraries Using PDM Display—Showing Additional Library List Options

   Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Type option 23 (Remove from list) next to the library you want to remove from the library list, in this example, next to the library APROD.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  13=Change text          20=Move within list          21=Move before
  22=Move after           23=Remove from list ...

Opt  Library     Type       Text
__   QSYS        *PROD-SYS  System Library
__   QGPL        *PROD-CUR  General Purpose Library
__   QPDA        *PROD-PRD  Application Development Tools Library
__   QGPL        *PROD-USR  General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR  Application Development Tools Library
__   PAYLIB      *PROD-USR  Payroll Library
23   APROD       *PROD-USR  Production Library for Dept. 642
__   BATCHLIB    *PROD-USR  Batch Program Library
                                                                      More...
Parameters or command
===>
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 72. Work with Libraries Using PDM Display—Choosing the Library to Remove

4. Press Enter, and the Work with Libraries Using PDM display reappears.

```
                        Work with Libraries Using PDM

List type  . . . . . .   *LIBL_____

Type options, press Enter.
  13=Change text          20=Move within list          21=Move before
  22=Move after           23=Remove from list ...

Opt  Library     Type       Text
__   QSYS        *PROD-SYS  System Library
__   QGPL        *PROD-CUR  General Purpose Library
__   QPDA        *PROD-PRD  Application Development Tools Library
__   QGPL        *PROD-USR  General Purpose Library
__   QTEMP       *TEST-USR
__   QPDA        *PROD-USR  Application Development Tools Library
__   PAYLIB      *PROD-USR  Payroll Library
__   BATCHLIB    *PROD-USR  Batch Program Library
__   TEXTTOOLS   *PROD-USR  Text Management Tools Library
                                                                      More...
Parameters or command
===>
F3=Exit          F4=Prompt           F5=Refresh          F6=Add to list
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Library list changed.
```

Figure 73. Work with Libraries Using PDM Display—after Removing the APROD Library

Notice that the list no longer contains the library APROD. The message at the bottom of the display indicates that the library list is changed.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.
6. Press F3=Exit to leave PDM.

Chapter 3. Working with Objects

Using PDM, you can work with all or with specific objects in a library. This chapter shows how to perform operations on objects using the available options and function keys. Some of the options can only be used with certain object types. Refer to Appendix A, "Command Reference for Objects, Libraries, and Members" on page 173 for information on the commands that can be performed on specific object types. This chapter contains examples of working with objects using the data file utility and screen design aid.

Creating Objects

When working with objects in PDM, you can create many different types of objects. The following example shows how to create an object called PRODDATA of type *DTAARA.

Note: This example, and the examples that follow in this chapter, use the libraries ATEST and APROD. You can use any libraries you want to work with.

1. Choose the displays as shown in the following sequence diagram:

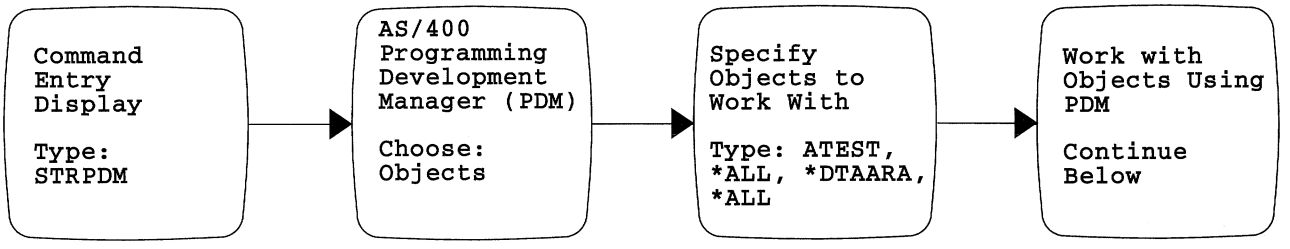


*Figure 74. Working with Objects with Type *DTAARA*

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   MYDATA      *DTAARA
__   TESTDATA    *DTAARA                 Test data









                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 75. Work with Objects Using PDM Display—before the Create Operation

2. On the Work with Objects Using PDM display, press F6=Create to create an object. A menu appears listing all the create commands.
3. Choose the type of object you want to create by typing the appropriate number.
4. Follow the instructions on the displays to complete the create operation. If you are unsure of what to enter for any of the prompts, press Help to display the online information for that prompt.
5. When you finish creating the object, follow the instructions on the displays to return to the Work with Objects Using PDM display. For this example, the object created is PRODDATA of type *DTAARA.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   MYDATA      *DTAARA
__   PRODDATA    *DTAARA                 Production data
__   TESTDATA    *DTAARA                 Test data

                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
```

Figure 76. Work with Objects Using PDM Display—Showing the New Object

If the object you created matches the values you specified on the Specify Objects to Work With display at the beginning of this exercise (that is, if it is in library ATEST and of type *DTAARA), it now appears in the list. For this example, object PRODDATA matches the values specified and is shown in the list. You may have to page through the list to find it if there are a lot of objects in the list.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Deleting Objects

You can delete objects you no longer need by selecting the Delete option. You can delete more than one object in a list at a time. PDM has a confirmation display that allows you to verify that the objects you chose are the ones you want to delete.

The following example shows how to delete the object BACKTEST in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

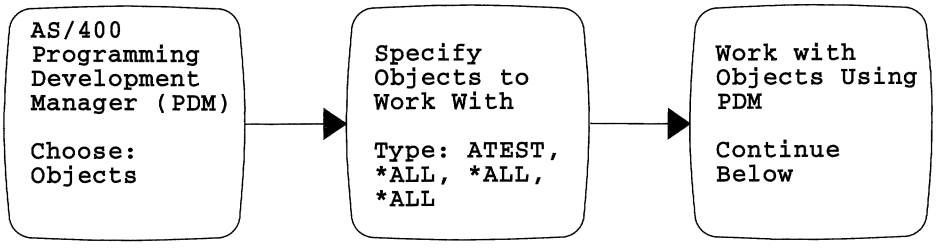


Figure 77. Working with Objects in ATEST

2. On the Work with Objects Using PDM display, type 4 (Delete) next to each object you want to delete which, in this example, is the object BACKTEST.

```
                          Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ADMBACK     *PGM        CLP         Program for administration backups
4_   BACKTEST    *PGM        CLP         Test program for backups
__   BACKUP      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
                                                                      More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 78. Work with Objects Using PDM Display—Choosing the Object to Delete

3. Press Enter. The Confirm Delete of Objects display appears.

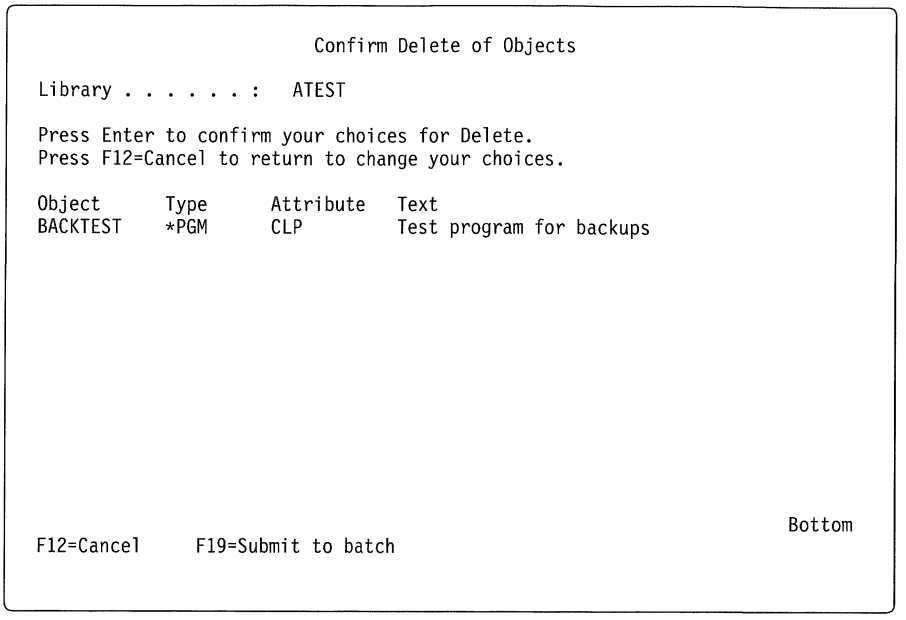


Figure 79. Confirm Delete of Objects Display—Listing Object to Delete

This display lists each of the objects you choose to delete on the previous display, in this example, the object BACKTEST. If you chose a large number of objects, you may have to page down the list to see them all.

4. Make sure you want to delete all the objects listed. If you do not want to delete some of the objects, press F12=Cancel to return to the previous display and change your selections. If you do want to delete all the objects listed, press Enter or, to delete the objects in batch mode, press F19=Submit to batch.

   Note: If you choose a large number of objects to delete, there may be more than can be listed on one page. When you press Enter or F19=Submit to batch, the objects on every page of the Confirm Delete of Objects display are deleted, not just the ones on the page that is currently displayed.

   After the system processes your requests, the Work with Objects Using PDM display reappears, as shown in Figure 80 on page 51.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____        Position to . . . . . .  _________
                                       Position to type  . . . . .  _____

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ADMBACK     *PGM        CLP         Program for administration backups
__   BACKUP      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Object BACKTEST in ATEST type *PGM deleted.
```

Figure 80. Work with Objects Using PDM Display—after the Delete Operation

Notice the object you chose to delete, in this example, the object BACKTEST, is no longer in the list. A message at the bottom of the display indicates that the object is deleted.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Renaming Objects

You can rename objects using the Rename option on the Work with Objects Using PDM display. You can choose to rename more than one object in the list at a time. The following example shows how to rename the ADMBACK and the BACKUP objects in the library ATEST.

1. Choose the displays as shown in the following sequence diagram:

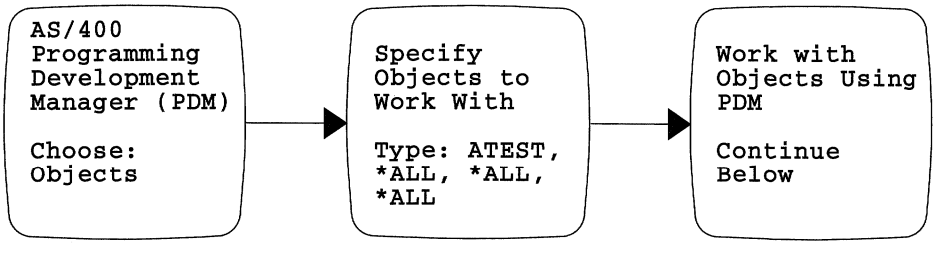


Figure 81. Working with All Objects in ATEST

2. On the Work with Objects Using PDM display, type 7 (Rename) next to each object you want to rename, in this example, next to the ADMBACK and BACKUP objects.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____        Position to . . . . . .  _________
                                       Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
7_   ADMBACK     *PGM        CLP         Program for administration backups
7_   BACKUP      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 82. Work with Objects Using PDM Display—Choosing Objects to Rename

3. Press Enter, and the Rename Objects display appears, as shown in Figure 83.

```
                              Rename Objects

Library . . . . . :   ATEST

To rename object, type New Name, press Enter.

Object      Type      New Name
ADMBACK     *PGM      ADMBACK___
BACKUP      *PGM      BACKUP____









                                                                      Bottom
F3=Exit     F5=Refresh     F12=Cancel     F19=Submit to batch
```

Figure 83. Rename Objects Display—Listing the Objects to Rename

Notice that this display lists each of the objects you selected to rename on the previous display. The object names under the column heading *New Name* are initially the same as the names under the column heading *Object*. This saves retyping if you only want to change one or two characters in the name of the object. If you choose a large number of objects to rename, you may have to page down the list to see them all.

4. Type the new name of the object under the *New Name* column beside each object listed. For this example, change ADMBACK to ABACK and change BACKUP to BBACK.

```
                              Rename Objects

Library . . . . . :   ATEST

To rename object, type New Name, press Enter.

Object      Type      New Name
ADMBACK     *PGM      ABACK_____
BACKUP      *PGM      BBACK_____
```

Figure 84. Rename Objects Display—Renaming the Objects

5. Press Enter. After the system processes your request, the Work with Objects Using PDM display reappears, as shown in Figure 85.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____        Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK       *PGM        CLP         Program for administration backups
__   BBACK       *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===>
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Object ADMBACK in ATEST type *PGM renamed ABACK                          +
```

Figure 85. Work with Objects Using PDM Display—after the Rename Operation

A message appears at the bottom of the display indicating that the first object you selected has been renamed. The + at the far right of the message indicates that another message is waiting. Place the cursor on the message line and press the Page Down key. The next message displayed indicates that the second object you chose is renamed.

6. Check the list for the renamed objects. The objects now have the new name you assigned them.
7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Moving Objects to Another Library

Using PDM, you can move objects from one library to another. You can move objects in groups, provided you are moving them to the same library, or you can move objects individually to different libraries.

The following example shows how to move the objects ABACK and BBACK from the library ATEST to the library APROD:

1. Choose the displays as shown in the following sequence diagram:

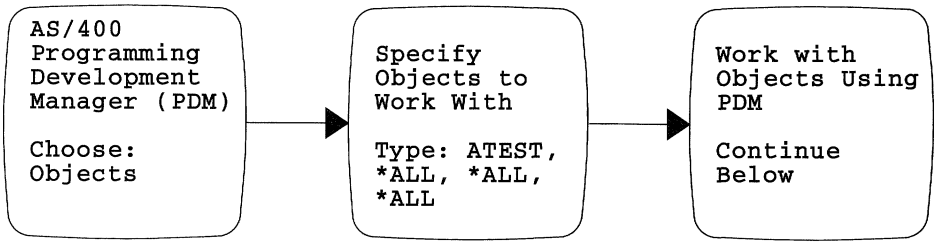


Figure 86. Working with All Objects in ATEST

2. On the Work with Objects Using PDM display, type 11 (Move) next to each object you want to move, in this example, next to the objects ABACK and BBACK.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
11   ABACK       *PGM        CLP         Program for administration backups
11   BBACK       *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 87. Work with Objects Using PDM Display—Choosing Objects to Move

3. Press Enter, and the Move Objects display appears, as shown in Figure 88 on page 55.

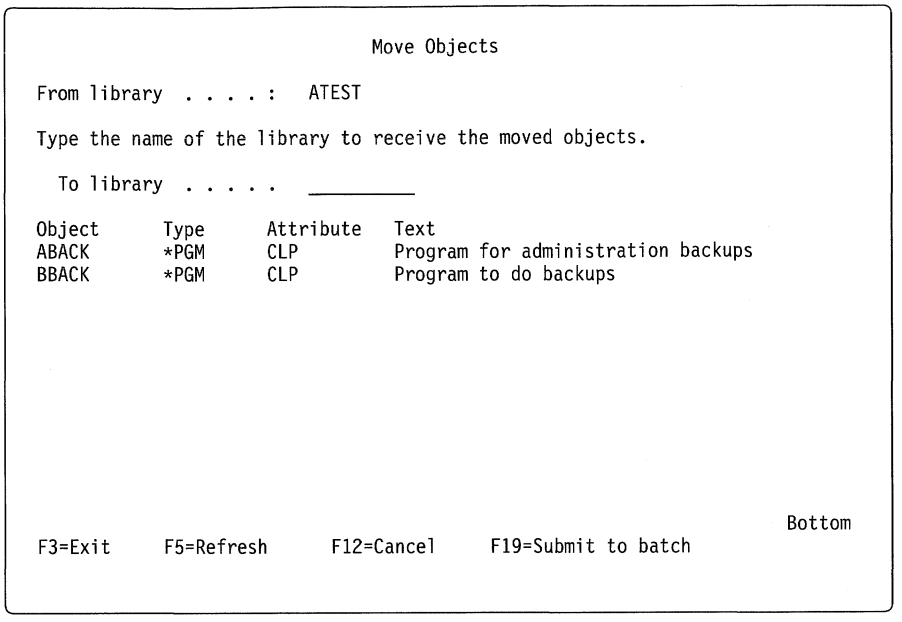


Figure 88. Move Objects Display—Listing Objects to Move

Notice that this display lists each object you selected to move on the previous display. If you chose a large number of objects, you may have to page through the list to see them all.

4. The *From library* prompt already has the name of the library that currently contains the objects you want to move. For this example, the *From library* is ATEST.

   In the *To library* prompt, type the name of the library to which you want to move the objects. For this example, the *To library* is APROD.

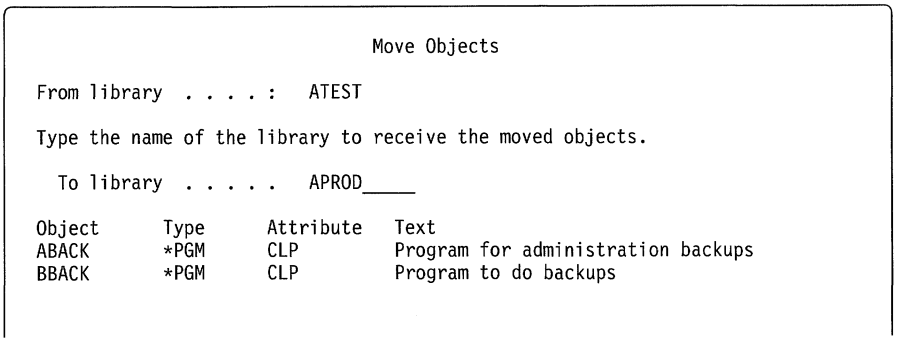


Figure 89. Move Objects Display—Showing Where to Move the Objects

5. Make sure the objects selected are the ones you want to move. Press Enter.

   After the system processes your request, the Work with Objects Using PDM display appears. Notice the objects you chose to move are no longer in the library ATEST.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                      Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
__   CLNADM      *PGM        CLP         Clean administration program
__   CLNA7       *PGM        CLP
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Object ABACK in ATEST type *PGM moved to library APROD.                  +
```

Figure 90. Work with Objects Using PDM Display—Library ATEST after the Move Operation

A message appears at the bottom of the display indicating that object ABACK was moved to library APROD. The + at the far right of the display indicates that another message is waiting. Move the cursor to the message line and press the Page Down key. Another message appears indicating that object BBACK was moved to library APROD.

6. To display the objects you moved to the library APROD, type APROD in the *Library* prompt and press Enter.

   The Work with Objects Using PDM display reappears, as shown in Figure 91.

```
                        Work with Objects Using PDM

Library . . . . .   APROD_____       Position to . . . . . .  _________
                                      Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK       *PGM        CLP         Program for administration backups
__   ACCTS       *PGM        CLP         Program to maintain accounts
__   AWAYWEGO    *PGM        CLP         5 - 10 minute warning for backups
__   BACKUP      *PGM        CLP         Program to do backups
__   BBACK       *PGM        CLP         Program to do backups
__   BGNIWSSRV   *PGM        CLP
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 91. Work with Objects Using PDM Display—Library APROD after the Move Operation

The list now contains objects in the library APROD, including the objects ABACK and BBACK you moved. You can page through the list to find the objects you moved.

7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Copying Objects

To copy objects use the Copy option. You can copy individual objects or a number of objects in the list at a time. Follow this example to copy the objects ABACK and BBACK from the library APROD to the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

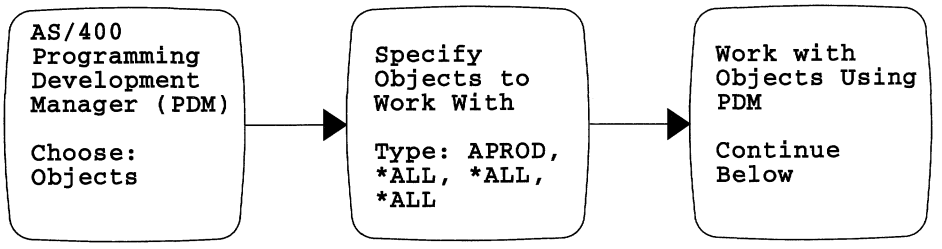


Figure 92. Working with All Objects in APROD

2. On the Work with Objects Using PDM display, type 3 (Copy) next to each object you want to copy.

```
                          Work with Objects Using PDM

Library . . . . .   APROD_____        Position to . . . . . .  _________
                                      Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
3_   ABACK       *PGM        CLP         Program for administration backups
__   ACCTS       *PGM        CLP         Program to maintain accounts
__   AWAYWEGO    *PGM        CLP         5 - 10 minute warning for backups
__   BACKUP      *PGM        CLP         Program to do backups
3_   BBACK       *PGM        CLP         Program to do backups
__   BGNIWSSRV   *PGM        CLP
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 93. Work with Objects Using PDM Display—Choosing Objects to Copy

3. Press Enter, and the Copy Objects display appears, as shown in Figure 94 on page 58.

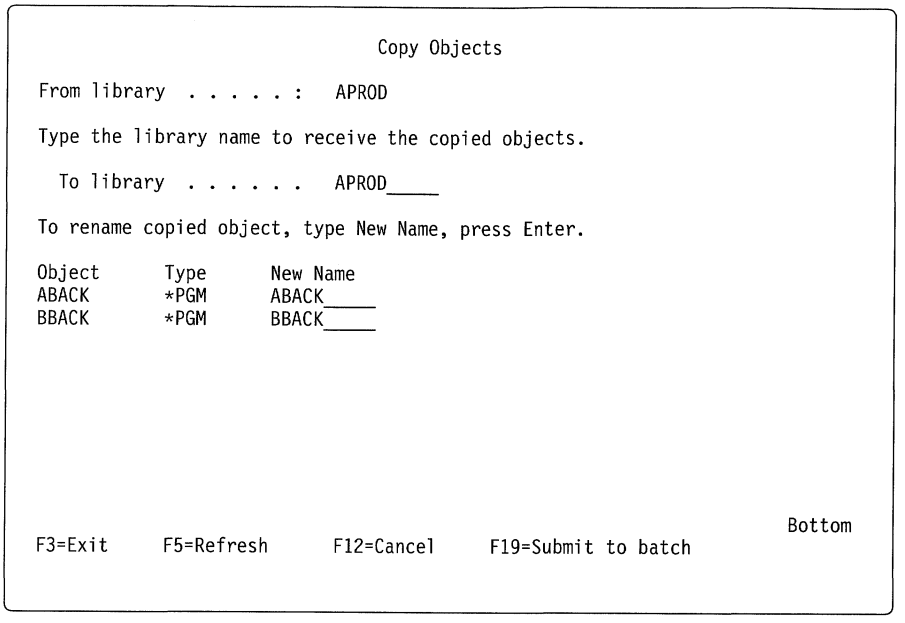


Figure 94. Copy Objects Display—Listing Objects to Copy

Notice that this display lists each object you chose to copy on the previous display. You may have to page through the list to see all the objects you chose to copy. The *To library* prompt initially contains the same library name as the *From library* prompt, and the Object names under the column heading *New Name* are initially the same as the ones under the column heading *Object*. This is to save retyping if you only want to change a few characters in the name of the library or object you are copying to.

4. Type the name of the library you want to copy the objects to in the *To library* prompt. For this example, the name of this library is ATEST.
5. Type the new object names under the column heading *New Name* beside each object. In this example, ABACK is copied to ABACK2 and BBACK is copied to BBACK2.

   Note: If you are copying objects to a different library, you do not have to change the object names, unless the object already exists in the other library.

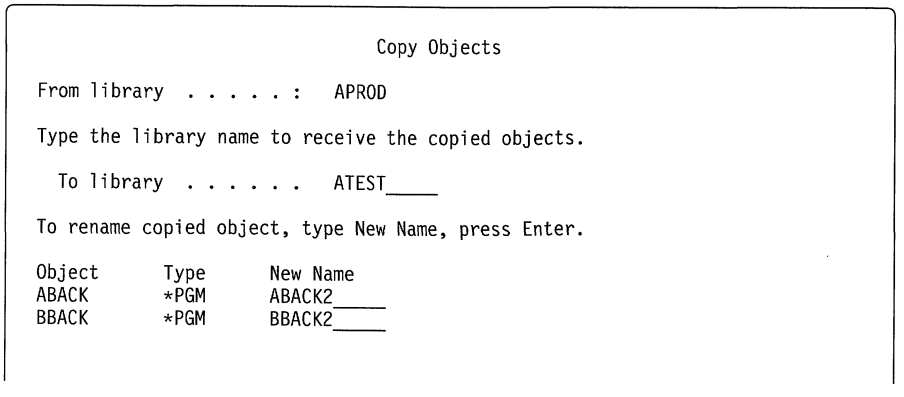


Figure 95. Copy Objects Display—Showing the Library and Objects to Copy To

6. Press Enter, and the Work with Objects Using PDM display reappears.
7. To display the library ATEST to see the objects you copied to it, type ATEST in the *Library* prompt, and press Enter.
8. The Work with Objects Using PDM display reappears, listing all the objects in the library ATEST, as shown in Figure 96.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change      3=Copy         4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 96. Work with Objects Using PDM Display—after the Copy Operation

Notice that the objects ABACK2 and BBACK2 you copied to the library ATEST are included in the list.

9. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Copying to an Object That Already Exists

If you attempt to copy an object to a library that already contains an object with the same name and type, a confirmation display appears. On this display, you can cancel the copy request, or delete the existing object in the library you are copying to, and then continue with the copy operation.

For example, suppose you try to copy an object from APROD to ATEST, but a copy of the object already exists in the library ATEST. You can delete the old object in the library ATEST, and then copy the new object into the library ATEST. Or you can cancel the copy operation.

Follow this example to copy the object ABACK from the library APROD to the library ATEST:

1. Choose the displays as shown in the sequence diagram in Figure 97 on page 60.

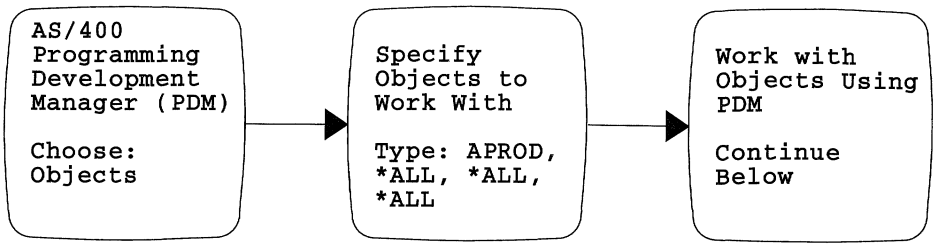


Figure 97. Working with All Objects in APROD

2. On the Work with Objects Using PDM display, type 3 (Copy) next to the object you want to copy. For this example, type 3 (Copy) next to the object ABACK.

```
                          Work with Objects Using PDM

Library . . . . .   APROD_____        Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
3_   ABACK       *PGM        CLP         Program for administration backups
__   ACCTS       *PGM        CLP         Program to maintain accounts
__   AWAYWEGO    *PGM        CLP         5 - 10 minute warning for backups
__   BACKUP      *PGM        CLP         Program to do backups
__   BBACK       *PGM        CLP         Program to do backups
__   BGNIWSSRV   *PGM        CLP
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 98. Work with Objects Using PDM Display—Choosing the Object to Copy

3. Press Enter, and the Copy Objects display appears, as shown in Figure 99.

```
                                Copy Objects

From library  . . . . . :   APROD

Type the library name to receive the copied objects.

  To library  . . . . . .   APROD_____

To rename copied object, type New Name, press Enter.

Object       Type       New Name
ABACK        *PGM       ABACK_____
```

Figure 99. Copy Objects Display—Listing the Object to Copy

The *From Library* prompt has the name of the library that contains the object you want to copy. In this example, the *From Library* is APROD.

4. Type the name of the library you want to copy the object to in the *To library* prompt. For this example, type ATEST.

Change the object name under the column heading *New Name* to ABACK2. In this example, an object called ABACK2 already exists in the library you are copying to, that is, ATEST.

```
                              Copy Objects

From library  . . . . . :   APROD

Type the library name to receive the copied objects.

  To library  . . . . . .   ATEST_____

To rename copied object, type New Name, press Enter.

Object      Type      New Name
ABACK       *PGM      ABACK2____
```

Figure 100. Copy Objects Display—Showing Where to Copy the Object

5. Press Enter, and the Confirm Copy of Object display appears, as shown in Figure 101.

```
                          Confirm Copy of Object

The following object already exists for this copy operation:

  Object which exists  . . . . . :   ABACK2
    Library  . . . . . . . . . . . :     ATEST
  Object type  . . . . . . . . . . :   *PGM

  Object to copy . . . . . . . . . :   ABACK
    Library  . . . . . . . . . . . :     APROD

Type choice, press Enter.
Press F12=Cancel to return and not perform the copy operation.

  Delete existing object . . . . . .   Y   Y=Yes, N=No




F12=Cancel
```

Figure 101. Confirm Copy of Object Display—Object Already Exists in Library ATEST

6. This display indicates that the object you are trying to copy to already exists in the library ATEST. You have three choices:
   - You can cancel the copy request and return to the Work with Objects Using PDM display by pressing F12=Cancel. Any pending options are not processed.
   - You can bypass the copy request by typing N (No) in the *Delete existing object* prompt. The next pending option, if there is one, is performed.
   - You can delete the existing object and then perform the copy operation by typing Y (Yes) in the *Delete existing object* prompt.

   For this example, type Y (Yes) next to the *Delete existing object* prompt to delete the existing object and then perform the copy operation.

7. Press Enter, and the Work with Objects Using PDM display reappears when the system has processed your request.

   A message appears at the bottom of the display indicating that object ABACK2 was deleted. The + at the far right of the message indicates that another message is waiting. Move the cursor to the message line and press the Page Down key. A message appears indicating that object ABACK2 was created. Press the Page Down key again, and a further message appears indicating that one object was duplicated.

8. To display the library ATEST to see the object you copied, type ATEST in the *Library* prompt and press Enter.

9. The Work with Objects Using PDM display reappears. The list now contains all the objects in the library ATEST, including the new version of the object ABACK2.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 102. Work with Objects Using PDM Display—after Copying ABACK2

An easy way to make sure the object was copied successfully is to check the time the object was last changed. The next section shows you how to do this.

10. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Displaying the Description of Objects

When working with PDM, you can display information about an object, such as its size, the time and date it was created, and the time and date it was last changed, last saved, and last restored.

The following example shows how to display the description of the object ABACK2 in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

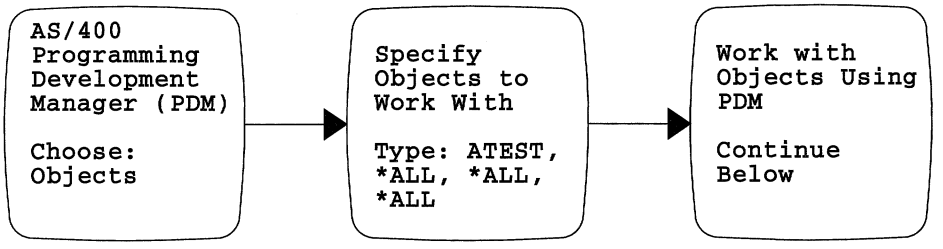


Figure 103. Working with All Objects in ATEST

2. To display the description of an object, type 8 (Display description) next to the object you want to display, in this example, next to the object ABACK2.

```
                          Work with Objects Using PDM

Library . . . . .   ATEST_____        Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
8_   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 104. Work with Objects Using PDM Display—Choosing an Object to Display

3. Press Enter. The prompt display for the DSPOBJD command appears, showing information about the object ABACK2, and including the time the object was last changed. This is not a PDM display.

   The time the object ABACK2 in the library ATEST was last changed is approximately the same time you replaced it with the object ABACK2 you copied from the library APROD in the example in the previous section.

4. When you have viewed the information for the object ABACK2 on the DSPOBJD command display, press Enter to return to the Work with Objects Using PDM display.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing Objects Using DFU

In PDM, you can change objects in a library using the data file utility (DFU). You can change files of type PF-DTA, LF, and DDMF, and DFU programs (*PGM DFU). For more information on using DFU, refer to the *DFU User's Guide and Reference*.

Follow this example to change the object DDATA of type *PGM in the library ATEST using DFU without exiting PDM.

1. Choose the displays as shown in the following sequence diagram:

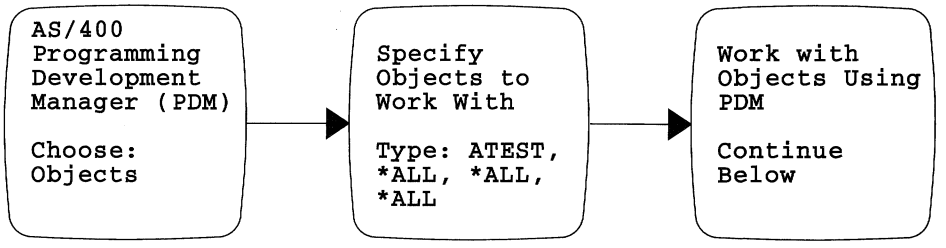


Figure 105. Working with All Objects in ATEST

2. Press F23=More options to show the additional options available for the Work with Objects Using PDM display.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  12=Work with            13=Change text          15=Copy file
  16=Run                  18=Change using DFU     25=Find string ...
```

Figure 106. Work with Objects Using PDM Display—the Additional Options Available

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. On the Work with Objects Using PDM display, page down the list until you reach the object that you want to change using DFU, in this example, the object DDATA.
4. Type 18 (Change using DFU) next to the object you want to change.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST____        Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  12=Work with            13=Change text          15=Copy file
  16=Run                  18=Change using DFU     25=Find string ...

Opt  Object      Type        Attribute   Text
__   DAVID       *PGM        CLP
__   DB          *PGM        CLP         Display subsystem
18   DDATA       *PGM        DFU         DFU Program
__   DISAJOB     *PGM        CLP         Display Active Jobs
__   DL          *PGM        CLP         Display library list
__   DLTIDEA     *PGM        RPG
__   DM          *PGM        CLP         Display messages
__   DONE        *PGM        CLP         Backups are done message
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 107. Work with Objects Using PDM Display—Choosing the Object to Change Using DFU

5. Press Enter. A DFU display appears on which you can change the object. If you are not sure how to change an object in DFU, press Help for more information on the DFU display.
6. After making your changes, exit from DFU. The Work with Objects Using PDM display reappears.
7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Creating a Program

You can bind one or more *MODULE, *SRVPGRM, and *BNDDIR objects to create one program object (*PGM). You can create the program object in batch or interactively, depending on the value you enter in the *Run in batch* prompt on the Change Defaults display. For more information on this prompt and job modes, see "Changing the Run and Compile Modes" on page 143. When you create a program object from several object types, you must include at least one object of type *MODULE.

Follow this example to create a program from several object types:

1. Choose the displays as shown in the following sequence diagram:

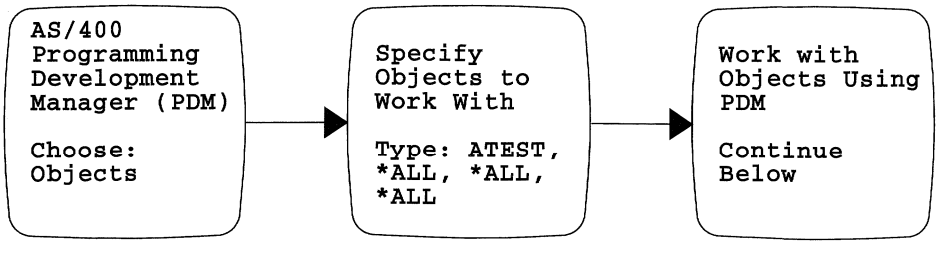


Figure 108. Working with All Objects in ATEST

2. On the Work with Objects Using PDM display, press F23=More options twice. The third set of options available for the Work with Objects Using PDM display appears.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST____        Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  26=Create Program        27=Create service program
```

Figure 109. Work with Objects Using PDM Display—Showing Additional Set of Options

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. On the Work with Objects Using PDM display, page down the list until you see the objects you want to bind. Type 26 (Create Program) next to the objects you want to bind which, in this example, are CMOD, CMOD1, and CMOD2.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST____        Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  26=Create Program        27=Create service program

Opt  Object      Type        Attribute   Text
26   CMOD1       *MODULE     C           Output module from CRTCMOD1
26   CMOD2       *MODULE     C           Output module from CRTCMOD2
26   CMOD        *MODULE     C           Output module from CRTCMOD



                                                                    Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 110. Work with Objects Using PDM Display—Choosing Objects to Bind

4. Press Enter. The objects you selected are bound into a single program object.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

You can create a service program (*SRVPGM) from several objects by specifying 27=Create service program for the objects you want to bind. This option does not create an executable object. You can create a program by binding the service program and other *MODULE, *SRVPGM, or *BNDDIR objects. The steps for creating a service program are the same as those for creating a program. Specify at least one *MODULE object when creating a service program.

Running Objects

PDM allows you to run objects in either batch mode or interactively, depending on the value you enter in the *Run in batch* prompt on the Change Defaults display. For more information on this prompt and job modes, see "Changing the Run and Compile Modes" on page 143.

The following example shows how to run the object DISAJOB in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

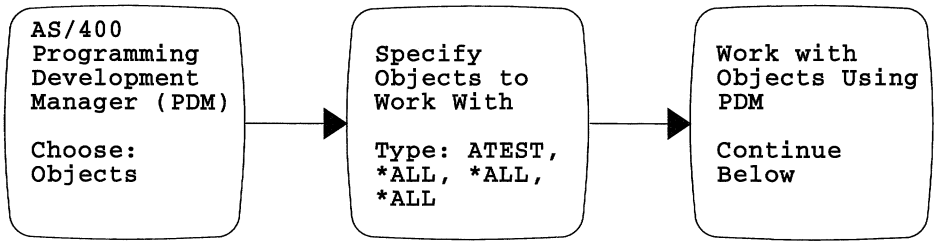


Figure 111. Working with All Objects in ATEST

2. On the Work with Objects Using PDM display, press F23=More options. The second set of options available for the Work with Objects Using PDM display appears.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  12=Work with            13=Change text          15=Copy file
  16=Run                  18=Change using DFU     25=Find string ...
```

Figure 112. Work with Objects Using PDM Display—Showing Additional Set of Options

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. On the Work with Objects Using PDM display, page down the list until you reach the object you want to run. Type 16 (Run) next to the object you want to run which, in this example, is the object DISAJOB.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . _________
                                      Position to type  . . . . . _________

Type options, press Enter.
  12=Work with             13=Change text          15=Copy file
  16=Run                   18=Change using DFU     25=Find string ...

Opt  Object      Type        Attribute   Text
__   DAVID       *PGM        CLP
__   DB          *PGM        CLP         Display subsystem
__   DDATA       *PGM        DFU         DFU Program
16   DISAJOB     *PGM        CLP         Display Active Jobs
__   DL          *PGM        CLP         Display library list
__   DLTIDEA     *PGM        RPG
__   DM          *PGM        CLP         Display messages
__   DONE        *PGM        CLP         Backups are done message
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 113. Work with Objects Using PDM Display—Choosing an Object to Run

4. Press Enter. If you run the object in batch mode, a message indicates that a batch job has been submitted. The message waiting light, if not already on, comes on when the object is finished running. You can type DSPMSG on the command line to see any system messages and then press Enter to return to the Work with Objects Using PDM display.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Note: Parameters entered on the command line for use with the 16=Run option are changed to uppercase.

Displaying Objects

You can display detailed information about objects by using the Display option on the Work with Objects Using PDM display. The type of information that appears depends on the object type you are displaying. Follow this example to display information for the object ABACK2 in the library ATEST.

Note: If you choose the Display option for certain objects (for example, objects of type *LIB), the contents of the object are displayed. If you choose to display a display file (*FILE DSPF), the Test display option in SDA is called.

To select and display an object, proceed as follows:

1. Choose the displays as shown in the following sequence diagram:

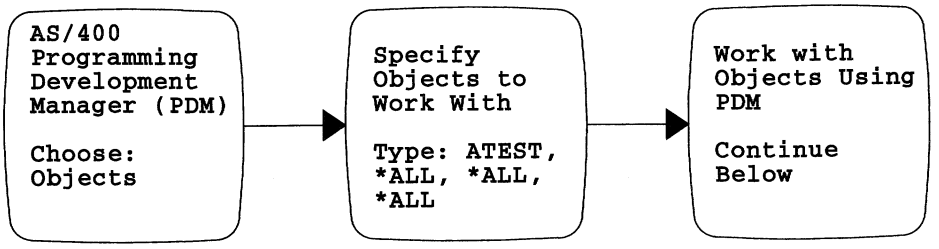


Figure 114. Working with All Objects in ATEST

2. On the Work with Objects Using PDM display, type 5 (Display) next to the object you want to display. This example displays the program ABACK2.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____        Position to . . . . . .  _________
                                      Position to type  . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
5_   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 115. Work with Objects Using PDM Display—Choosing an Object to Display

3. Press Enter. The display that appears depends on the type of the object you choose to display. For this example, because you chose to display an object of type *PGM, the prompt display for the DSPPGM command appears showing information such as the program creation date and time. This is not a PDM display. For a list of the commands called for the different object types, refer to "Command Reference for Objects" on page 173.

   You may have to page through the information on the display to find what you are looking for.

4. When you finish looking through the information for the chosen object, press F3=Exit to return to the Work with Objects Using PDM display.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Working with Members in a Physical File

You can work with members in a physical file using either option 12 (Work with) or option 25 (Find string) on the Work with Objects Using PDM display. For further information on the Find string option, see Chapter 5, "Finding Strings" on page 105.

When you select an object to work with, if the object type is *FILE and the attribute is PF-SRC or PF-DTA, the Work with Members Using PDM display appears allowing you to perform operations on members. If the object type is *LIB, the Work with Objects Using PDM display appears allowing you to perform operations on objects in the library. In general, PDM displays items within an object for you to work with, and only if operations cannot be performed on the constituent parts of the object does it display the object itself for you to work with.

Note: If the Work with option is used on an object with a type other than *FILE and *LIB, a display that does not originate from PDM may appear.

For a list of the objects that are valid for the Work with option, refer to "Commands Called for the Work With Option" on page 185.

PDM also allows you to press F4 and prompt the Work with option. The Specify Members to Work With display appears. You can choose the members with which you want to work.

The system does not process commands entered on the command line when you select the Work with option.

The following example shows how to work with all the members in the CMDSRC physical file in the library ATEST that start with A:

1. Choose the displays as shown in the following sequence diagram:

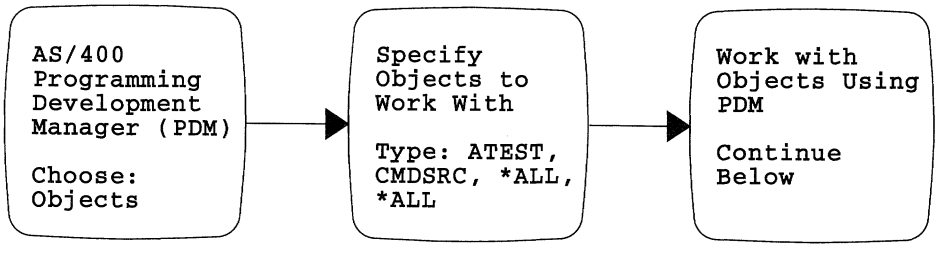


Figure 116. Working with CMDSRC in ATEST

2. Press F23=More options to show the additional options available for the display.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST____        Position to . . . . . .   _________
                                     Position to type  . . . .   _________

Type options, press Enter.
  12=Work with              13=Change text          15=Copy file
  16=Run                    18=Change using DFU     25=Find string ...
```

Figure 117. Work with Objects Using PDM Display—Additional Options Available

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. On the Work with Objects Using PDM display, type 12 (Work with) next to each object you want to work with. This example works with the members in the file CMDSRC.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  12=Work with             13=Change text          15=Copy file
  16=Run                   18=Change using DFU     25=Find string ...

Opt  Object      Type        Attribute   Text
12   CMDSRC      *FILE       PF-SRC      Source for command definition









                                                                       Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 118. Work with Objects Using PDM Display—Choosing Objects to Work With

4. Press F4=Prompt to choose the members you want to work with, or press Enter to work with all the members in the specified file. For this example, press F4. The Specify Members to Work With display appears.

```
                      Specify Members to Work With

Type choices, press Enter.

  File  . . . . . .  CMDSRC____   Name, F4 for list

    Library . . . . . .   ATEST_____ *LIBL, *CURLIB, name

  Member:
    Name  . . . . . .   A*________   *ALL, name, *generic*
    Type  . . . . . .   *ALL_____   *ALL, type, *generic*, *BLANK









F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 119. Specify Members to Work With Display—Prompting the Work With Option

5. Type A* in the *Name* prompt and press Enter. The Work with Members Using PDM display appears showing all the members in the file you chose to work with.

```
                          Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .   ATEST____          Position to . . . . . _________

Type options, press Enter.
  2=Edit        3=Copy       4=Delete      5=Display     6=Print
  7=Rename      8=Display description      9=Save        13=Change text ...

Opt  Member     Type         Text
__   ADDLIB     CMD_______   Command definition source to add a library_______
__   ADMPRT     CMD_______   ____________________________________________

                                                                      Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
This is a subsetted list.
```

Figure 120. Work with Members Using PDM Display—Listing Members in the CMDSRC File

6. You can select any of the options available for this display for the members listed. For more information on working with members in a file, refer to Chapter 4, "Working with Members" on page 77.
7. Press Enter or F12=Cancel to return to the Work with Objects Using PDM display.
8. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Showing a Subset of a List of Objects

When working with objects in PDM, you can show a subset of a list of objects. For example, if you want to list all CLP programs with the characters BACK anywhere in their names in the library ATEST, you can do so using the F17=Subset function key. The following example shows how to create a subset of a list of objects:

1. Choose the displays as shown in the following sequence diagram:

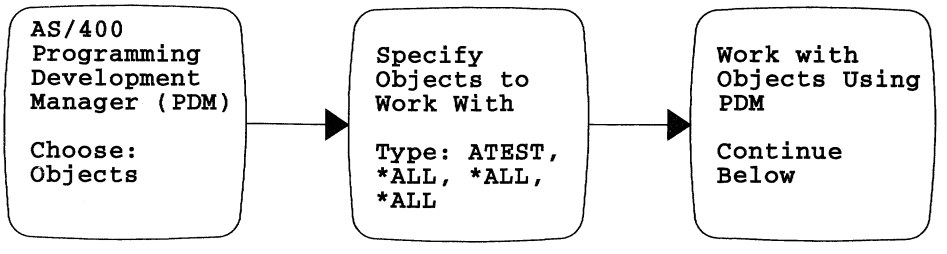


Figure 121. Working with All Objects in ATEST

2. On the Work with Objects Using PDM display, press F24=More keys. The Work with Objects Using PDM display reappears, this time showing the second set of function keys for the display.

```
                                                                More...

Parameters or command
===> ____________________________________________________________________
F11=Display names and types    F12=Cancel              F13=Repeat
F14=Display Size               F23=More options        F24=More keys
```

Figure 122. Work with Objects Using PDM Display—Second Set of Function Keys

3. Press F24=More keys again, and the remaining set of function keys appears.

```
                                                                More...

Parameters or command
===> ____________________________________________________________________
F16=User Options          F17=Subset              F18=Change defaults
F21=Print list            F23=More options        F24=More keys
```

Figure 123. Work with Objects Using PDM Display—Third Set of Function Keys

Note: You do not have to display the additional function keys and options when you use them. Steps 2 and 3 are not required, but you should use them until you are familiar with PDM.

4. On the Work with Objects Using PDM display, press F17=Subset to create a subset of the list. The Subset Object List display appears.
5. In the *Object* or *Object attribute* prompts, type the generic name to show a subset of the list. The generic name can be in one of the formats listed on page 19.

   For this example, type *BACK* in the *Object* prompt, *PGM in the *Object type* prompt, and CLP in the *Object attribute* prompt.

   You can also specify a range of object sizes in the *From* and *To* prompts to list objects within the range. For this example, use the default values.

```
                          Subset Object List

Type choices, press Enter.

  Object . . . . . .  *BACK*____   *ALL, name, *generic*

  Object type  . . . . . .  *PGM_____   *ALL, *type

  Object attribute . . . . . .  CLP_____   *ALL, attribute, *generic*,
                                           *BLANK

  Object size
    From . . . . . .  0_________   0 - 9999999999
    To . . . . . .  9999999999   0 - 9999999999


  Text . . . . . .  *ALL_____________________________________
_____
```

Figure 124. Subset Object List Display—Specifying the Objects to Display in the List

6. Press Enter. The Work with Objects Using PDM display appears with a list of all the objects that include the characters BACK anywhere in their name, that have a type of *PGM, and that have the attribute CLP.

```
                          Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Program to do backups




                                                                      Bottom
Parameters or command
===> ____________________________________________________________________
F16=User options          F17=Subset              F18=Change defaults
F21=Print list            F23=More options        F24=More keys
This is a subsetted list.
```

Figure 125. Work with Objects Using PDM Display—Showing the Subset of the List

Note: When working with a subset of a list, if you change the *Library* prompt on the Work with Objects Using PDM display to view the objects in a different library, the new list that appears will also be subsetted.

Refreshing the List after Creating a Subset List

If you create a subset of a list of objects and then decide you no longer want to work with this subset, you can return the list to its original format. To display all the objects in the chosen library on the list again, return to the Subset Object List display and use F5=Refresh.

Note: Pressing F5=Refresh on the Work with Objects Using PDM display does not cancel the subset of the list. It only refreshes the subsetted list and does not return to the original format.

The following example shows how to return the subsetted list that you created in the last section to its original format:

1. On the Work with Objects Using PDM display showing the subset of a list of objects you created in the previous example, press F17=Subset. The Subset Object List display appears allowing you to specify different subset values.
2. Press F5=Refresh. The prompts are refreshed to *ALL.

```
                          Subset Object List

Type choices, press Enter.

  Object . . . . . .  *ALL_____   *ALL, name, *generic*

  Object type  . . . . . .  *ALL_____   *ALL, *type

  Object attribute . . . . . .  *ALL_____   *ALL, attribute, *generic*,
                                            *BLANK

  Object size
    From . . . . . .  0_________   0 - 9999999999
    To . . . . . .  9999999999   0 - 9999999999

  Text . . . . . .  *ALL_____________________________________
_____



F3=Exit        F5=Refresh        F12=Cancel
```

Figure 126. Subset Object List Display—Showing How to Refresh the List

3. Press Enter. The Work with Objects Using PDM display appears with a list of all the objects in the library ATEST.

```
                        Work with Objects Using PDM

Library . . . . .  ATEST_____       Position to . . . . . .  _________
                                    Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type       Attribute   Text
__   ABACK2      *PGM       CLP         Program for administration backups
__   BBACK2      *PGM       CLP         Program to do backups
__   BGNPGM      *PGM       CLP         Begin program
__   CALPER      *PGM       CLP         Display messages from personal log
__   CALSYS      *PGM       CLP         Display messages from system msg log
__   CDSNFMT     *PGM       CLP
__   CHGLIBL     *PGM       CLP         Program to change a library
__   CHGMSGS     *PGM       CLP         Program to maintain messages
                                                                    More...
Parameters or command
===>_____________________________________________________________________
F16=User options          F17=Subset              F18=Change defaults
F21=Print list            F23=More options        F24=More keys
```

Figure 127. Work with Objects Using PDM Display—after Refreshing the List

4. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.
5. Press F3=Exit to leave PDM.

Chapter 4. Working with Members

You can use PDM to work with all the members in physical files—either data physical files (*FILE PF-DTA) or source physical files (*FILE PF-SRC). The options and function keys on the Work with Members Using PDM display allow you to perform many operations on members, including changing members using DFU, SDA, and SEU.

Data Physical Files and Source Physical Files

The Work with Members Using PDM display allows you to work with both data physical files and source physical files. Different options are available, depending on the type of physical file you are working with.

Data Physical Files

A data physical file contains information that cannot be compiled; for example, a file containing input data for a program. The only option available when you work with a data physical file that is not available when working with a source physical file is the Change using DFU option.

Source Physical Files

A source physical file contains source code, such as a COBOL source program. The options you can use when you work with a source physical file that are not available when working with a data physical file are the Edit, Print, Compile, Change using SDA, Change using RLU, and Run procedure.

Specifying Members to Work With

You can choose to work with a specific member, all the members in a file, or a subset of the members in a file. The available files can be listed by pressing F4 when the cursor is positioned on the *File* prompt.

Follow this example to work with the members in the CMDSRC file.

1. Choose the displays as shown in the following sequence diagram.

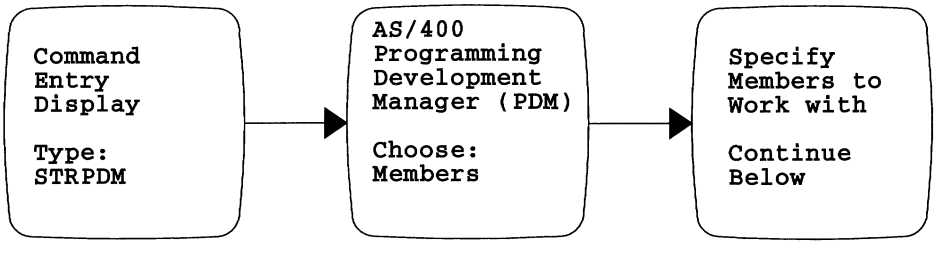


Figure 128. Getting to the Specify Members to Work With Display

2. The Specify Members to Work With display appears, as shown in Figure 129 on page 78.

```
                    Specify Members to Work With

Type choices, press Enter.

  File . . . . . .   CMD*_____   Name, F4 for list

    Library . . . . . .    ATEST____ *LIBL, *CURLIB, name

  Member:
    Name . . . . . .   *ALL_____   *ALL, name, *generic*
    Type . . . . . .   *ALL_____   *ALL, type, *generic*, *BLANK




F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 129. Specify Member to Work With Display—Choosing Files

You can type CMDSRC directly in the *File* prompt, or you can get a list of the files from which you can make a selection in library ATEST by pressing F4 when the cursor is positioned on the *File* prompt. To get a list of all the files that you can select from, either leave the *file* prompt blank, type a file name, or type *ALL before pressing F4. Type a generic name in the *File* prompt before pressing F4 to get a subsetted list. For a list of valid generic names, see page 19.

If the *Library* prompt is left blank, it defaults to the previous library name used. For this example, you want a list of all the files starting with CMD in library ATEST. Type CMD* in the *File* prompt, and press F4. The Select File using PDM display appears, as shown in Figure 130.

```
                          Select File using PDM

Library . . . . :   ATEST

Position to . . . . . .  _________   Starting character(s)
Subset by name  . . . .  *CMD_____   *ALL, name, *generic*

Type option, press Enter.
  1=Select

Opt     File          Attribute     Text
 _      CMDSRC        PF-SRC        Source for command definition
 _      CMDTYP        PF-SRC




                                                                  Bottom
F5=Refresh   F12=Cancel
This is a subsetted list.
```

Figure 130. Select File Using PDM Display—Selecting a File

3. Type a 1 next to the file that you want to select and press Enter. The Specify Members to Work With display reappears, and the *File* prompt is filled in with your choice.
4. Press Enter to go to the Work with Members Using PDM display.
5. Press F3=Exit to return to the Programming Development Manager (PDM) menu.

Copying Members

When working with members in a file, use option 3 (Copy) on the Work with Members Using PDM display to copy a member to the same file or to a different file. You can copy members in groups or individually. If you copy a group, all members in the group are copied to the same file and library.

Follow this example to copy the members ADDLIB and ADMPRT to other members in the same file:

1. Choose the displays as shown in the following sequence diagram.

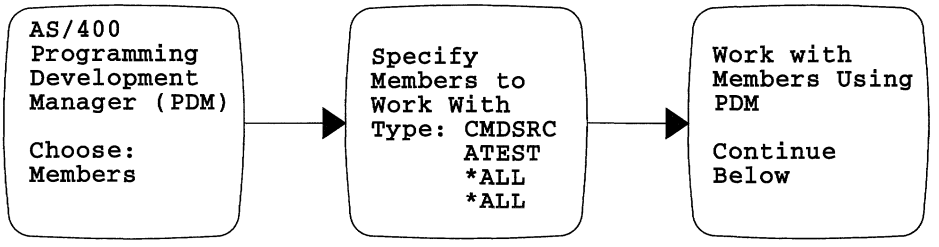


Figure 131. Working with All Members in File CMDSRC

2. On the Work with Members Using PDM display, type 3 (Copy) next to each member you want to copy, in this example, next to the members ADDLIB and ADMPRT.

```
                          Work with Members Using PDM

File  . . . . . .   CMDSRC____
  Library . . . .     ATEST_____          Position to  . . . . .  _________

Type options, press Enter.
  2=Edit         3=Copy       4=Delete       5=Display      6=Print
  7=Rename       8=Display description       9=Save         13=Change text ...

Opt  Member      Type        Text
3_   ADDLIB      CMD_______  Command definition source to add a library_______
3_   ADMPRT      CMD_______  ____________________________________________________
__   CHGSYSL     CMD_______  Command definition source to change a library____
__   CP          CMD_______  Command definition source for CP command________
__   CRTHELP     CMD_______  Create help text_____________________________________
__   CRTO        CMD_______  Command definition source to create an object____
__   CRTP        CMD_______  Command definition source to create a file_______
__   DLCD        CMD_______  Delete command definition_____________________________
                                                                        More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 132. Work with Members Using PDM Display—Choosing Members to Copy

3. Press Enter, and the Copy Members display appears, as shown in Figure 133.

```
                              Copy Members

From file . . . . . :   CMDSRC
  From library  . . . :     ATEST

Type the file name and library name to receive the copied members.

  To file . . . . . .   CMD*_____   Name, F4 for list
    To library  . . . .    ATEST____

To rename copied member, type New Name, press Enter.

Member         New Name
ADDLIB         ADDLIB___
ADMPRT         ADMPRT___




                                                                    Bottom
F3=Exit            F4=Prompt     F5=Refresh     F12=Cancel
F19=Submit to batch
```

Figure 133. Copy Members Display—Listing Members to Copy

Notice that this display lists each of the members you chose to copy on the previous display. You may have to page through the list to see all the members you chose. The *To file* and *To library* prompts initially have the same values as the *From file* and *From library* prompts, and the member names under the column heading *New Name* are initially the same as those under the *Member* column heading. This is to save retyping if you only want to change a few characters.

4. To view a list of the source or data physical files in the specified library that you can copy to, place your cursor on the *To file* prompt and press F4. The Select File Using PDM display appears. To view a subsetted list, type a generic name on the prompt before pressing F4. For a list of valid generic names, see page 19.

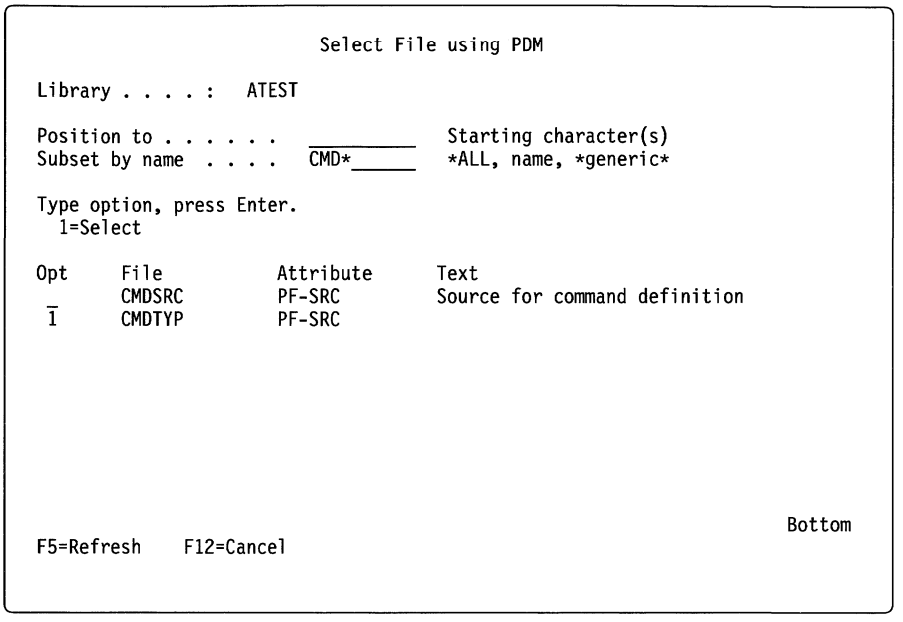


Figure 134. Select File Using PDM Display—Selecting a File

This display provides you with a list of all the valid source physical files for which you have authority to copy the member. While you are copying from a source physical file, only source physical files are shown on the list. Type 1 (Select) next to the file of your choice and press Enter. The Copy Members display reappears, and the *To file* prompt is filled in with your choice.

5. If you were copying the members to the same file and library, you could leave the *To file* and *To library* prompts as they are. For this example, you copy to the file CMDTYP in ATEST.
6. Type the names to which you want to copy the members under the *New Name* column beside each member. For this example, you are copying ADDLIB to ADDL and ADMPRT to ADMP.

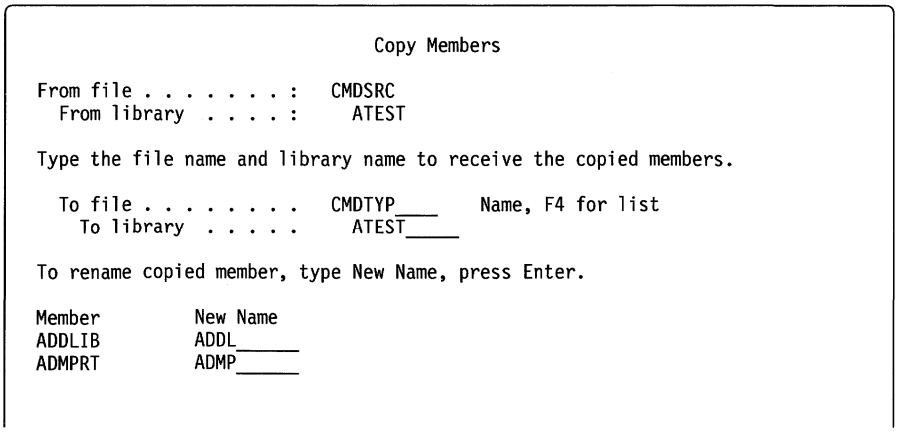


Figure 135. Copy Members Display—Showing Where to Copy the Members

While you are copying the members to a different file, you do not have to use a new name unless the new file already contains a member of that name. If the member already exists, the Confirm Copy of Member display appears. For this example, the members do not already exist.

7. Press Enter or, to copy the members in batch mode, press F19=Submit to batch. For an interactive job, a brief message flashes on your display as each member is copied. When all the members are copied, the Work with Members Using PDM display reappears, as shown in Figure 136.

```
                          Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .  ATEST____          Position to . . . . . _________

Type options, press Enter.
  2=Edit        3=Copy       4=Delete      5=Display      6=Print
  7=Rename      8=Display description      9=Save         13=Change text ...

Opt  Member     Type        Text
__   ADDLIB     CMD_______  Command definition source to add a library______
__   ADMPRT     CMD_______  ____________________________________________
__   CHGSYSL    CMD_______  Command definition source to change a library___
__   CP         CMD_______  Command definition source for CP command_______
__   CRTHELP    CMD_______  Create help text_____________________________
__   CRTO       CMD_______  Command definition source to create an object___
__   CRTP       CMD_______  Command definition source to create a file_____
__   DLCD       CMD_______  Delete command definition____________________
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt            F5=Refresh           F6=Create
F9=Retrieve      F10=Command entry    F23=More options     F24=More keys
Member ADMP added to file CMDTYP in ATEST.                              +
```

Figure 136. Work with Members Using PDM Display—after the Copy Operation

A message appears at the bottom of the display indicating that the first member you choose to copy is added to the CMDTYP file. The + at the far right of the message indicates another message is waiting. Place the cursor on the message line and press the Page down key. The next message displayed indicates that the second member you chose to copy is added to the CMDTYP file.

Note: If you chose to copy the members to a file, library, or member that do not match the selection values you entered on the Specify Members to Work With display (that is, if you copy the members to a file other than CMDSRC in a library other than ATEST), the new members do not appear on this list.

8. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing the Text of Members

If you have the authority, you can change the type and text of a member on the Work with Members Using PDM display without having to go to another display.

Note: Whether or not you can change the type and text of members is determined by the value entered in the *Change type and text* prompt on the Change Defaults display. For further information, see "Restricting the Ability to Change Member Type and Text" on page 150.

If you change the type of a member, be sure the member contains the correct source for the type; for example, a member of type CMD should contain CMD source code.

Follow this example to change the text of the ADDL member in the CMDSRC file in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

Figure 137. Working with All Members in File CMDSRC

```
                          Work with Members Using PDM

File  . . . . . .   CMDSRC____
  Library . . . .     ATEST_____          Position to  . . . . .   _________

Type options, press Enter.
  2=Edit         3=Copy       4=Delete       5=Display      6=Print
  7=Rename       8=Display description       9=Save         13=Change text ...

Opt  Member      Type         Text
__   ADDL        CMD_______   Command definition source to add a library_______
__   ADDLIB      CMD_______   Command definition source to add a library_______
__   ADMP        CMD_______   ____________________________________________________
__   ADMPRT      CMD_______   ____________________________________________________
__   CHGSYSL     CMD_______   Command definition source to change a library____
__   CP          CMD_______   Command definition source for CP command_________
__   CRTHELP     CMD_______   Create help text_____________________________________
__   CRTO        CMD_______   Command definition source to create an object____
                                                                          More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt             F5=Refresh            F6=Create
F9=Retrieve      F10=Command entry     F23=More options      F24=More keys
```

Figure 138. Work with Members Using PDM Display—before Changing Text

2. On the Work with Members Using PDM display, in the *Text* column of the appropriate member, type the new text. In this example, change the text of the member ADDL to read:

   ```
   Command definition source to add library APROD
   ```

```
                          Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .   ATEST_____          Position to . . . . . _________

Type options, press Enter.
  2=Edit        3=Copy       4=Delete      5=Display      6=Print
  7=Rename      8=Display description      9=Save         13=Change text ...

Opt  Member      Type        Text
__   ADDL        CMD_______  Command definition source to add library APROD___
__   ADDLIB      CMD_______  Command definition source to add a library_______
__   ADMP        CMD_______  ____________________________________________________
__   ADMPRT      CMD_______  ____________________________________________________
__   CHGSYSL     CMD_______  Command definition source to change a library____
__   CP          CMD_______  Command definition source for CP command________
__   CRTHELP     CMD_______  Create help text_____________________________________
__   CRTO        CMD_______  Command definition source to create an object____
                                                                        More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt             F5=Refresh            F6=Create
F9=Retrieve      F10=Command entry     F23=More options      F24=More keys
```

Figure 139. Work with Members Using PDM Display—after Changing the Text

3. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

   Note: You can also change the text, expiration date, and share open data path value for a member by using Option 13 (Change Text).

Editing Members

You can edit a member in a file only if the file is a source physical file. When you select option 2 (Edit), PDM calls the source entry utility (SEU) and an SEU display appears, allowing you to edit the member. For more information on editing members in a file, refer to the *SEU User's Guide and Reference*.

Follow this example to edit the ADDL member in the CMDSRC file in the ATEST library using SEU:

1. Choose the displays as shown in the following sequence diagram:

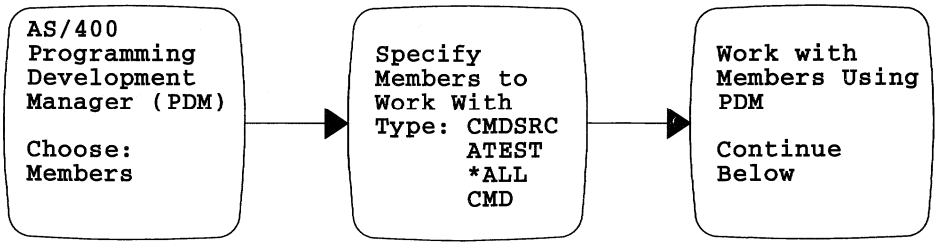


Figure 140. Working with All Members of Type CMD in CMDSRC

2. On the Work with Members Using PDM display, type 2 (Edit) next to the member you want to edit, in this example, next to the ADDL member.

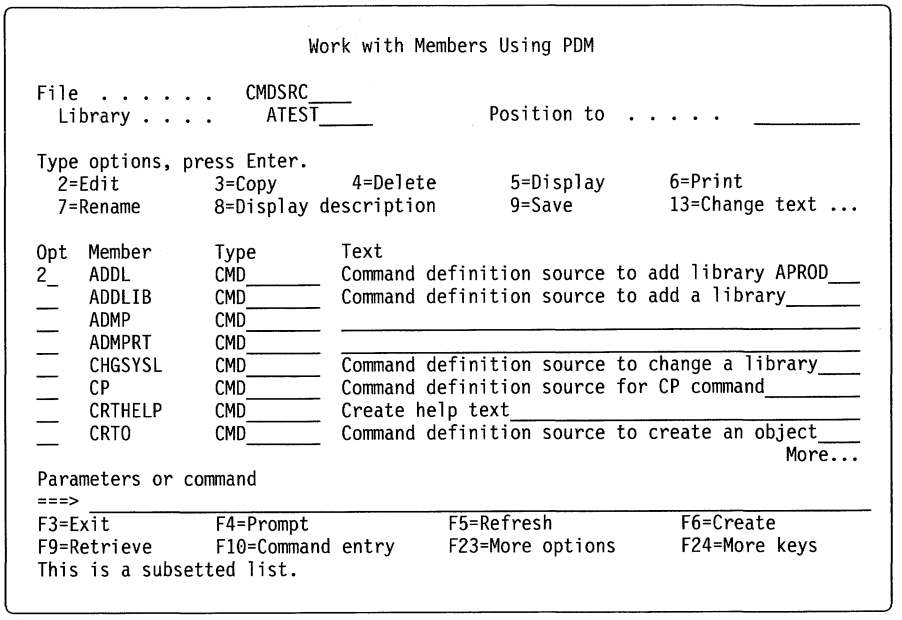


Figure 141. Work with Members Using PDM Display—Choosing Member to Edit

3. Press Enter. An SEU display appears, allowing you to make changes to the member. If you are not sure how to use SEU, press Help for more information.
4. When you finish editing the member, exit from SEU. The Work with Members Using PDM display reappears. A message at the bottom of the display indicates that the member has been updated.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Compiling Members

You can compile a member only if the member is in a source physical file. When you compile a member, PDM calls the appropriate create command for the member type. For more information on the compile commands called for different member types, see "Command Reference for Members" on page 189.

You can compile a member in batch mode or interactively. The *Compile in batch* prompt on the Change Defaults display allows you to choose your preferred method of compiling. For more information on changing the compilation mode, see "Changing the Run and Compile Modes" on page 143.

For example, when you submit RPG38 and RPG to batch, you are submitting with different versions of the Submit Job command. The resulting jobs therefore have different job run characteristics. This may result in compilations that fail in batch but are successful when they are run interactively.

To avoid this problem, change the initial library list and output queue parameter values for the job description value specified on the Change Defaults display to reflect the values of your interactive session.

Follow this example to compile the ADDL member in the CMDSRC file in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

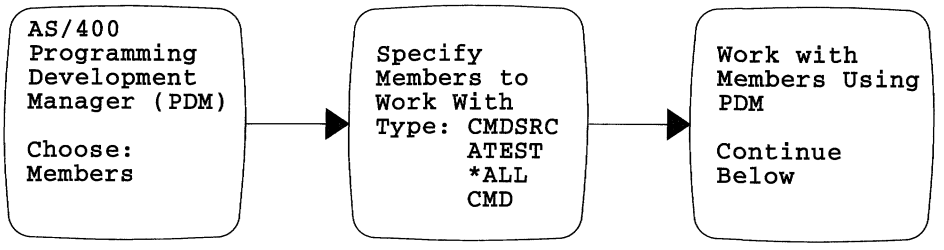


Figure 142. Working with All Members of Type CMD in CMDSRC

2. On the Work with Members Using PDM display, press F23=More options to see the additional options available for the display.

```
                          Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .   ATEST____          Position to . . . . . _________

Type options, press Enter.
  14=Compile             15=Create module       16=Run procedure
  17=Change using SDA    19=Change using RLU    25=Find string ...
```

Figure 143. Work with Members Using PDM Display—Showing Additional Options Available

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Type option 14 (Compile) next to the member you want to compile, in this example, the ADDL member.

```
                          Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .   ATEST____          Position to . . . . . _________

Type options, press Enter.
  14=Compile             15=Create module       16=Run procedure
  17=Change using SDA    19=Change using RLU    25=Find string ...

Opt  Member      Type        Text
14   ADDL        CMD_______  Command definition source to add library APROD___
__   ADDLIB      CMD_______  Command definition source to add a library_______
__   ADMP        CMD_______  ____________________________________________
__   ADMPRT      CMD_______  ____________________________________________
__   CHGSYSL     CMD_______  Command definition source to change a library____
__   CP          CMD_______  Command definition source for CP command_______
__   CRTHELP     CMD_______  Create help text_____________________________
__   CRTO        CMD_______  Command definition source to create an object___
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt            F5=Refresh           F6=Create
F9=Retrieve      F10=Command entry    F23=More options     F24=More keys
This is a subsetted list.
```

Figure 144. Work with Members Using PDM Display—Choosing the Member to Compile

4. Press Enter. PDM calls the appropriate create (CRT) command to compile the member. For this example, the CRTCMD command is called.

   Note: The member type determines the CRT command that is called; therefore, the source code contained in the member must correspond to the member type for the compilation to take place. In this example, the ADDL member must contain CMD source because the member type is CMD.

5. If the member is compiled in batch mode, the message waiting light comes on when the compilation is complete. You can check your messages to see if the compilation was successful by typing DSPMSG on the command line.

6. The object created as a result of compiling is put in the library specified in the *Object library* prompt on the Change Defaults display. If an object with the same name as the object to be created as a result of the compilation already exists in the library, you can specify that the existing object should be deleted before compiling, in one of the following ways:

   - On the Change Defaults display, type Y (Yes) for the *Replace object* prompt to specify that if an object with the same name as the object to be created as a result of the compile already exists, the existing object is to be replaced. If the command called for the compilation has a REPLACE parameter, its value defaults to the value that is in the *Replace object* prompt on the Change Defaults display.

     For a description of the REPLACE parameter, see the paragraph following Figure 145. For additional information on the *Replace object* prompt, refer to "Changing Prompts That Affect Compiling Programs" on page 141.

   - If the object already exists, and you did not type Y (Yes) for the *Replace object* prompt on the Change Defaults display, the Confirm Compile of Member display appears after PDM determines that the object already exists.

```
                          Confirm Compile of Member

The following object already exists for the compile operation:

  Object which exists  . . . . . :   ADDL
    Library  . . . . . . . . . . :     SRCLIB
  Object type  . . . . . . . . . :   *PGM

  Member to compile  . . . . . . :   ADDL
  File . . . . . . . . . . . . . :   CMDSRC
    Library  . . . . . . . . . . :     ATEST

Type choice, press Enter.
Press F12=Cancel to return and not perform the compile operation.

  Delete existing object . . . . . .   Y   Y=Yes, N=No




F12=Cancel
```

Figure 145. Confirm Compile of Member Display

Type Y (Yes) for the *Delete existing object* prompt on this display and press Enter. One of the following then occurs:

- If the command called for the compile operation has a REPLACE parameter, it is changed to *YES. The compile operation continues and, if it is completed successfully, the existing object is replaced.
- If the command called for the compile operation does not have a REPLACE parameter, the existing object is deleted before the compile operation takes place. This means the existing object is deleted even if the compile operation is unsuccessful.

Type N (No) for the *Delete existing object* prompt if you do not want to delete the existing object, and the compile operation is canceled for the member.

- Press F4=Prompt, and the prompt display for the command called for the compilation appears. As there is no REPLACE parameter in this example, you must delete an object if it exists.

Note: If the name of the object to be created by the compilation is a symbolic name, for example, *PROC or *CTLSPEC, PDM does not check to see whether the object already exists before compiling.

7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Creating Modules

You can create a module for an Integrated Language Environment (ILE) source type using the Work with Members Using PDM display. When you create a module, PDM calls the appropriate create command for the ILE member type. The resulting modules can be bound into a program object using the Work with Objects Using PDM display and the 26=Create program option. For more information on creating a program from one or more modules, see "Creating a Program" on page 65. For more information on the commands called for ILE member types, see "Command Reference for Members" on page 189.

You can create a module in batch mode or interactively. Use the *Compile in batch* prompt on the Change Defaults display to select the method. For more information on changing the compilation mode, see "Changing the Run and Compile Modes" on page 143.

The Create module option works the same as 14=Compile and uses the same options, but creates a *MODULE object type. To create a module, follow the steps in "Compiling Members" on page 85 using the 15=Create module option for any valid ILE source type. This option does not work with any other source types.

Running Source Member Procedures

You can run a source member procedure from the Work with Members Using PDM display for members of type REXX, OCL36, BASP, and BASP38. You can do this interactively or in batch, depending on what you specify on the Change Defaults display.

Follow this example to run the SRCMBR procedure in the CMDSRC file in the ATEST library.

1. Choose the displays as shown in the following sequence diagram:

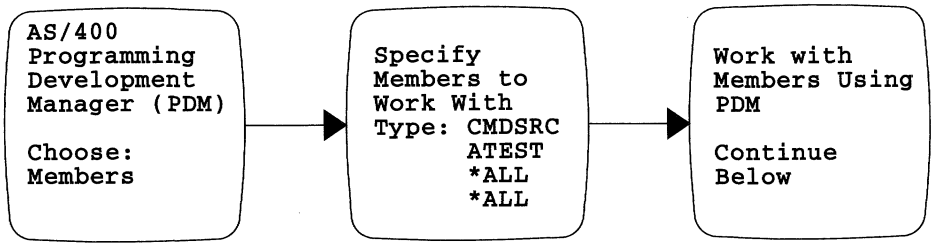


Figure 146. Working with All Members in CMDSRC

2. On the Work with Members Using PDM display, press F23=More options to see the additional options available for the display. Reposition the list to the member that you want to work with by filling in the *Position to* prompt with SRCMBR.

```
                        Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .   ATEST_____          Position to . . . . .  SRCMBR____

Type options, press Enter.
  14=Compile             15=Create module       16=Run procedure
  17=Change using SDA    19=Change using RLU    25=Find string ...
```

Figure 147. Work with Members Using PDM Display—Showing Additional Options Available

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Type option 16 (Run procedure) next to the source member procedure that you want to run.

   Note: The member must be of type REXX, OCL36, BASP, or BASP38. Members with type OCL36 can only be run in the source file QS36PRC.

```
                          Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .   ATEST_____          Position to . . . . . _________

Type options, press Enter.
  14=Compile             15=Create module       16=Run procedure
  17=Change using SDA    19=Change using RLU    25=Find string ...

Opt  Member      Type         Text
16   SRCMBR      REXX_____

                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt            F5=Refresh           F6=Create
F9=Retrieve      F10=Command entry    F23=More options     F24=More keys
This is a subsetted list.
```

Figure 148. Work with Members Using PDM Display—Choosing the Procedure to Run

4. Press Enter to run the procedure.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Deleting Members

Using PDM, you can delete members you no longer need, either in groups or individually. PDM has a confirmation display on which you can verify that you have chosen the correct members to delete.

Follow this example to delete the ADMP member in the CMDSRC file in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

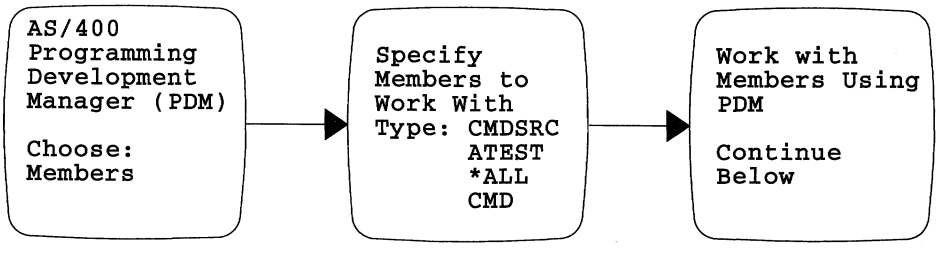


Figure 149. Working with All Members of Type CMD in CMDSRC

2. On the Work with Members Using PDM display, type option 4 (Delete) next to each member you want to delete. For this example, type 4 (Delete) beside the ADMP member.

```
                        Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .   ATEST_____          Position to . . . . . _________

Type options, press Enter.
  2=Edit        3=Copy       4=Delete       5=Display      6=Print
  7=Rename      8=Display description       9=Save         13=Change text ...

Opt  Member      Type        Text
__   ADDL        CMD_______  Command definition source to add library APROD___
__   ADDLIB      CMD_______  Command definition source to add a library_______
4_   ADMP        CMD_______  ____________________________________________
__   ADMPRT      CMD_______  ____________________________________________
__   CHGSYSL     CMD_______  Command definition source to change a library____
__   CP          CMD_______  Command definition source for CP command_______
__   CRTHELP     CMD_______  Create help text_____________________________
__   CRTO        CMD_______  Command definition source to create an object___
                                                                       More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt            F5=Refresh           F6=Create
F9=Retrieve      F10=Command entry    F23=More options     F24=More keys
This is a subsetted list.
```

Figure 150. Work with Members Using PDM Display—Choosing Members to Delete

3. Press Enter, and the Confirm Delete of Members display appears, as shown in Figure 151.

```
                        Confirm Delete of Members

File . . . . . :   CMDSRC
  Library . . . . :    ATEST

Press Enter to confirm your choices for Delete.
Press F12=Cancel to return to change your choices.

Member      Type        Text
ADMP        CMD

                                                                       Bottom
F12=Cancel          F19=Submit to batch
```

Figure 151. Confirm Delete of Members Display—Listing Members to Delete

Notice that this display lists each member you chose to delete on the previous display. You may have to page through the list to see all the members you chose.

4. Make sure you want to delete all the members listed on the Confirm Delete of Members display. If you decide you do not want to delete all of the members listed, press F12=Cancel to return to the previous display and select new members. To continue deleting the members listed, press Enter or, to delete the members in batch mode, press F19=Submit to batch.

Note: If you choose a large number of members to delete, there may be more than one page of members listed on the Confirm Delete of Members display. When you press Enter or F19=Submit to batch, all the members on all pages of the Confirm Delete of Members display are deleted, not just those on the page currently displayed.

The Work with Members Using PDM display appears after the system processes your requests.

```
                          Work with Members Using PDM

File . . . . . CMDSRC____
  Library . . . .  ATEST____          Position to . . . . . _________

Type options, press Enter.
  2=Edit         3=Copy       4=Delete      5=Display      6=Print
  7=Rename       8=Display description      9=Save         13=Change text ...

Opt  Member     Type        Text
__   ADDL       CMD_______  Command definition source to add library APROD___
__   ADDLIB     CMD_______  Command definition source to add a library_______
__   ADMPRT     CMD_______  ____________________________________________________
__   CHGSYSL    CMD_______  Command definition source to change a library____
__   CP         CMD_______  Command definition source for CP command_________
__   CRTHELP    CMD_______  Create help text_____________________________________
__   CRTO       CMD_______  Command definition source to create an object____
__   CRTP       CMD_______  Command definition source to create a file_______
                                                                        More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt            F5=Refresh           F6=Create
F9=Retrieve      F10=Command entry    F23=More options     F24=More keys
Member ADMP removed from file CMDSRC in ATEST.
```

Figure 152. Work with Members Using PDM Display—after the Delete Operation

The member you chose to delete, in this example ADMP, is no longer included in the list. A message at the bottom of the display indicates that the member has been removed.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Displaying the Description of Members

When working with PDM, you can display descriptive information relating to a member, such as the time and date the member was created, last changed, last saved, and last restored, along with the number of records in the member and the number of records deleted from the member.

Follow this example to display information for the CHGSYSL member in the CMDSRC file in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

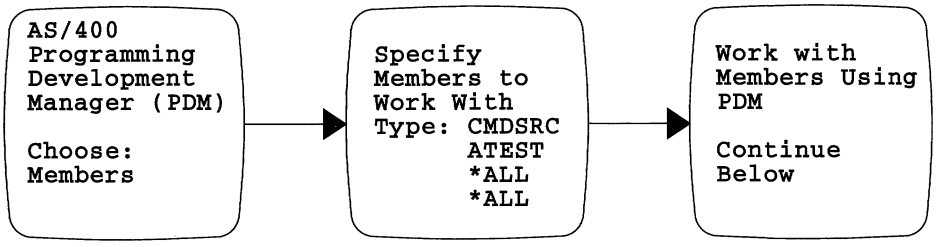


Figure 153. Working with All Members in CMDSRC

2. Type option 8 (Display description) next to the member for which you want to display descriptive information. For this example, type 8 next to the CHGSYSL member.

```
                          Work with Members Using PDM

File  . . . . . .   CMDSRC____
  Library . . . .     ATEST_____          Position to  . . . . .   _________

Type options, press Enter.
  2=Edit         3=Copy       4=Delete       5=Display      6=Print
  7=Rename       8=Display description       9=Save         13=Change text ...

Opt  Member      Type         Text
__   ADDL        CMD_______  Command definition source to add library APROD___
__   ADDLIB      CMD_______  Command definition source to add a library_______
__   ADMPRT      CMD_______  ____________________________________________________
8_   CHGSYSL     CMD_______  Command definition source to change a library____
__   CP          CMD_______  Command definition source for CP command_________
__   CRTHELP     CMD_______  Create help text_____________________________________
__   CRTO        CMD_______  Command definition source to create an object____
__   CRTP        CMD_______  Command definition source to create a file_______
                                                                        More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt             F5=Refresh            F6=Create
F9=Retrieve      F10=Command entry     F23=More options      F24=More keys
```

Figure 154. Work with Members Using PDM Display—Choosing the Member to Display

3. Press Enter, and the Display Member Description display appears, as shown in Figure 155 on page 94.

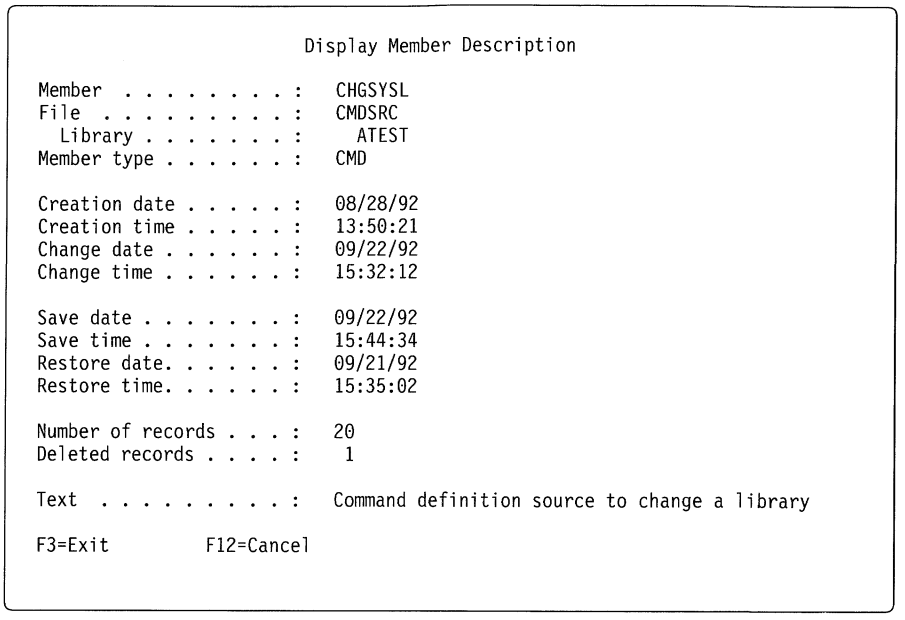


Figure 155. Display Member Description Display

4. This display contains information about the member, such as the time and date the member was created, last changed, last saved, and restored.

   For a source physical file member, the Change date is the date of the most recent change to the contents of the member. For a data physical file member, the Change date refers to the last date that any part of the member was changed, even if it was only a rename or a text change. To see an explanation for each prompt use Help.

5. When you finish viewing the descriptive information for the member, press F12=Cancel to return to the Work with Members Using PDM display, or press Enter to continue processing options if you chose more than one on the Work with Members Using PDM display.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing Members Using Screen Design Aid

Option 17 (Change using SDA) on the Work with Members Using PDM display allows you to change members using SDA if you are working with members in a source physical file.

Note: If you want to create a member using SDA, you can do so using either the CS (create a display using SDA), or the CM (create a menu using SDA) sample user-defined options shipped with PDM. For further information on the sample user-defined options, see "Sample User-Defined Options" on page 119.

The Change using SDA option allows you to work with members in your file that are the source code for displays (members of type DSPF, DSPF36, or DSPF38) and menus (members of type MNUDDS, MNUCMD, MNU36, or MNU). If the file type ends in 36, SDA is called in the System/36 environment. If the file type ends in 38, SDA is called in the System/38 environment.

If you use this option with a member of type MNU, SDA converts it to a member of type MNUDDS or MNUCMD.

Follow this example to change the ACCSCR member in the DDSSRC file in the library ATEST using SDA:

1. Choose the displays as shown in the following sequence diagram:

Figure 156. Working with All Members of type DSPF in DDSSRC

2. On the Work with Members Using PDM display, press F23=More options to see the remaining options available for the display.

```
                          Work with Members Using PDM

File . . . . . DDSSRC____          Position to . . . . . _________
  Library . . . .   ATEST____

Type options, press Enter.
  14=Compile             15=Create module       16=Run procedure
  17=Change using SDA    19=Change using RLU    25=Find string ...
```

Figure 157. Work with Members Using PDM Display—Showing Additional Options

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Type option 17 (Change using SDA) next to the member you want to work with, in this example, next to the ACCSCR member. Make sure the member contains the source code for a display or menu.

```
                        Work with Members Using PDM

File . . . . . DDSSRC____
  Library . . . .   ATEST_____          Position to . . . . . _________

Type options, press Enter.
  14=Compile             15=Create module       16=Run procedure
  17=Change using SDA    19=Change using RLU    25=Find string ...

Opt  Member      Type         Text
17   ACCSCR      DSPF_____    Accounts payable screens_____________________
__   ACCHLP      DSPF_____    Accounts payable help text___________________
__   ADMSCR      DSPF_____    Administration screens_______________________
__   ADMHLP      DSPF_____    Administration help text_____________________
__   FINSCR      DSPF_____    Finance screens______________________________
__   FINHLP      DSPF_____    Finance help text____________________________
__   PAYSCR      DSPF_____    Payroll screens______________________________
__   PAYHLP      DSPF_____    Payroll help text____________________________
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt             F5=Refresh            F6=Create
F9=Retrieve      F10=Command entry     F23=More options      F24=More keys
This is a subsetted list.
```

Figure 158. Work with Members Using PDM Display—Choosing the Member to Change

4. Press Enter. PDM calls the STRSDA command to start the SDA utility, and an SDA display appears allowing you to change the member. For more information on this and the other functions available in SDA, refer to the *SDA User's Guide and Reference*.

   Note: If you use option 17 (Change using SDA) with a member of type MNUDDS, MNUCMD, MNU36, or MNU, a different display appears, allowing you to change menus instead of displays.

5. When you finish changing the member, exit from SDA. The Work with Members Using PDM display reappears.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing Members Using Report Layout Utility

Option 19 (Change using RLU) on the Work with Members Using PDM display allows you to change members using RLU if you are working with members in a source physical file. The Change using RLU option allows you to work with members in your file (of type PRTF) that are the source code for report images. You can either create a new report member or change an existing one.

Follow this example to change the SMPREP member in the CMDSRC file in the library ATEST using RLU:

1. Choose the displays as shown in the following sequence diagram:

Figure 159. Working with All Members in CMDSRC

2. On the Work with Members Using PDM display, press F23=More options to see the remaining options available for the display. Also, position to the member that you want to work with.

```
                          Work with Members Using PDM

File . . . . . CMDSRC____          Position to . . . . .    SMPREP____
  Library . . . .   ATEST____

Type options, press Enter.
  14=Compile            15=Create module       16=Run procedure
  17=Change using SDA   19=Change using RLU    25=Find string ...
```

Figure 160. Work with Members Using PDM Display—Showing Additional Options

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Type 19 (Change using RLU) next to the member you want to work with which, in this example, is the SMPREP member. Make sure the member contains the source code for a report image.

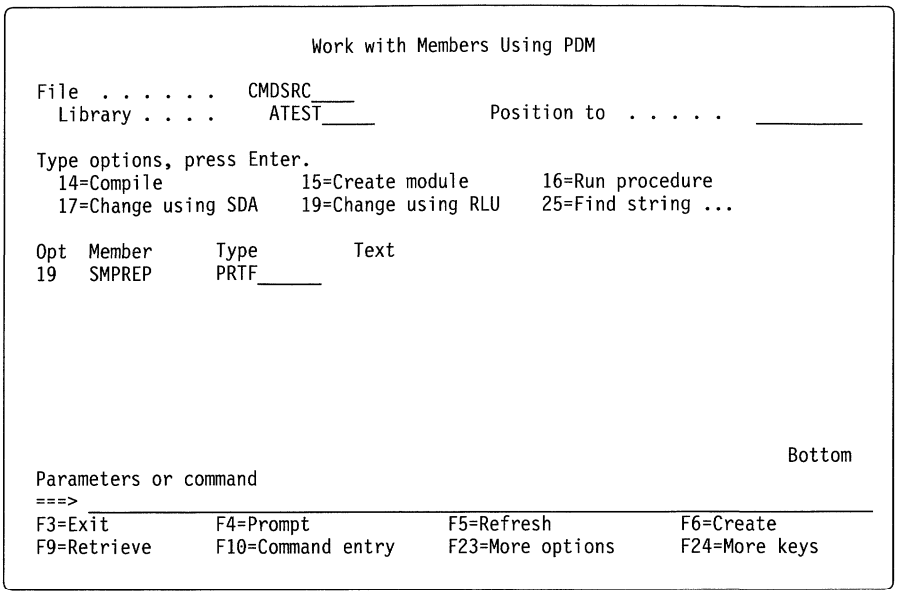


Figure 161. Work with Members Using PDM Display—Choosing the Member to Change

4. Press Enter. PDM calls the STRRLU command to start RLU, and an RLU display appears allowing you to change the member. For more information on this and the other functions available in RLU, refer to the *RLU User's Guide and Reference*.
5. When you finish changing the member, exit from RLU. The Work with Members Using PDM display reappears.
6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing Members Using Data File Utility

You can use option 18 (Change using DFU) on the Work with Members Using PDM display to change members using the data file utility (DFU) if you are working with members in a data physical file only.

Note: If you want to create members using DFU, you can do so using the CD sample user-defined option shipped with PDM. For further information on the sample user-defined options, see "Sample User-Defined Options" on page 119.

Follow this example to use DFU to change the ACCDTA member in the DTAFILE file in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

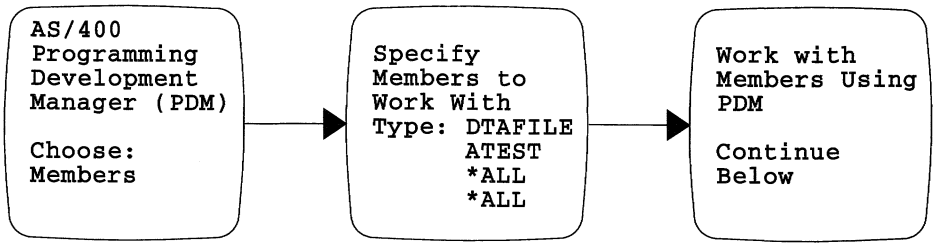


Figure 162. Working with All Members in DTAFILE

2. Type 18 (Change using DFU) next to the member you want to change, in this example, next to the ACCDTA member.

```
                          Work with Members Using PDM

File  . . . . . .   DTAFILE___
  Library . . . .     ATEST_____          Position to  . . . . .   _________

Type options, press Enter.
  2=Edit    3=Copy          4=Delete    5=Display   6=Print
  7=Rename  8=Display description       9=Save      13=Change text...

Opt  Member      Date        Text
__   ACCDTA      08/12/92    Accounts payable data file_____________________
__   ADMDTA      07/20/91    Administration data file_______________________
__   DATATEST    12/01/92    Test data file_________________________________
__   FINDTA      05/14/92    Finance data file______________________________
__   FINTEST     09/08/91    Finance test data file_________________________
__   PAYDTA      08/05/92    Payroll data file______________________________
__   PERDTA      11/04/91    Personnel data file____________________________
__   SALDTA      09/28/92    Salary data file_______________________________
                                                                      More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt            F5=Refresh           F6=Create
F9=Retrieve      F10=Command entry                         F24=More keys
```

Figure 163. Work with Members Using PDM Display—Choosing the Member to Change Using DFU

3. Press Enter. PDM calls DFU, which then creates and runs a temporary program allowing you to change the member. For more information on these and the other functions available in DFU, refer to the *DFU User's Guide and Reference*.
4. When you finish changing the member, exit from DFU. The Work with Members Using PDM display reappears.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Displaying, Sorting, and Positioning a List to a Date

On the Work with Members Using PDM display, you can sort the members on the list by date instead of by name and then position the list to a member that you updated previously. When working with members in source physical files, you can also display the date that the contents of the members were last updated instead of the member type for the members on the display.

The following example shows you how to display the date instead of the member type for members in source physical files, sort the list by date, and then position the list to a date. The format of the date is *MM/DD/YY*.

1. Choose the displays as shown in the following sequence diagram:

Figure 164. Working with All Members of Type DSPF in DDSSRC

2. Press F24=More keys to see the second set of function keys available for the Work with Members Using PDM display.

```
                                                                    More...

Parameters or command
===> _____________________________________________________________________
F11=Display names and types            F12=Cancel          F13=Repeat
F14=Display date        F15=Sort date  F23=More options    F24=More keys
```

Figure 165. Work with Members Using PDM Display—Showing Second Set of Function Keys

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. On the Work with Members Using PDM display, press F14=Display date to display the date on which the contents of the members in the list were last updated instead of the member type.

   Note: For a source physical file, the last date changed is the date that the content last changed. For a data physical file, the last date changed is the date that the member was last edited, such as for a rename or change in description.

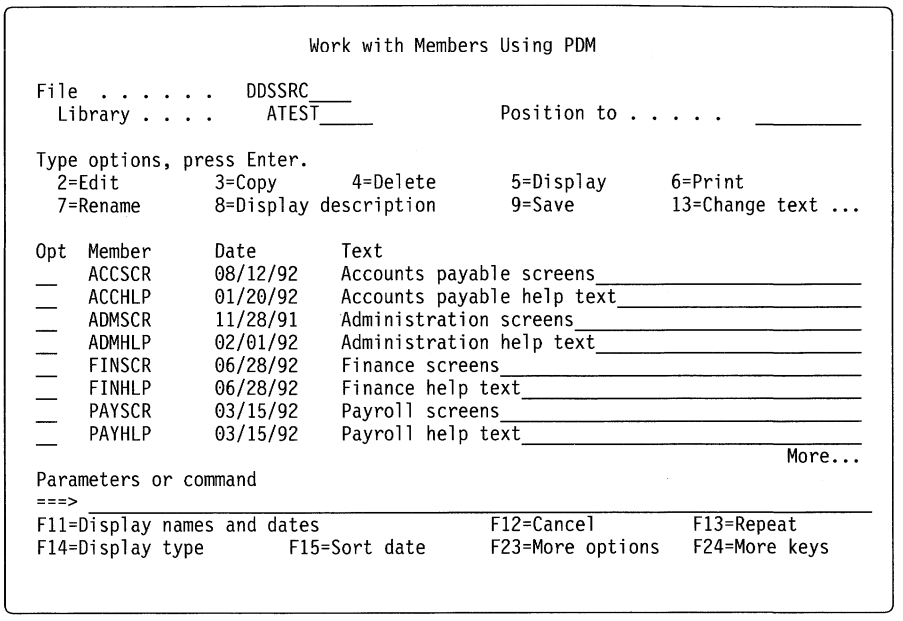


Figure 166. Work with Members Using PDM Display—Showing Dates Members Were Last Changed

Notice that, in the list area where member types were displayed, the dates the members were last updated are now shown. Notice also that F14=Display date is changed to F14=Display type.

4. Press F15=Sort date to sort the list by the date on which the members were last updated instead of in alphabetical order of member name.

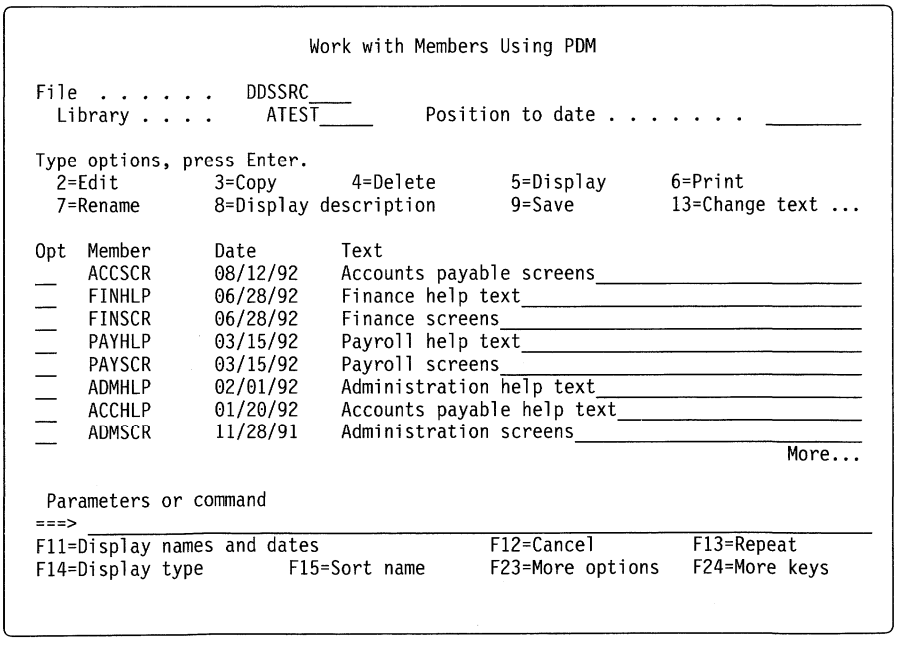


Figure 167. Work with Members Using PDM Display—Showing the List Sorted by Date

The list is now sorted by the date on which the members were last updated. Notice also that F15=Sort date has changed to F15=Sort name.

5. You may want to position the list to a member you updated previously. In the *Position to date* prompt, type the date you want to position the list to. The date you specify must be in the same format as the date in the *Date* list area. For this example, position the list to the PAYHLP member that was last updated on 03/15/92.

```
                        Work with Members Using PDM

File  . . . . . .   DDSSRC____
  Library . . . .     ATEST_____          Position to date . . .   03/15/92__

Type options, press Enter.
  2=Edit         3=Copy       4=Delete       5=Display      6=Print
  7=Rename       8=Display description       9=Save         13=Change text ...

Opt  Member      Date        Text
__   ACCSCR      08/12/92    Accounts payable screens_____________________
__   FINHLP      06/28/92    Finance help text____________________________
__   FINSCR      06/28/92    Finance screens______________________________
__   PAYHLP      03/15/92    Payroll help text____________________________
__   PAYSCR      03/15/92    Payroll screens______________________________
__   ADMHLP      02/01/92    Administration help text_____________________
__   ACCHLP      01/20/92    Accounts payable help text___________________
__   ADMSCR      11/28/91    Administration screens_______________________
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F11=Display names and dates              F12=Cancel         F13=Repeat
F14=Display type        F15=Sort name    F23=More options   F24=More keys
```

Figure 168. Work with Members Using PDM Display—Showing the Date to Position To

6. Press Enter, and the Work with Members Using PDM display reappears, with PAYHLP at the top of the list.

```
                        Work with Members Using PDM

File  . . . . . .   DDSSRC____
  Library . . . .     ATEST_____          Position to date . . .   _________

Type options, press Enter.
  2=Edit         3=Copy       4=Delete       5=Display      6=Print
  7=Rename       8=Display description       9=Save         13=Change text ...

Opt  Member      Date        Text
__   PAYHLP      03/15/92    Payroll help text____________________________
__   PAYSCR      03/15/92    Payroll screens______________________________
__   ADMHLP      02/01/92    Administration help text_____________________
__   ACCHLP      01/20/92    Accounts payable help text___________________
__   ADMSCR      11/28/91    Administration screens_______________________
__   PERHLP      11/20/91    Personnel help text__________________________
__   PERSCR      11/20/91    Personnel screens____________________________
__   FINSCR      10/29/91    Finance screens______________________________
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F11=Display names and dates              F12=Cancel         F13=Repeat
F14=Display type        F15=Sort name    F23=More options   F24=More keys
```

Figure 169. Work with Members Using PDM Display—Positioned to the Requested Date

The list is now positioned to the PAYHLP member, which was last updated on 03/15/92.

7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Showing a Subset of a List of Members

When working with members in PDM, you can use the F17=Subset function key to create a list of members within a range of members you specify. The following example shows you how to create a subset of a list of members that includes only the display files in the CMDSRC file in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

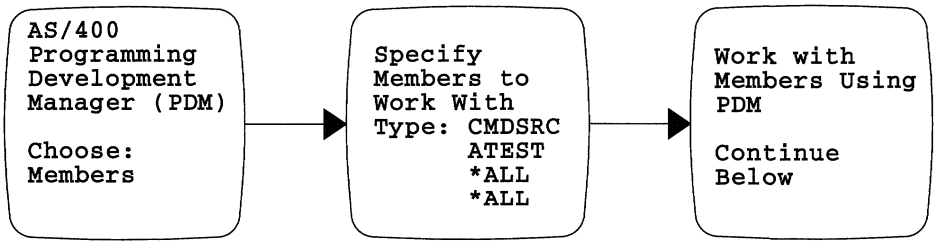


Figure 170. Working with All Members in CMDSRC

2. On the Work with Members Using PDM display, press F24=More keys. The second set of function keys available for the display appears.
3. Press F24=More keys again, and the remaining set of function keys for the Work with Members Using PDM display appears.

```
                                                                More...
Parameters or command
===> ____________________________________________________________________
F16=User options     F17=Subset      F18=Change defaults     F21=Print list
                                     F23=More options        F24=More keys
```

Figure 171. Work with Members Using PDM Display—Third Set of Function Keys

Note: You do not have to display the additional function keys and options when you use them. Steps 2 and 3 are not required, but you should use them until you are familiar with PDM.

4. On the Work with Members Using PDM display, press F17=Subset to create a subset of the list. The Subset Member List display appears allowing you to specify the selection values for the subset list.
5. In the *Member* or *Member type* prompt, type the generic name to show a subset of the list. The generic name can be in one of the formats listed on page 19.

   For this example, type DSPF* for the *Member type* prompt to display a subset of a list that includes all members whose type begins with the characters DSPF.

   Leave the *Member* prompt, the *From date*, *To date* prompts, and the *Text* prompt at their default settings to include all members in the subset list whose type begins with the letters DSPF, independent of the data that they were last updated, or their text description.

```
                              Subset Member List

Type choices, press Enter.

  Member . . . . . .   *ALL_____    *ALL, name, *generic*,

  Member type  . . . .  DSPF*____    *ALL, type, *generic*, *BLANK

  From date  . . . . .  01/01/01     Earliest date to include

  To date  . . . . . .  12/31/99     Latest date to include

  Text . . . . . . . .  *ALL_____________________________________



F3=Exit     F5=Refresh     F12=Cancel
```

Figure 172. Subset Member List Display—Specifying the Members to Include in the List

6. Press Enter. The Work with Members Using PDM display appears with a list of all the members with types beginning with DSPF in the CMDSRC file in the library ATEST.

```
                          Work with Members Using PDM

File  . . . . . .   CMDSRC____
  Library . . . .     ATEST_____          Position to  . . . . .  __________

Type options, press Enter.
  2=Edit         3=Copy       4=Delete       5=Display      6=Print
  7=Rename       8=Display description       9=Save         13=Change text ...

Opt  Member      Type         Text
__   ACCSCR      DSPF_____    Accounts payable screens_____________________
__   ACCHLP      DSPF_____    Accounts payable help text___________________
__   ACPAY2      DSPF36___    Accounts payable screens_____________________
__   ADMSCR      DSPF_____    Administration screens_______________________
__   ADMHLP      DSPF_____    Administration help text_____________________
__   BRADSC      DSPF36___    Finance screens______________________________
__   CRDTSC      DSPF38___    Accounts receivable screens__________________
__   FINSCR      DSPF_____    Finance screens______________________________
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F16=User options    F17=Subset     F18=Change defaults     F21=Print list
                                   F23=More options        F24=More keys
This is a subsetted list.
```

Figure 173. Work with Members Using PDM Display—Showing the Subset of the List

Note: When working with a subset of a list, if you change the *Library* prompt on the Work with Members Using PDM display to show the members in a different library, the new list you see is also a subsetted list.

7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Chapter 5. Finding Strings

The Find string function in PDM allows you to search for a character or numeric string in a source or data physical file. You can perform any valid option or user-defined option on the member that contains a match for the string. Some tips and techniques for using Find string are discussed at the end of this chapter.

Using Find String

You can use the Find string function in one of the following ways:

- Using the Work with Members Using PDM display
- Using the Work with Objects Using PDM display
- Using the Find String Using PDM (FNDSTRPDM) command

Each of these methods of accessing Find string is described in the next section.

If you have the Application Development Manager/400 licensed program installed, you can use the Find string part function in one of the following ways:

- Using the Work with Parts Using PDM display
- Using the Work with Groups Using PDM display
- Using the Find String Part (FNDSTRPART) command

For a complete discussion of this function, refer to *Application Development Manager/400 User's Guide*.

Using the Work with Members Display

You can use option 25 (Find string) on the Work with Members Using PDM display to search the members in a list, or a subset of a list, for a character string; you can then specify an option to be performed on each member that contains a match for the character string. The Find string option is available on the PDM member list for both source and data physical files.

You can print a list of the members that contain the string or print the individual records in the members that contain the string. You can perform Find string in batch or interactively, depending on which options you decide to use on the members containing a match. For information on using Find string in batch mode, see "Processing Find String in Batch Mode" on page 114.

The following example shows you how to display the description of a member and print a list of all the members and records that contain the string `Invoice` and are of type DSPF in the DDSSRC file in the library ATEST:

1. Choose the displays as shown in the following sequence diagram:

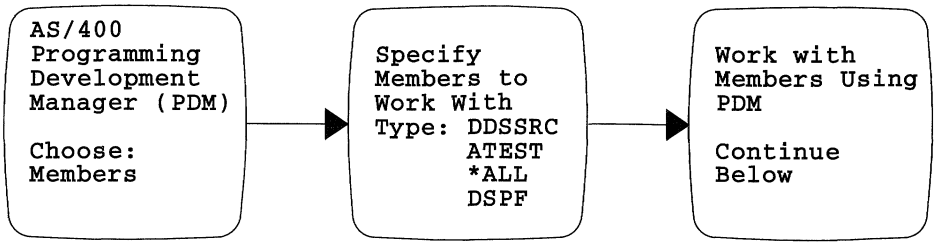


Figure 174. Working with All Members of Type DSPF in DDSSRC

2. On the Work with Members Using PDM display, press F23=More options and the remaining options available for this display are shown in Figure 175.

```
                        Work with Members Using PDM

File  . . . . . .  DDSSRC____
  Library . . . .    ATEST_____          Position to  . . . . .  _________

Type options, press Enter.
  14=Compile             15=Create module       16=Run procedure
  17=Change using SDA    19=Change using RLU    25=Find string ...
```

Figure 175. Work with Members Using PDM Display—Showing the Additional Options

Note: You do not have to display the additional function keys and options when you use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Type option 25 (Find string) next to each member you wish to search. For this example, type 25 (Find string) next to the first member in the list and then press F13=Repeat to repeat the option for all members in the list.

```
                        Work with Members Using PDM

File . . . . . DDSSRC____
  Library . . . .   ATEST____          Position to . . . . . _________

Type options, press Enter.
  14=Compile            15=Create module       16=Run procedure
  17=Change using SDA   19=Change using RLU    25=Find string ...

Opt  Member     Type        Text
25   ACCSCR     DSPF_____   Accounts payable screens_____________________
25   ACCHLP     DSPF_____   Accounts payable help text_____________________
25   ADMSCR     DSPF_____   Administration screens_____________________
25   ADMHLP     DSPF_____   Administration help text_____________________
25   FINSCR     DSPF_____   Finance screens_____________________
25   FINHLP     DSPF_____   Finance help text_____________________
25   PAYSCR     DSPF_____   Payroll screens_____________________
25   PAYHLP     DSPF_____   Payroll help text_____________________
                                                                  Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry  F23=More options    F24=More keys
Option 25 repeated from ACCSCR to the end of the list.
```

Figure 176. Work with Members Using PDM Display—Selecting Members to Search

4. Press Enter, and the Find String display appears, allowing you to specify search values.

   If you choose more than one member to search on the previous display, all the members selected are searched, but the Find String display is only shown once.

```
                              Find String

Type choices, press Enter.

  Find . . . . . .  Invoice_____________________________
    From column number . . . . . .  1_____   1 - *RCDLEN
    To column number . . . . . .    *RCDLEN  1 - *RCDLEN
    Kind of match  . . . . . .      1        1=Same case, 2=Ignore case

  Option . . . . . .  8____        *NONE, Valid option
    Prompt . . . . . .  N          Y=Yes, N=No
  Print list . . . . . .  Y        Y=Yes, N=No
  Print records  . . . . . .  Y    Y=Yes, N=No
    Number to find . . . . . .  *ALL     *ALL, number
    Print format . . . . . .  *CHAR     *CHAR, *HEX, *ALTHEX
    Mark record  . . . . . .  Y         Y=Yes, N=No
    Record overflow  . . . . .  1       1=Fold, 2=Truncate
  Find string in batch . . . . . .  N   Y=Yes, N=No
  Parameters . . . . . .  _____________________________________
_____________________________________________________________________

F3=Exit              F5=Refresh        F12=Cancel        F16=User options
F18=Change defaults
```

Figure 177. Find String Display.

5. In the *Find* prompt, type the string of characters you want PDM to search for. For this example, type `Invoice`.

Note: PDM ignores surrounding quotation marks unless the string is preceded by a space. When the string is preceded by a space, then the space becomes part of the string that PDM searches for. If you want to search members for a character string that is enclosed in quotation marks, add an additional set of quotation marks at the start and end of the string.

6. The *From column number* and *To column number* prompts specify the column numbers that define the left and right boundaries for the find operation. For this example, type 1 in the *From column number* prompt and *RCDLEN (this represents the record length of the file) in the *To column number* prompt.
7. The *Kind of match* prompt allows you to indicate whether or not character capitalization is to be taken into account when searching for the Find string. Type 1 (Same case) to search for the string exactly as it is typed in the *Find* prompt. Type 2 (Ignore case) to disregard the capitalization of the string in the *Find* prompt when searching. For this example, type 1 (Same case).
8. The *Option* prompt allows you to specify the option to perform on each member that contains a match for the Find string. All the options available on data or source physical file member lists are allowed. User-defined options are also allowed. Enter *NONE if you do not want PDM to process any options. For this example, type 8 to select the Display description option.

   Note: If you enter *NONE for the *Option* prompt, you **must** enter Y (Yes) for either the *Print list* prompt or the *Print records* prompt. If you want to display the list without printing it, type N (No) for *Print list* and *Print records* and type 5 in the *Option* prompt.
9. The *Prompt* field allows you to specify if the prompt display for the command called from the entry in the *Option* field should be shown. If you type Y (Yes), the command prompt display is shown for each member that contains a match for the Find string. If you type N (No) for this prompt, the option is processed for each member without prompting first. For this example, type N (No).
10. The *Print list* prompt allows you to print a list of the members that contain a match for the Find string. This can be done as well as, or instead of, performing an option for each member. For this example, type Y (Yes) to print a list of members that contain a match for the Find string.
11. The *Print records* prompt allows you to print each record that contains the string. The other records in the member are not printed. These records are saved in a spooled file in the output queue specified by the current job. This spooled file differs from the spooled file used for the *Print list* prompt. For this example, choose Y for Yes.

    Note: When you choose to print the records, all the records in the member are searched and the matching records are printed before any options specified are processed. This means that the printouts reflect the records before any changes were made.
12. The *Number to find* prompt specifies whether all the records containing the string in the member, or only a designated number of records containing the string are printed. For this example, choose *ALL.
13. The *Print format* prompt specifies whether the records are printed in character (*CHAR), hexadecimal over/under format (*HEX), or hexadecimal side-by-side format (*ALTHEX).

14. The *Mark records* prompt specifies that Find string flags the occurrence of the string on the listing. For character strings, the marker is the Find string itself, printed above the record. For hexadecimal strings, the marker is a series of asterisks (*) above the record. All occurrences of the string are marked in a similar fashion. If the string occurs in the truncated portion of the record, an arrow is displayed above the record with a message.
15. The *Record overflow* prompt specifies that the record is folded if you type 1 or truncated if you type 2. Folding means that the record is printed over multiple print lines whereas truncating means that only columns 1 through 100 are shown for *HEX and *CHAR formats, and only columns 1 through 32 are shown if *ALTHEX is used.
16. The *Find string in batch* prompt allows you to choose whether or not you want to submit the Find string and print list tasks to batch. For this example, type N (No) to process the Find string and print jobs interactively. For more information on using Find string in batch mode, see "Processing Find String in Batch Mode" on page 114.
17. The *Parameters* prompt is like the command line on the Work With displays. The parameters you enter in this prompt are joined with the command called to perform the option called from the *Option* prompt. For this example, leave the *Parameters* prompt blank.

    Note: The values you enter for prompts on the Find String display are saved in the user profile and become the defaults for the next time you select the Find string option. Press F5=Refresh if you want to reset the prompts to their original default values.

```
                                Find String

Type choices, press Enter.

  Find . . . . . .  Invoice_____________________________
    From column number . . . . . .  1_____   1 - *RCDLEN
    To column number . . . . . .  *RCDLEN   1 - *RCDLEN
    Kind of match  . . . . . .  1           1=Same case, 2=Ignore case

  Option . . . . . .  8___      *NONE, Valid option
    Prompt . . . . . .  N       Y=Yes, N=No
  Print list . . . . . .  Y     Y=Yes, N=No
  Print records  . . . . . .  Y Y=Yes, N=No
    Number to find . . . . . .  *ALL     *ALL, number
    Print format . . . . . .  *CHAR     *CHAR, *HEX, *ALTHEX
    Mark record  . . . . . .  Y         Y=Yes, N=No
    Record overflow  . . . . . .  1     1=Fold, 2=Truncate
  Find string in batch . . . . . .  N   Y=Yes, N=No
  Parameters . . . . . .  ______________________________

F3=Exit                F5=Refresh        F12=Cancel        F16=User options
F18=Change defaults
```

Figure 178. Find String Display—Specifying Search Values

18. Press Enter.

    Each member for which you selected the Find string option is now searched for occurrences of the string. When a match for the Find string is found in a record, the record is printed. When all the records in the members are searched, the option in the *Option* prompt is performed for the member. The next member is then searched.

    Note: If the option selected in the *Option* prompt is a grouping option (that is, Rename, Delete, or Copy), and if you type N (No) for the *Prompt* field, PDM searches all the members for which you selected the Find string option. Only then is the option you selected in the *Option* prompt performed for the members containing a match for the Find string. If you select a grouping option, and you want to stop on each member as it is found to contain a match for the Find string, you must type Y (Yes) for the *Prompt* field.

    In this example, a display appears allowing you to view information relating to the first member that is found to contain the Find string.

19. When you finish viewing the descriptive information for the member, you have two choices:

    - Press Enter to exit from the Display Member Description display and continue processing the Find string option.
    - Press F12=Cancel to exit from the Display Member Description display and cancel the Find string option.

    For this example, press Enter to continue processing the Find string option. You can now view descriptive information for the next member containing a match for the Find string.

    When you have viewed descriptive information for all the members containing the string `Invoice`, a list of all those members is printed, and the records containing a match are printed.

    Note: If you enter Y (Yes) for the *Print list* prompt, or the *Print records* prompt, and if you cancel the Find string option, only the members processed before you cancel the option are printed.

    The Work with Members Using PDM display appears again.

20. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Using the Work with Objects Using PDM Display

You can use the Find string option from the Work with Objects Using PDM display to search for a character string in members in more than one file by doing the following:

1. Type option 25 (Find string) beside each file whose members you want to search. You can select the Find string option for files of type PF-SRC or PF-DTA only.

   PDM allows you to select the Find string option for both source and data files at one time. If you select an option in the *Option* prompt on the Find String display that is not valid for members in both source and data physical files, you may receive an error message.

For example, if you choose the Find string option for a source file and a data file, and if you select option 2 (Edit) for the *Option* prompt on the Find String display, an error occurs if a match for the Find string is found for a member in the data file. This is because option 2 (Edit) is not allowed for data files, only for source files.

2. Press Enter. The Find String display appears.
3. Fill in the appropriate information for the prompts on this display.
4. Press Enter.

   All the members in the first file for which you selected the Find string option are searched. If you selected an option in the *Option* prompt on the Find String display, it is processed for each member in the file that contains a match for the Find string. If you typed Y (Yes) for the *Print list* prompt, a list of all members in the file containing a match for the Find string is printed. If you typed Y (Yes) for the *Print records* prompt, all the records containing that string are printed.

   The members in the second file for which you selected the Find string option are then searched.

   After all the files for which you selected the Find string option are searched, the Work with Objects Using PDM display appears again.

Using the FNDSTRPDM Command

By using the FNDSTRPDM command, you can bypass the Work with Members Using PDM display and the Work with Objects Using PDM display and proceed directly with the search.

The following example shows you how, using the FNDSTRPDM command, to display the description and print a list of all the members and records that contain the string `Invoice` in ATEST/DDSSRC:

1. Type FNDSTRPDM on any command line.
2. Press F4=Prompt, and the Find String Using PDM display as shown in Figure 179 on page 112 appears.

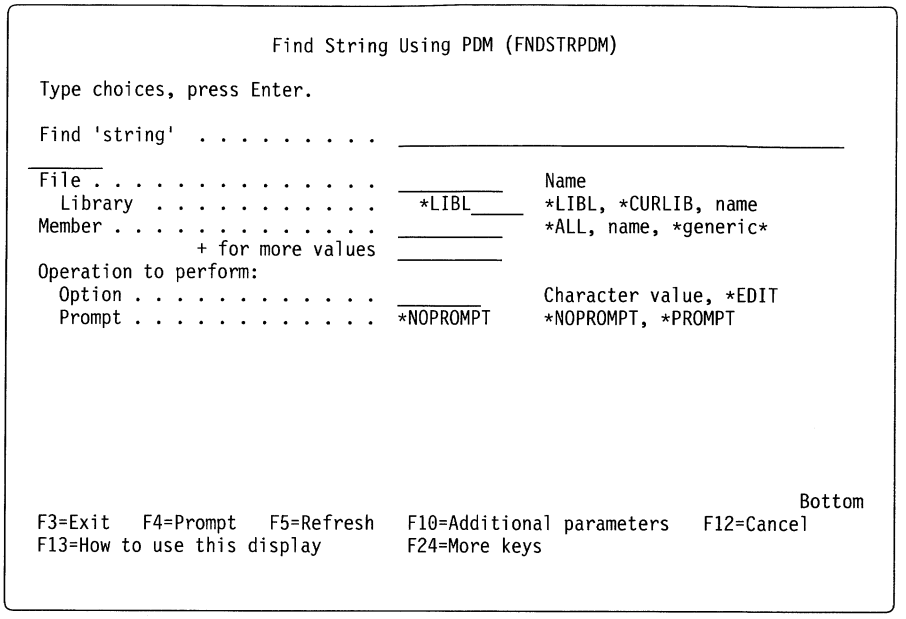


Figure 179. Find String Using PDM Display

3. In the *Find 'string'* prompt, type the string of characters, surrounded by quotation marks, that you want PDM to search for. For this example, type `'Invoice'`.
4. Type the library, file, and member to be searched. To search for additional members, type + on the line beneath the member line, and spaces for additional members appear. For this example, search for *ALL members in the file DDSSRC in library ATEST.
5. Type the option of the function that you want to perform on the members containing the string in the *Option* prompt. To display the description, type *DSPD in this prompt.
6. Type *PROMPT in the *Prompt* field to display an entry screen for the command chosen in the *Option* prompt every time a match is found for the Find string.
7. Press F10=Additional Parameters to see the remaining Find string prompts. Fill in these prompts with the values as they appear in Figure 180 on page 113.

```
                    Find String Using PDM (FNDSTRPDM)

Type choices, press Enter.

Find 'string'  . . . . . .  'Invoice'_____________________________
_____
File . . . . . .  DDSSRC____    Name
  Library  . . . . . .  ATEST_____  *LIBL, *CURLIB, name
Member . . . . . .  *ALL_____   *ALL, name, *generic*
             + for more values  _________
Operation to perform:
  Option . . . . . .  *DSPD       Character value, *EDIT
  Prompt . . . . . .  *PROMPT     *NOPROMPT, *PROMPT

                      Additional Parameters

Columns to search:
  From column  . . . . . .  1_____      1 - *RCDLEN
  To Column  . . . . . .  *RCDLEN     1 - *RCDLEN
Kind of match  . . . . . .  *IGNORE     *IGNORE, *MATCH
                                                              More...
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

Figure 180. Find String Using PDM Display with Additional Parameters

Press Page Down (Roll Up) to enter all the remaining values.

```
                    Find String Using PDM (FNDSTRPDM)

Type choices, press Enter.

Print list . . . . . .  *NO_____     *NO, *YES
Print records
  Number to find . . . . . .  *NONE___    *NONE, *ALL, number
  Print format . . . . . .  _______    *CHAR, *HEX, *ALTHEX
  Mark record  . . . . . .  _______    *MARK, *NOMARK
  Overflow . . . . . .  _______    *FOLD, *TRUNCATE
Parameters . . . . . .  _____________________________________________
_____________________________________________________________________
_______

                                                              Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

Figure 181. Find String Using PDM Display

For this example, type *ALL in the *Print records* prompt to print all of the records containing the string specified. The *Print format*, *Mark record*, and *Overflow*, prompts will then default to *CHAR, *MARK, and *FOLD.

8. Press Enter to perform the search. When a match is found, the appropriate display for the option chosen appears. For this example, when the string `Invoice` is found, the Display Member Description display appears.
9. When you press Enter, the display where you started the FNDSTRPDM command appears again.

Find String Tips and Techniques

Processing Find String in Batch Mode

The *Find string in batch* prompt on the Find String display allows you to submit a Find string operation to batch processing, rather than using the Find String Using PDM (FNDSTRPDM) display. This section explains the restrictions that apply when you choose to submit a Find string operation to batch processing and describes ways of working around them.

Specifying Options

If you submit a Find string operation to batch processing, the only options you can select for the *Option* prompt on the Find String display are user-defined options, the Compile option, the Print option or the Run option.

If you want to submit other options to batch processing from the Find String display, create a user-defined option that calls the appropriate command to perform the option. You can then select this user-defined option for the *Option* prompt on the Find String display and you can submit the user-defined option to batch processing.

Compiling

If you choose to submit a Find string operation to batch processing, and if you also select the Compile option for the *Option* prompt, note the following considerations:

- *Replace object* prompt.

  Normally in PDM, if you type N (No) for the *Replace object* prompt on the Change Defaults display, and an object with the same name as the object to be created as a result of compiling already exists, the compile operation is stopped. Before this happens, however, a warning display appears allowing you to choose whether or not you want to proceed with the compile operation.

  When you select the Compile option on the Find String display and then submit the Find string operation to batch processing, a warning display does **not** appear if the object resulting from the compile already exists. Instead, PDM stops the compile operation for that member and continues with the Find string operation.

  To replace existing objects before a compile, type Y for the *Replace object* prompt on the Change Defaults display. Alternatively, you can type REPLACE (*YES) in the *Parameters* prompt on the Find String display if you are compiling members in batch. Then if the object to be compiled already exists, it is replaced, and the compile is processed.

  Note: The REPLACE parameter is not used on compile commands for which it is not valid. If you use REPLACE on the command line for a command for which it is not valid, you receive an error message.

- *Compile in batch* prompt.

  The *Compile in batch* prompt on the Change Defaults display allows you to choose whether you want to compile members in batch mode or interactively.

  If you submit a Find string operation to batch processing, and if you select the Compile option for the *Option* prompt on the Find String display, members are **always** compiled in **batch** mode, regardless of your entry in the *Compile in batch* prompt on the Change Defaults display.

If, however, your entry for the *Compile in batch* prompt is Y (Yes), two batch jobs are submitted, one for the Find string operation and one for the compile operation. You receive a message indicating a batch job has been submitted. If your entry for the *Compile in batch* prompt is N (No), the compile and Find string operations are submitted to one batch job. You receive a message indicating whether or not the compile operation was successful.

If you process the Find string operation interactively, the compile is processed according to your entry in the *Compile in batch* prompt on the Change Defaults display.

Making Global Changes with Confirmation

You can use the Find string option to change a string of characters in a number of members to a different string of characters by doing the following:

1. On the Find String display, type the string of characters you want to change in the *Find* prompt and type 2 (Edit) in the *Option* prompt. Type the appropriate information for the remainder of the prompts on this display.
2. Press Enter. PDM searches all the members for which you selected the Find string option and, when a member is found that contains the Find string, an SEU display appears allowing you to edit that member.
3. On the SEU display, press F14=Find/Change Options.
4. Type the new character string that is to replace the search string in the *Change* prompt.

   If you do not want to change all occurrences of the Find string in the member, you can specify which occurrences to change in the *Occurrences to process* prompt. (You can choose to change only the next occurrence of the string, only the previous occurrence of the string, or all occurrences of the string in the member.)
5. Press F17=Change to process the change. The Find string is changed to the characters you specified in the *Change* prompt.
6. Exit from SEU and continue processing the Find string operation. See "Using Find String from the Source Entry Utility" on page 117 for further details.

   When another member is found that contains the Find string, the SEU edit screen again appears, allowing you to edit the member.
7. To change the Find string to the same characters you specified for the previous member, press F17=Change. You do not have to enter values for the *Change* or *Occurrences* prompts again. The values you enter for these prompts when you edit the first member become the defaults for the duration of this Find string operation. After the Find string operation is finished, the defaults are refreshed.

   Continue changing each member in turn. When you have changed all members containing the Find string, the display on which you originally selected the Find string option reappears.

Scanning Members for Hexadecimal Numbers

You can use the Find string option to search members for hexadecimal numbers in source and data physical files by doing the following:

1. On the Find String display, type the string of hexadecimal numbers you want to search for in the *Find* prompt using the following format:

   ```
   X'nn'
   ```

   where nn are the numbers for which you want to search.

   Make sure you begin typing the Find string in column 1 of the *Find* prompt. PDM searches for the character string exactly as you enter it. Thus, if there is a space before the string, only members containing the actual characters X'nn' preceded by a space are considered to contain the string.

   Type the appropriate information for the remaining prompts on this display.

2. Press Enter. PDM searches all the members for which you selected the Find string option. When a member is found that contains the hexadecimal number you specified, the option you selected in the *Option* prompt, if any, is performed for the member. The next member for which you selected the Find string option is then searched.

   If you typed Y (Yes) for the *Print list* prompt on the Find String display, when all the members for which you selected the Find string option are searched, a list of members containing the hexadecimal values you specified in the *Find* prompt are printed.

   If you typed Y (Yes) for the *Print records* prompt, all the records containing the string are printed. Data files default to hexadecimal over/under style format. After printing records of a sequential file, you can use the data file utility to change the records by referring to the RCDNBR field in the spooled file. After printing records of a keyed file, the records are still referred to by record number.

   To use DFU, create a sequential logical file over the keyed physical file, and use the logical file with DFU to access the required records by the record number that is referred to in the spooled file. The DDS for the logical file does not have any key fields specified, so DFU accesses the record by the record number instead of the key. This means that you can change the records using DFU.

   When all the members for which you selected the Find string option are searched, the display on which you originally selected the Find string option appears again.

Note: You cannot search members in source files for hexadecimal numbers. If you select the Find string option for a member in a source file and if you type X'nn' in the *Find* prompt (where nn are the hexadecimal numbers for which you want to search), PDM searches members in source physical files for this exact string.

Using Find String with the Report Layout Utility

If you select option 19 (Change using RLU) for the *Option* prompt on the Find String display, an RLU display is shown when a match is found for the Find string. This allows you to change the code for an existing report image.

When you finish changing the report, press F3=Exit. The Exit RLU display appears. Type your choices on this display and then press Enter. PDM then searches the remaining members for the Find string and re-enters RLU when another match is found.

To cancel the Find string operation from RLU, type CANCEL on the Design Report display command line. This brings you back to the Work with Members Using PDM or Work with Objects Using PDM display and cancels the Find string operation.

If you use the FNDSTRPDM command, you must type *RLU for the *Option* parameter to use RLU when a match is found. When you type CANCEL on the Design Report display command line, the display where you started the FNDSTRPDM command appears again.

Using Find String from the Screen Design Aid

If you select option 17 (Change using SDA) for the *Option* prompt on the Find String display, an SDA display is shown when a member is found that contains a match for the Find string, allowing you to change the member.

When you finish changing the member, the Design Screen or Exit Menus display appears again, depending on whether the member contains source code for menus or displays. On the Design Screen or the Exit Menus display, you have a number of choices:

- Press F3=Exit or F12=Cancel if you do not want to save the changes you have made to the member and if you want to cancel the Find string option. The display on which you selected the Find string option reappears.

  If you chose to print a list of members containing the Find string, only the members processed before you cancel the option are printed.

- Select option 6 (Save DDS source) if you want to save the changes you have made to the member. The Save DDS-Create Display File display appears. Press Enter on this display to continue processing the Find string operation.

Using Find String from the Source Entry Utility

If you select option 2 (Edit) for the *Option* prompt on the Find String display, an SEU display, allowing you to edit the member, is shown when a member is found that contains a match for the Find string.

When you finish editing the member, press F3=Exit to display the SEU exit display. On the SEU exit display, you have a number of choices:

- Press F3=Exit if you do not want to save the changes you have made to the member and if you want to cancel the Find string option. The display on which you selected the Find string option appears again.

  If you chose to print a list of members containing the Find string, only the members processed before you cancel the option are printed.

- Type Y (Yes) for the *Change/create member* prompt if you want to save the changes you made to the member. Type N (No) if you do not want to save the editing changes.

- Type Y (Yes) for the *Cancel PDM Find String* prompt if you want to exit from the Find string option. Type N (No) if you do not want to cancel the Find string option.

Canceling the Find String Option

You can usually cancel the Find string option by pressing F3=Exit or F12=Cancel before all the members for which you selected the option have been processed. In the following instances, however, the Find string option cannot be canceled:

1. When you enter N (No) for the *Prompt* prompt and:
   a. Select option 6 (Print) for the *Option* prompt.
   b. Select the Compile option for the *Option* prompt. The Find string option cannot be canceled unless the Confirm Compile Of Member display appears because the object already exists. You can press F12=Cancel on the Confirm Compile of Member display to cancel the Find string option.
   c. Select a grouping option for the *Option* prompt. In this case, the Find string option cannot be canceled until all the members for which you selected the Find string option are searched. When all the members have been searched, the members containing the Find string are listed on the appropriate grouping display for the option.

      You can press F12=Cancel on the grouping display to cancel the Find string option. Or you can press Enter to process the option for all members containing the Find string. After you press Enter, the Find string option cannot be canceled. (If you select the Copy option, however, you can cancel the Find string option if the Confirm Copy of Member display appears because the member to copy to already exists.)
2. When you select a user-defined option that calls a user program for the *Option* prompt.
3. When you submit the Find string operation to batch processing.

After you cancel the Find string option, the display on which you originally selected the Find string option appears again. Any pending options are not processed but are still shown in the list.

Chapter 6. Working with User-Defined Options

All PDM list displays show a list of items on which you can perform operations by typing an option number and pressing Enter or F4=Prompt. PDM then calls the appropriate command for the option, and an operation is carried out on the specified items.

You can also call your own commands from any PDM list display (except the Work with User-Defined Options display) to perform operations on items by creating your own options, called **user-defined options**. This is useful because it allows you to carry out operations you do frequently by simply typing an option on a list display. This saves you from having to type the command every time you want to use it. User-defined options are stored in a data physical file.

You can store different sets of user-defined options in different members in this file. You can then specify the active user-defined options to use by typing the file name, the library name, and the member name in the *Option file*, *Library*, and *Member* prompts on the Change Defaults display. If you want to use user-defined options in a different member, file, or library, you must change the appropriate prompts on the Change Defaults display. For more information on changing these prompts, see "Changing the Default User-Defined Options File" on page 151.

Note: The defaults for the *Option file*, *Library*, and *Member* prompts on the Change Defaults display are QAUOOPT, *LIBL, and QAUOOPT. If you change these prompts, the new member, file, and library you specify become the new defaults each time you sign on to the system.

If you want your user-defined options in a file other than the default file provided, you can either copy the default file or create another one. For more information, see "Copying the User-Defined Options File" on page 132.

Note: Special characters defined for user-defined options cannot be used across systems with different languages.

Sample User-Defined Options

A number of sample user-defined options are shipped with PDM. Figure 182 lists these options and explains what each does.

Figure 182 (Page 1 of 2). Sample User-Defined Options

Option Name	Command Called	Function
C	CALL &O/&N	Allows you to run a program on the Work with Members Using PDM display.
CC	CHGCURLIB CURLIB(&L)	Changes the library on the Work With Objects using PDM display or the Work With Members Using PDM display to the current library in the library list.
CD	STRDFU OPTION(2)	Allows you to create a DFU program.
CL	CHGCURLIB CURLIB(&N)	Changes selected library on the Work With Libraries Using PDM display to the current library in the library list.

Figure 182 (Page 2 of 2). Sample User-Defined Options

Option Name	Command Called	Function
CM	STRSDA OPTION(2) SRCFILE(&L/&F) ??SRCMBR()	Allows you to create a member (menu) using SDA.
CS	STRSDA OPTION(1) SRCFILE(&L/&F) ??SRCMBR()	Allows you to create a member (display) using SDA.
DM	DSPMSG	Allows you to display messages.
EA	EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)	Allows you to edit the authority to an object on the Work with Objects Using PDM display.
GO	GO &L/&N	Allows you to display the menu for a menu object.
JL	DSPJOBLOG	Allows you to display the job log.
SL	SBMJOB ??CMD(SAVLIB LIB(&N))	Saves library in batch on the Work With Libraries Using PDM display.
SM	SBMJOB ??CMD(SAVOBJ OBJ(&F) LIB(&L) OBJTYPE(*FILE) FILEMBR((&F(&N))))	Save member in batch on the Work With Members Using PDM display.
SO	SBMJOB ??CMD(SAVOBJ OBJ(&N) LIB(&L))	Save object in batch on the Work With Objects Using PDM display. This option is an example using conditional prompting. This means that the prompt for the SBMJOB command comes up automatically when the user-defined option is used. This is specified by the ?? at the beginning of the CMD parameter.
SP	WRKSPLF	Allows you to work with spooled files.
WS	WRKSBMJOB	Allows you to work with jobs submitted to batch.
Note: The following options have been added for the Application Development Manager/400 program.		
AP	ADDPRJ PRJ(&ZP) GRP(&ZG) SCAN(&ZH) SCHPTH(&ZS)	Allows you to add project libraries from the AS/400 library list when you are testing a part.
IM	?IMPART OBJ(&L/&F) OBJTYPE(&FILE) MBR(&N) PART(&N) LANG(&S) TEXT(&X)	Allows you to import a member into the project hierarchy from the Work with Members display.
IO	?IMPART OBJ(&L/&N) OBJTYPE(&T) TYPE(&S) PART(&N) TEXT(&X)	Allows you to import an object into the project hierarchy from the Work with Objects display.
RP	RMVPRJLIB	Allows you to remove project libraries from the AS/400 library list when you are testing a part.

You can choose to use the sample user-defined options or you can delete, change, or display them using options on the Work with User-Defined Options display.

Using the Work with User-Defined Options Display

You can reach the Work with User-Defined Options display in one of two ways:

- Using option 9 on the AS/400 Programming Development Manager (PDM) menu
- Using the F16=User options function key

Follow the steps below to reach the Work with User-Defined Options display using the AS/400 Programming Development Manager (PDM) menu:

1. Choose option 9 (Work with user-defined options) by typing 9 on the command line.
2. Press Enter, and the Specify Option File to Work With display appears.

   The prompts for this display always default to the active user-defined options file.
3. Type the name of the file containing the user-defined options with which you want to work in the *File* prompt. The file you choose to work with does not have to be the active user-defined options file, and choosing an option file to work with does not make it the active user-defined options file.

The active user-defined options file is the file specified in the *Option file* prompt on the Change Defaults display. For more information on changing the active user-defined options file, refer to "Changing the Default User-Defined Options File" on page 151. For this example, leave the prompts at their defaults.

4. Press Enter, and the Work with User-Defined Options display appears, as shown in Figure 183.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change         3=Copy          4=Delete        5=Display

Opt  Option  Command
 _       C    CALL &O/&N
 _      CC    CHGCURLIB CURLIB(&L)
 _      CD    STRDFU OPTION(2)
 _      CL    CHGCURLIB CURLIB(&N)
 _      CM    STRSDA OPTION(2) SRCFILE(&L/&F) ??SRCMBR()
 _      CO    CHGOBJOWN OBJ(&L/&N) OBJTYPE(&T) ??NEWOWN(*N) CUROWNAUT(*SAME)
 _      CS    STRSDA OPTION(1) SRCFILE(&L/&F) ??SRCMBR()
 _      DF    DSPPFM (&L/&F) MBR(&N)
                                                                        More...
Command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry                      F24=More keys
```

Figure 183. Work with User-Defined Options Display—List of User-Defined Options

In this example, the CS sample user-defined option exists in the file QAUOOPT.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Using the User Options Function Key

Follow the steps below to reach the Work with User-Defined Options display using the F16=User options function key:

1. Choose the displays as shown in the following sequence diagram:

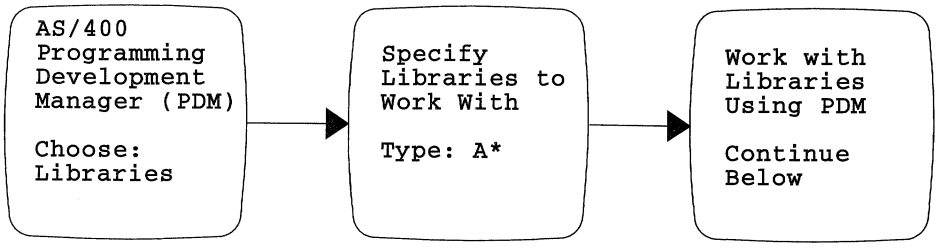


Figure 184. Working with All Libraries That Start with an A

```
                        Work with Libraries Using PDM

List type . . . . . .  *ALL_____      Position to . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy                    4=Delete       5=Display
  7=Rename       8=Display description     9=Save         10=Restore ...

Opt  Library     Type      Text
__   AOLD        *TEST     Old backup copy of Dept. 642 library
__   APROD       *PROD     Production library for Dept. 642
__   ARUN        *PROD
__   ASCONFIG    *PROD     Configuration library
__   ASM         *PROD
__   ASPGMS      *PROD
__   ATEST       *PROD     Test library for Dept. 642

                                                                    Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 185. Work with Libraries Using PDM Display

2. Press F24=More keys, and the Work with Libraries Using PDM display reappears, showing the second set of function keys for the display, as shown in Figure 186.

```
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F11=Display names only      F12=Cancel          F13=Repeat
F16=User options            F23=More options    F24=More keys
```

Figure 186. Work with Libraries Using PDM Display—Second Set of Function Keys

Note: You do not need to have the additional function keys and options displayed to use them. Step 2 is not required, but you should use it until you are familiar with PDM.

3. Press F16=User options, and the Work with User-Defined Options display appears, as shown in Figure 187.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change        3=Copy          4=Delete        5=Display

Opt  Option  Command
 _      C    CALL &O/&N
 _     CC    CHGCURLIB CURLIB(&L)
 _     CD    STRDFU OPTION(2)
 _     CL    CHGCURLIB CURLIB(&N)
 _     CM    STRSDA OPTION(2) SRCFILE(&L/&F) ??SRCMBR()
 _     CO    CHGOBJOWN OBJ(&L/&N) OBJTYPE(&T) ??NEWOWN(*N) CUROWNAUT(*SAME)
 _     CS    STRSDA OPTION(1) SRCFILE(&L/&F) ??SRCMBR()
 _     DF    DSPPFM (&L/&F) MBR(&N)
                                                                      More...
Command
===>
F3=Exit          F4=Prompt          F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry                      F24=More keys
```

Figure 187. Work with User-Defined Options Display—Showing User-Defined Options

The display you see is the same as that shown in Figure 183 on page 121.

4. Press F3=Exit to return to the Work with Libraries Using PDM display.

Creating User-Defined Options

You can create your own user-defined options in PDM. The command you choose to correspond to the user-defined option you create can be any AS/400 system or user command. It can contain parameter variables so that the command can be performed against an item in a list. For example, you may need to save a file with a particular file name daily. You can create a user-defined option to correspond to the command to do this, which saves you from having to type the command each day.

Note: You can use replacement variables when working with parts, groups, or projects. See the online help for more information about the valid Application Development Manager/400 substitution variables and the values returned for each list type.

Follow this example to create a user-defined option named CF that copies all the members in a file for backup purposes:

1. Choose the displays as shown in the following sequence diagram:

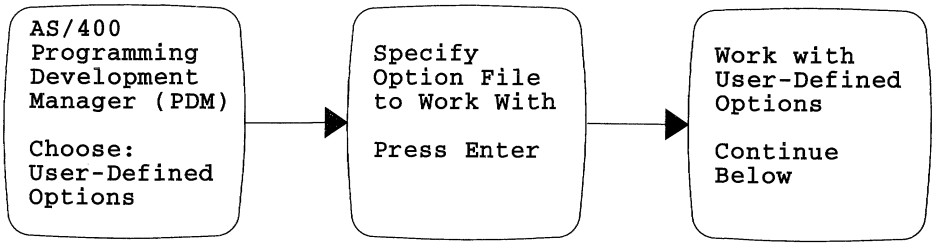


Figure 188. Working with User-Defined Options

2. To create a user-defined option, press F6=Create on the Work with User-Defined Options display.

   The Create User-Defined Option display appears, as shown in Figure 189.

```
                        Create User-Defined Option

Type option and command, press Enter.

  Option . . . . . .  __   Option to create

  Command . . . . . .  _____________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________


F3=Exit       F4=Prompt       F12=Cancel
```

Figure 189. Create User-Defined Option Display

3. At the *Option* prompt, type the characters you want to use to represent the command. The first character of the option name must be a letter, but the second character can be any alphanumeric.

   For this example, type CF in the *Option* prompt.

4. At the *Command* prompt, type the command you want to be called when the CF option you are creating is selected. If you cannot remember the correct format of the command or its parameters, press the F4=Prompt function key for assistance. Either type in the command and press F4=Prompt to see the prompt display for the command, or just press F4=Prompt to display a menu where you can choose to display all system commands or specific types of commands.

For this example, to create an option to copy all the members in a file for backup purposes, type the following command in the *Command* prompt:

```
CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL)
     TOMBR(*FROMMBR) MBROPT(*REPLACE)
```

In this command, BACKLIB and BACKFILE are the names of the library and file where you want the backups to be stored. To use this option, BACKFILE must exist in BACKLIB, and the contents of BACKFILE are replaced with the new members. &L and &N can be used on any library and file. PDM replaces these values with the library name and file name of the selected members on the list display.

Note: A complete list of all valid substitution variables is also available in the online help. To view the list from this display, press F1=Help and then press F2=Extended help.

```
                    Create User-Defined Option

Type option and command, press Enter.

  Option  . . . . . .  CF   Option to create

  Command . . . . . .  CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FRO
MMBR(*ALL) TOMBR(*FROMMBR) MBROPT(*REPLACE)_____________________________
_____________________________________________________________________
_____________________________________
```

Figure 190. Create User-Defined Option Display—Creating an Option

5. Press Enter, and the Work with User-Defined Options display reappears, as shown in Figure 191.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change        3=Copy          4=Delete        5=Display

Opt  Option  Command
 _     EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 _     CF    CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR




                                                                      Bottom
Command
===> ____________________________________________________________________
F3=Exit             F4=Prompt           F5=Refresh        F6=Create
F9=Retrieve         F10=Command entry                     F24=More keys
User-defined option CF has been created.
```

Figure 191. Work with User-Defined Options Display—after Creating an Option

You see a message at the bottom of the display indicating that the CF option was created. If you have a large number of user-defined options in this member, you may have to page down the list to find the user-defined option you created. The entire command for the option may not fit on the display.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu. The new option is now saved in the file QAUOOPT.

Figure 192 describes the valid parameter variables you can use for user-defined options and the values returned for each list type.

Figure 192 (Page 1 of 2). Substitution Values for User-Defined Options

Parm	Meaning	Description
&A	Object attribute	If you are working with objects, &A is replaced by the object attribute from the list. If you are working with libraries or members, &A is replaced by *NULL.
&B	List type	If you are working with a library list (*LIBL, *USRLIBL), &B is replaced by X. If you are working with a list of libraries (*ALL, *ALLUSR), &B is replaced by L. If you are working with a list of objects, &B is replaced by O. If you are working with a list of members, &B is replaced by M.
&C	Option	&C is replaced by the user-defined option code.
&D	Member change date	If you are working with members, &D is replaced by the date the member was last changed. The value returned is the system format with separator characters. Otherwise, &D is replaced by *NULL. You must use this variable in single quotation marks (that is, '&D') because the date may contain a slash (/), which is used as an operator.
&E	Run in batch	&E is replaced by *YES if Y is specified in the *Run in batch* prompt on the Change Defaults display and *NO if N is specified.
&F	File name	If you are working with members, &F is replaced by the name of the file that contains these members. For all other conditions, &F is replaced by *NULL.
&G	Job description library	&G is replaced by the job description library value from the Change Defaults display.
&H	Job description name	&H is replaced by the job description value from the Change Defaults display.
&J	Job description	&J is replaced by the job description value from the Change Defaults display in the format library/job description.
&L	Library name	If you are working with libraries, &L is replaced by QSYS. If you are working with objects or members, &L is replaced by the name of the library that contains the objects or members.
&N	Item name	&N is replaced by the name of the item in the list beside which the option was typed.
&O	Object library	If you are working with libraries, objects, or members, &O is replaced by the object library from the Change Defaults display.
&P	Compile in batch	&P is replaced by *YES if Y is specified in the *Compile in batch* prompt on the Change Defaults display and *NO of N is specified.
&R	Replace object	&R is replaced by *YES if Y is specified in the *Replace object* prompt on the Change Defaults display and *NO if N is specified.

Figure 192 (Page 2 of 2). Substitution Values for User-Defined Options

Parm	Meaning	Description
&S	Item type without '*'	If you are working with libraries, &S is replaced by LIB. If you are working with objects, &S is replaced by the object type without the asterisk '*'. If you are working with members, &S is replaced by the member type as is.
&T	Item type with '*'	If you are working with libraries, &T is replaced by *LIB. If you are working with objects or members, &T is replaced by the object or member type as is.
&U	User-Defined Option File	&U is replaced by the user-defined option file name from the Change Defaults display.
&V	User-Defined Option Library	&V is replaced by the user-defined option library name from the Change Defaults display.
&W	User-Defined Option File Member	&W is replaced by the user-defined option file member name from the Change Defaults display.
&X	Item text	&X is replaced by the text (in single quotation marks) of the item beside which the option was typed.

Changing User-Defined Options

Option 2 (Change) on the Work with User-Defined Options display allows you to change existing user-defined options. When you use the Change option, you cannot type anything on the command line.

The following example shows you how to change the CF user-defined option you created in the previous section:

1. Choose the displays as shown in the following sequence diagram.

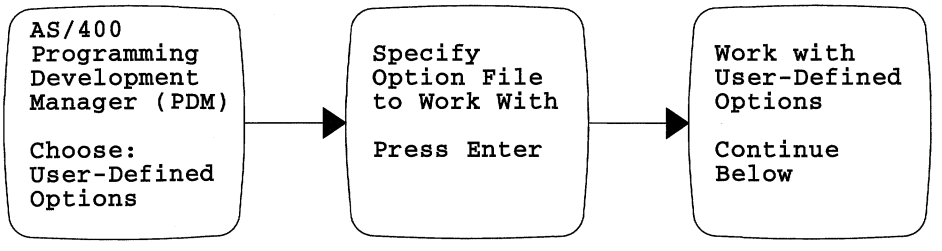


Figure 193. Working with User-Defined Options

2. On the Work with User-Defined Options display as shown in Figure 194 on page 128, type option 2 (Change) next to the user-defined option you want to change, in this example, the CF option.

```
                    Work with User-Defined Options

File . . . . . . . :   QAUOOPT          Member . . . . . . :   QAUOOPT
  Library  . . . . :     QGPL

Type options, press Enter.
  2=Change         3=Copy          4=Delete        5=Display

Opt  Option  Command
 _     EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 2     CF    CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR
```

Figure 194. Work with User-Defined Options Display—Choosing the Option to Change

3. Press Enter, and the Change User-Defined Option display appears, as shown in Figure 195.

```
                       Change User-Defined Option

 Type changes, press Enter.

   Option  . . . . . . . . .  CF   Value to change to

   Command . . . . . . . . .  CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FRO
MMBR(*ALL) TOMBR(*FROMMBR) MBROPT(*REPLACE)________________________________
___________________________________________________________________________
__________________________________________

F3=Exit     F4=Prompt      F12=Cancel
```

Figure 195. Change User-Defined Option Display—the User-Defined Option to Change

4. Make the changes you want by typing over the existing values in the *Option* and *Command* prompts. If you want to change the *Command* prompt, you can press F4=Prompt for assistance in entering the new command. For this example, change the *Option* prompt to C1. Leave the *Command* prompt as it is.

```
                    Change User-Defined Option

Type changes, press Enter.

  Option  . . . . . .  C1   Value to change to

  Command . . . . . .  CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FRO
MMBR(*ALL) TOMBR(*FROMMBR) MBROPT(*REPLACE)
```

Figure 196. Change User-Defined Option Display—after Changing User-Defined Option

5. Press Enter, and the Work with User-Defined Options display reappears, as shown in Figure 197.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change        3=Copy          4=Delete        5=Display

Opt  Option  Command
 _     EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 _     C1    CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR




                                                                      Bottom
Command
===>
F3=Exit             F4=Prompt           F5=Refresh        F6=Create
F9=Retrieve         F10=Command entry                     F24=More keys
User-defined option CF was changed to C1.
```

Figure 197. Work with User-Defined Options Display—after the Change Operation

On the bottom of the display, you see a message indicating that the CF user-defined option is changed. The new option name you assigned the user-defined option is shown in the list.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu. The changes to the user-defined option are now saved in file QAUOOPT.

Copying User-Defined Options

Option 3 (Copy) on the Work with User-Defined Options display allows you to copy any user-defined option from the current member to the same or another user-defined option member in the same library or file or in a different library or file.

Note: If you are copying to a different member, file or library, the *To file* prompt is updated as soon as all the options on the list have been completed. The Copy option is not a grouping option when selected on the Work with User-Defined Options display. Even if you press the F15 key to exit without saving changes, the copy is made. If copying to the same member, file, or library, the file is updated when you exit from the Work with User-Defined Options display by pressing the F3 key, the F12 key, or Enter. Pressing the F15 key cancels any changes to existing members.

The following example shows you how to copy the DM (display messages) user-defined option to a different member in another file.

1. Choose the displays as shown in the following sequence diagram:

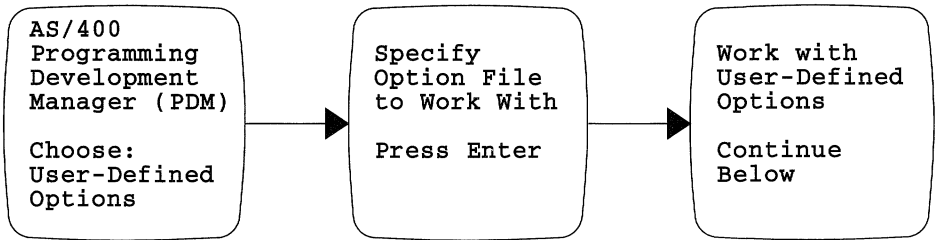


Figure 198. Working with User-Defined Options

2. On the Work with User-Defined Options display as shown in Figure 199, type 3 (Copy) next to the user-defined option you want to copy (in this example, the DM option).

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change         3=Copy          4=Delete        5=Display

Opt  Option  Command
 _     EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 _     C1    CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR
 3     DM    DSPMSG
```

Figure 199. Work with User-Defined Options Display—Choosing the Option to Copy

3. Press Enter, and the Copy User-Defined Option display appears, as shown in Figure 200 on page 131.

```
                        Copy User-Defined Options

From file . . . . . :    QAUOOPT
  From library  . . . :      QGPL
From member . . . . . :    QAUOOPT

Type the file, library, and member to receive copied options.

  To file . . . . . .    USEROPTS
    To library  . . . .      QGPL
  To member . . . . . .    USEROPTS

To rename copied option, type New Option, press Enter.

Option    New Option
  DM         DM




                                                                    Bottom
F3=Exit     F5=Refresh    F12=Cancel
```

Figure 200. Copy User-Defined Option Display—the User-Defined Option to Copy

4. Make the changes you want by typing over the existing values in the *To file*, *To library*, and *To member* prompts. If copying to the same member, file, and library, you must specify a new name for the option. If the option name already exists, you see a confirmation screen as shown in Figure 201. In this example, the option already exists, so type Y (Yes) in the *Replace existing option* prompt.

```
                  Confirm Copy of User-Defined Option

The following option already exists for this copy operation:

  Option which exists . . . . . :     DM
    Command . . . . . . . . . . :       DSPMSG

  File  . . . . . . . . . . . . :     USEROPT
    Library . . . . . . . . . . :       QGPL
  Member  . . . . . . . . . . . :     USEROPT

  Option to copy  . . . . . . . :     DM
  File  . . . . . . . . . . . . :     QAUOOPT
    Library . . . . . . . . . . :       QGPL
  Member  . . . . . . . . . . . :     QAUOOPT

Type choice, press Enter.
Press F12=Cancel to return and not perform the copy operation.

  Replace existing option  . . . . . .       Y    Y=Yes, N=No

F12=Cancel
```

Figure 201. Confirm Copy of User-Defined Option.

5. Press Enter, and the Work with User-Defined Options display reappears, as shown in Figure 202 on page 132.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change         3=Copy          4=Delete        5=Display

Opt  Option  Command
 _     EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 _     C1    CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR
 _     DM    DSPMSG




                                                                        Bottom
Command
===> ____________________________________________________________________________
F3=Exit             F4=Prompt           F5=Refresh        F6=Create
F9=Retrieve         F10=Command entry                     F24=More keys
User-defined option was copied to option DM.
```

Figure 202. Work with User-Defined Options Display—after the Copy Operation

On the bottom of the display, you see a message indicating that the DM user-defined option is copied.

6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Copying the User-Defined Options File

You may want to store some of your user-defined options in a file other than QAUOOPT. You can either create another user-defined options file or copy the PDM supplied user-defined options file.

The user-defined options file must be a physical file with a record length of 252 characters. The record format is as follows:

Position	Contents
1-2	The user-defined option, right justified
3-252	The command called for the option

Follow this example to copy the system user-defined options file to a file named UDO.

1. Choose the displays as shown in the following sequence diagram:

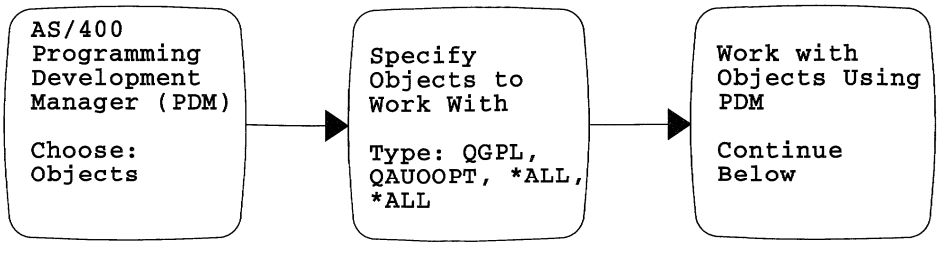


Figure 203. Working with Object QAUOOPT in QGPL

2. On the Work with Objects Using PDM display as shown in Figure 204, type 3 (Copy) next to the member you want to copy, which, in this example, is next to QAUOOPT.

```
                        Work with Objects Using PDM

Library . . . . .   QGPL_____        Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
3_   QAUOOPT     *FILE       PF-DTA

                                                                      Bottom
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 204. Work with Objects Using PDM Display—Choosing the File to Copy

3. Press Enter, and the Copy Objects display appears.
4. Type the name of the object and library to which you want to copy the user-defined options file. For this example, type ATEST for the *To library* prompt. In the *New name* list area next to the QAUOOPT object, type UDO.

```
                              Copy Objects

From library  . . . . . :   QGPL

Type the library name to receive the copied objects.

  To library  . . . . . .   ATEST_____

To rename copied object, type New Name, press Enter.

Object       Type        New Name
QAUOOPT      *FILE       UDO_______
```

Figure 205. Copy Objects Display—Showing Where to Copy the File

5. Press Enter, and the Work with Objects Using PDM display reappears.

   You now have another user-defined options file in which to store your user-defined options.
6. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Displaying User-Defined Options

Some of the commands you use in a user-defined option may be too long to be displayed in full on the Work with User-Defined Options display. If this happens, you can use option 5 (Display) to view the entire command. When using the display option, you cannot type anything on the command line.

Follow this example to display in full the command for the C1 user-defined option you changed in the last section:

1. Choose the displays as shown in the following sequence diagram:

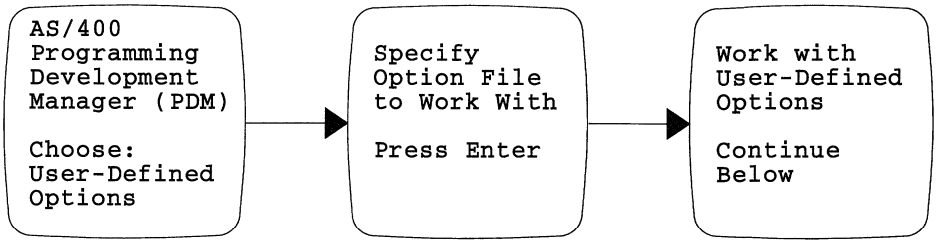


Figure 206. Working with User-Defined Options

2. On the Work with User-Defined Options display as shown in Figure 207, type option 5 (Display) next to the user-defined option you want to display.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change         3=Copy          4=Delete        5=Display

Opt  Option  Command
 _      EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 5      C1    CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR
```

Figure 207. Work with User-Defined Options Display—Choosing the Option to Display

3. Press Enter, and the Display User-Defined Option display appears, showing the entire command for the user-defined option you chose to view, as shown in Figure 208.

```
                      Display User-Defined Option

Press Enter to continue.

   Option  . . . . . :   C1

   Command . . . . . :   CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FRO
MMBR(*ALL) TOMBR(*FROMMBR) MBROPT(*REPLACE)
```

Figure 208. Display User-Defined Option—Showing the Command in Full

4. Press Enter. If you chose more than one user-defined option to display, the next user-defined option selected is displayed. Otherwise, you return to the Work with User-Defined Options display.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Using User-Defined Options

This section shows you how to use the C1 user-defined option you created in "Creating User-Defined Options" on page 123 to copy all the members in a file to a backup file. You can use user-defined options on the library, object, and member list displays. This example uses a file called BACKFILE in the library BACKLIB and a file CMDSRC in the library ATEST.

Note: The user-defined option you choose to use must be in the active user-defined options file. You specify which file is the active user-defined options file on the Change Defaults display. For more information on changing the active user-defined options file, see "Changing the Default User-Defined Options File" on page 151.

1. Choose the displays as shown in the following sequence diagram:

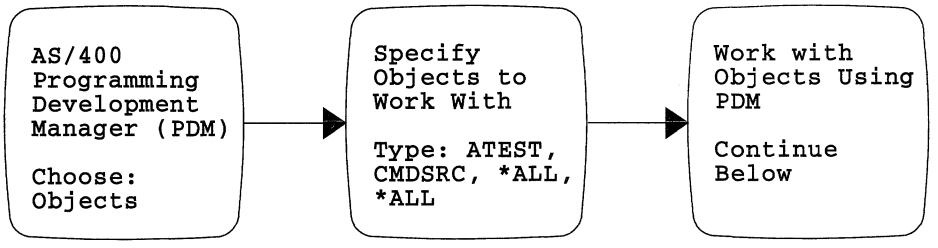


Figure 209. Working with CMDSRC Object in ATEST

2. On the Work with Objects Using PDM display as shown in Figure 210 on page 136, type C1 next to the file you want to copy. In this example, type C1 next to the CMDSRC file.

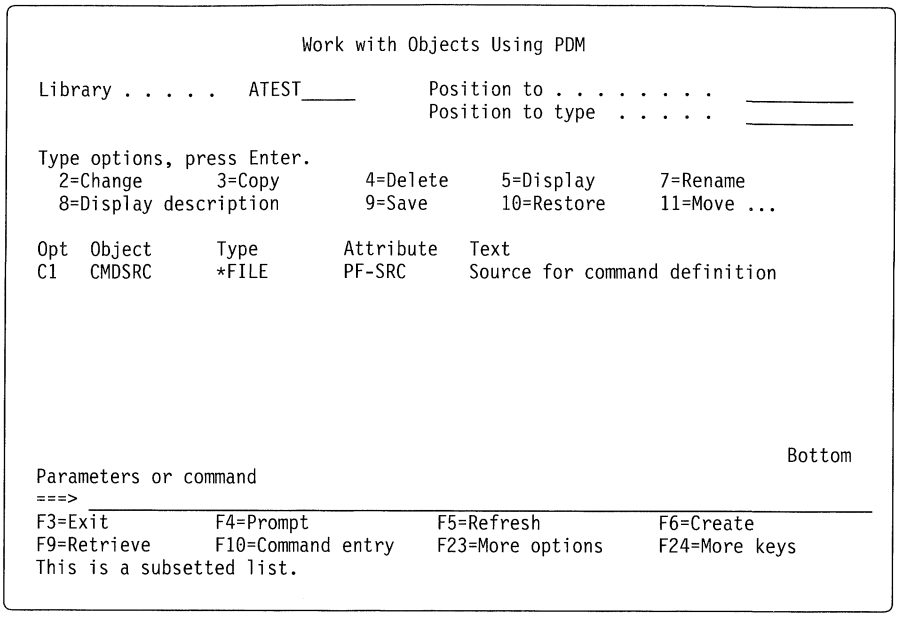


Figure 210. Work with Objects Using PDM Display—Using the C1 User-Defined Option

3. Press Enter. PDM calls the appropriate command in the user-defined options file for the user-defined option you selected. For this example, you have just copied all the members in the CMDSRC file to the BACKFILE file in the library BACKLIB.
4. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Using the User-Defined Option Window Program

The user-defined option window program, when called, creates a window in the upper right corner of the display listing the PDM user-defined options. You must compile and call the programs needed for this tool to be able to view the windows. All the source programs reside in library QUSRTOOL and all the information about the tool is found in member TPSINFO in QUSRTOOL/QATTINFO.

To install the tool, do the following:

1. Compile the member TPSINST in QUSRTOOL/QATTCL by typing 14 (Compile) next to it on the Work with Members Using PDM display.

   The compile will be done interactively or in batch, depending on what you have specified in the Change Defaults display. The compile creates an object TPSINST.
2. On the Work with Objects Using PDM display, type 16 (Run) next to the object TPSINST and press F4=Prompt.
3. Specify QUSRTOOL in the *Parameters* prompt, and press Enter.

   This program compiles all the members needed to run the window program.

4. To call the program, create your own user-defined option using the following command:

```
CALL PGM(QUSRTOOL/TPSCLUDO) PARM(&U &V &W '&A' &B
&C '&D' '&E' '&F' &G &H '&J' &L &N &O &P &R '&S' '&T'
&U &V &W &X)
```

Note: You must use a BASIC compiler to compile this code.

You can now use your user-defined option to see a window with the active user-defined options.

Note: The source code for this tool is provided without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranty of merchantability and fitness for a particular purpose.

Deleting User-Defined Options

Using PDM, you can delete user-defined options you no longer need. You can delete a group of user-defined options or an individual user-defined option in the list.

Follow this example to delete the C1 user-defined option you created earlier:

1. Choose the displays as shown in the following sequence diagram:

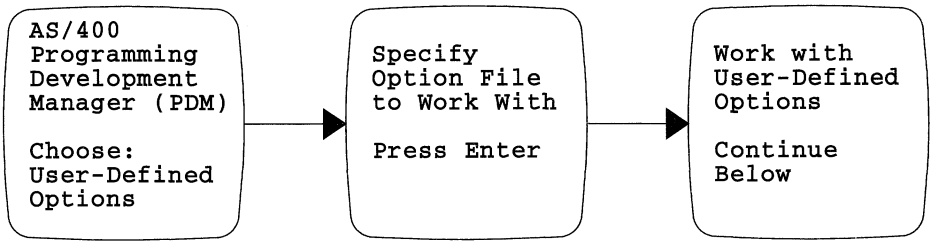


Figure 211. Working with User-Defined Options

2. On the Work with User-Defined Options display as shown in Figure 212, type option 4 (Delete) next to each option you want to delete. In this example, type 4 (Delete) beside the C1 option.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change        3=Copy           4=Delete        5=Display

Opt  Option  Command
      EA     EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 4    C1     CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR
```

Figure 212. Work with User-Defined Options Display—Choosing an Option to Delete

3. Press Enter, and the Confirm Delete of User-Defined Options display appears, listing all the user-defined options you chose to delete, as shown in Figure 213 on page 138. If you choose a large number, you may have to page down the list to see them all.

```
                  Confirm Delete of User-Defined Options

File . . . . . :   QAUOOPT
  Library . . . . :     QGPL
Member . . . . . :   QAUOOPT

Press Enter to confirm your choices for Delete.
Press F12=Cancel to return to change your choices.

Option        Command
  C1          CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR
```

Figure 213. Confirm Delete of User-Defined Options Display

4. Make sure the user-defined options listed are the ones you want to delete. If you decide you do not want to delete all the user-defined options listed, press F12=Cancel to return to the previous display and change your selections. If you do want to delete the user-defined options listed, press Enter.

   Note: When you press Enter, the user-defined options on every page of the Confirm Delete of User-Defined Options display are deleted, not just the ones on the page currently displayed.

   The Work with User-Defined Options display reappears after the system processes your requests, as shown in Figure 214. The option you chose to delete, in this example, option C1, is no longer in the list.

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change         3=Copy          4=Delete        5=Display

Opt  Option  Command
 _     EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)









                                                                      Bottom
Command
===>
F3=Exit             F4=Prompt           F5=Refresh        F6=Create
F9=Retrieve         F10=Command entry                     F24=More keys
User-defined option C1 is deleted.
```

Figure 214. Work with User-Defined Options Display—after the Delete Operation

If you now decide that you should not have deleted the user-defined option, in this example, option C1, follow the steps below to exit from the Work with User-Defined Options display without saving the changes you made to the QAUOOPT member.

5. On the Work with User-Defined Options display, press F24=More keys; the second set of function keys available for this display appears.

```
                                                                More...
Parameters or command
===>
F12=Cancel              F13=Repeat          F15=Exit without saving changes
F18=Change defaults                         F24=More keys
```

Figure 215. Work with User-Defined Options Display—Showing Additional Function Keys

Note: You do not need to have the additional function keys and options displayed to use them. Step 5 is not required, but you should use it until you are familiar with PDM.

6. Press F15=Exit without saving changes. You return to the AS/400 Programming Development Manager (PDM) menu without deleting the C1 user-defined option.
7. To check that the C1 user-defined option still exists, choose the displays as shown in the following sequence diagram:

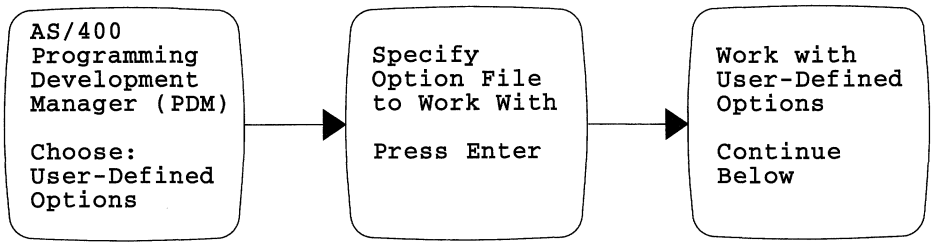


Figure 216. Working with User-Defined Options

```
                    Work with User-Defined Options

File . . . . . :   QAUOOPT          Member . . . . . :   QAUOOPT
  Library  . . . :     QGPL

Type options, press Enter.
  2=Change        3=Copy          4=Delete        5=Display

Opt  Option  Command
 _     EA    EDTOBJAUT OBJ(&L/&N) OBJTYPE(&T)
 _     C1    CPYF FROMFILE(&L/&N) TOFILE(BACKLIB/BACKFILE) FROMMBR(*ALL) TOMBR
```

Figure 217. Work with User-Defined Options Display—after Exiting Without Saving Changes

The user-defined option C1 is again included in the list.

8. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Chapter 7. Changing the Default Values for PDM

The Change Defaults display allows you to select the default values for certain operations in PDM. The Change Defaults display appears when you press F18=Change defaults on the AS/400 Programming Development Manager (PDM) menu or on any of the Work With displays. This chapter shows you how to change the PDM default values and explains the effects of doing so. Any changes you make to the prompts on the Change Defaults display are saved until the next time you change the prompts on this display.

Note: The prompts *Scan hierarchy, Search path*, and *Build scope* are specific to the Application Development Manager/400 product. If you do not have this product installed, these prompts are not enabled. If you do have this product installed, refer to the *Application Development Manager/400 User's Guide* for more information.

Changing Prompts That Affect Compiling Programs

When you compile a member, an object is created. The library in which this object is stored is determined by the *Object library* prompt on the Change Defaults display. This prompt is initially set to *SRCLIB to indicate that objects created as a result of compiling are to go to the source library. You can change this prompt so that objects created by compile operations are put in a special library set up for compiled programs.

If an object to be created as the result of compiling already exists, you can specify that the existing object is to be replaced by changing the *Replace object* prompt on the Change Defaults display. The new object created as a result of the compile is then placed in the library specified in the *Object library* prompt. (You can also use the REPLACE parameter on the create command that is called for compiling the member type.) To reach the Change Defaults display:

1. On any command line, type STRPDM.
2. Press Enter. The AS/400 Programming Development Manager (PDM) menu appears.
3. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 218 on page 142.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   *SRCLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   N            Y=Yes, N=No
  Compile in batch . . . . .   Y            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *CURLIB___ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                    More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 218. Change Defaults Display—before Compile Prompts are Changed

When the Change Defaults display appears, all the prompts are filled with their original default values (unless you made changes to the display previously).

4. On the Change Defaults display, change the *Object library* prompt to COMPLIB to indicate that you want all objects created as a result of compiling to be put in the library COMPLIB.
5. Change the *Replace object* prompt from N (No) to Y (Yes) to indicate that you want PDM to delete the existing object, if one exists, before the create command for the member is called.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   Y            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                    More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 219. Change Defaults Display—after the Compile Prompts are Changed

6. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

The defaults on this display for *Object library*, *Replace object*, *Compile in batch*, and *Job description* can be overridden by typing the commands on the command line.

From now on, when you compile a member using PDM, the object created is put into the COMPLIB library and, if the object to be created as a result of compiling already exists, it is replaced before the create command is called.

To see the effects of changing the *Object library* and *Replace object* default prompts, follow the steps outlined in "Compiling Members" on page 85 and then display the COMPLIB library.

Changing the Run and Compile Modes

You can change the mode (batch or interactive) in which a member is compiled or an object is run using the *Compile in batch* and *Run in batch* prompts on the Change Defaults display. The default value for the *Compile in batch* prompt is Y (Yes); the default for the *Run in batch* prompt is N (No).

Follow this example to change the default values of these prompts so that members are compiled interactively and objects are run in batch mode.

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 220.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   Y            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 220. Change Defaults Display—Changing the Compile and Run Modes

2. On this display, change the *Compile in batch* prompt to N (No), and the *Run in batch* prompt to Y (Yes).

Note: You could also change the job description and the library submitting the job at the *Job description* and *Library* prompts. For this example, use the default values of these prompts.

If you specify *USRPRF for the *Job description* prompt, you must leave the *Library* field that follows blank.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   Y            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 221. Change Defaults Display—after Changing the Compile and Run Modes

3. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

   Until you change the *Compile in batch* and *Run in batch* prompts again, when you compile a member it is compiled interactively, and when you run a program it is run in batch. To see the effects of these new default values, perform the steps outlined in "Running Objects" on page 67, "Running Source Member Procedures" on page 89, and "Compiling Members" on page 85.

Note: When you compile a member in batch, the library list used differs according to whether the member is a System/38 or an AS/400 member. When System/38 members are compiled in batch, the System/38 SBMJOB command is called to submit the job to batch processing. When AS/400 members are compiled in batch, the AS/400 SBMJOB command is called to submit the job to batch processing.

The default values of the INLLIBL parameter on the System/38 and AS/400 SBMJOB commands differ. As a result, the library list specified as part of the job description is used when you compile a System/38 member in batch, and the current library list for the job is used when you compile an AS/400 member in batch.

If you want to change the default library list used when compiling System/38 or AS/400 members in batch, create a user-defined option to compile members, and specify the default library list you want to use in the SBMJOB INLLIBL parameter. Then, when you want to compile a member, specify the option code for the option you created, instead of using option 14 (Compile) on the Work with Members Using PDM display. For information on creating user-defined options, see "Creating User-Defined Options" on page 123.

Changing Session Defaults

A PDM session is created is each time you use STRPDM, FNDSTRPDM, or any of the WRKxxxPDM commands. You can also call PDM recursively by issuing any one of these commands when you are already working within PDM. This means that you could have multiple active sessions of PDM within the same job.

The *Change session defaults* prompt lets you save the default values for your current session.

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 222.

```
                          Change Defaults

Type choices, press Enter.

  Object library . . . . . .   *COMPLIB__   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                    More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 222. Change Defaults Display—before Changing the Save Session Defaults Prompt

2. Type Y on the *Save session defaults* prompt to have changes to the default values saved in your user profile.

   Leaving this prompt set to its default means that any changes to the default values are effective for your current session only.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   *COMPLIB__   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   Y            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH___    Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 223. Change Defaults Display—after Changing the Save Session Defaults Prompt

3. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

Note: If you want batch jobs submitted through PDM to use the same default values as your current session, the *Save session defaults* value must be Y before the job is submitted to batch. These batch jobs must also run under the same user profile as the one that submitted it.

Saving and Restoring Objects

The *Save/restore option* prompt lets you save or restore selected objects or members individually or all at the same time.

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 224 on page 147.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   *COMPLIB__   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                    More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 224. Change Defaults Display—before Changing the Save/Restore Option Prompt

2. Type 1 on the *Save/Restore option* prompt to save or restore selected objects or members all at the same time with one command.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   *COMPLIB__   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   Y            Y=Yes, N=No
  Save/Restore option  . . .   2            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                    More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 225. Change Defaults Display—after Changing the Save Session Defaults Prompt

3. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

Selecting the Job Description

You can change your job description by changing the *Job description* prompt on the Change Defaults display. You can choose from a list of all valid job descriptions in the specified library to which you have authority by pressing F4 when your cursor is on the *Job description* prompt.

You can create a subset of the list by typing a generic name on the *Job description* prompt before pressing F4. This selection list is similar to the Select File Using PDM display when you are copying members or specifying the members to work with.

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 226.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   J*_______    Name, *USRPRF, F4 for list
    Library  . . . . . . . .     ATEST_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                    More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 226. Change Defaults Display—before Pressing F4 for a Selection List

2. To display a list of all job descriptions starting with J, type J* on the *Job description* prompt before pressing F4 for the list. Move the cursor to the *Job description* prompt and press F4.

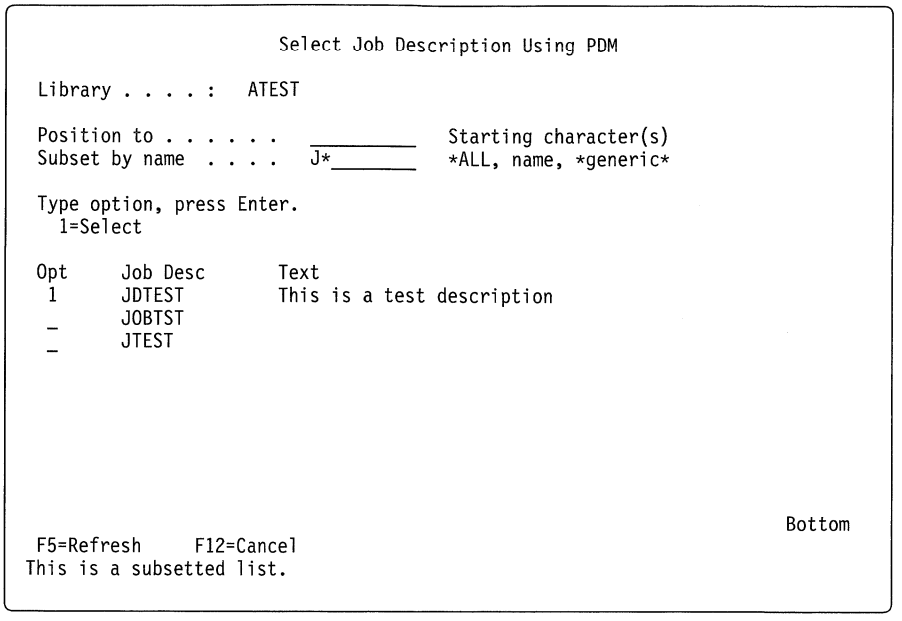


Figure 227. Select Job Description Using PDM—using F4 for List

3. Type 1 in the *Opt* prompt next to the job description that you want to work with, and press Enter. The Change Defaults display reappears with the *Job description* prompt filled in with your choice, as shown in Figure 228.

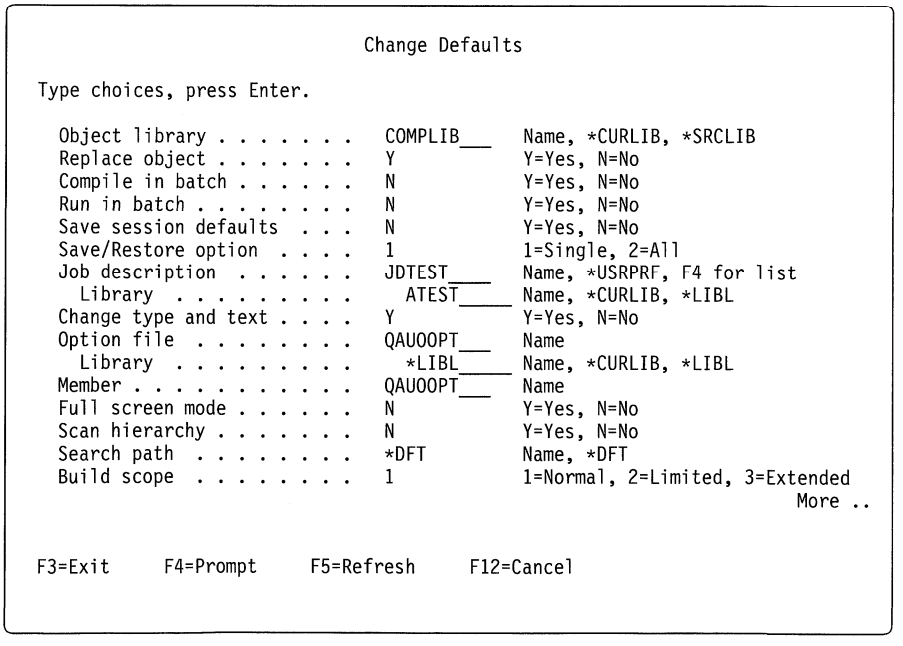


Figure 228. Change Defaults Display—after Pressing F4 for a Selection List

4. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

Restricting the Ability to Change Member Type and Text

When you work with members on the Work with Members Using PDM display, you can change the type and text of a member specified in the *Type* and *Text* column.

The command called when you select many of the options you can perform on members is determined by the member type. In these instances, if the option selected is to be successfully performed for the member, the member type must match the source code in the member. Allowing inexperienced users to change the member type could, therefore, lead to problems.

If you do not want to change the type and text of members, change the default value for the *Change type and text* prompt on the Change Defaults display, as shown in the following example:

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 229.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   Y            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 229. Change Defaults Display—before Changing the Change Type and Text Prompt

2. On the Change Defaults display, change the *Change type and text* prompt from Y (Yes) to N (No).

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   N            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 230. Change Defaults Display—after Changing the Change Type and Text Prompt

3. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

   From now on, you cannot change the type or text of a member on the Work with Members Using PDM display until you change the *Change type and text* prompt again.

Changing the Default User-Defined Options File

You can change the active user-defined options file, library, and member by changing the *Option file* prompt, the *Library* prompt, and the *Member* prompt on the Change Defaults display.

Follow this example to change the active user-defined options file, library, and member from their default values to the file, library, and member you created in "Copying the User-Defined Options File" on page 132:

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 231 on page 152.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH___    Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   N            Y=Yes, N=No
  Option file  . . . . . . .   QAUOOPT___   Name
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 231. Change Defaults Display—before Changing the User-Defined Options Prompts

2. On the Change Defaults display, change the *Option file* prompt to UDO, the *Library* prompt to ATEST, and leave the *Member* prompt as QAUOOPT.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH___    Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   N            Y=Yes, N=No
  Option file  . . . . . . .   UDO_______   Name
    Library  . . . . . . . .     ATEST_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 232. Change Defaults Display—after Changing the User-Defined Options Prompts

3. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

   Until you change these prompts again, the only user-defined options you can use are those in the UDO file in the library ATEST.

Changing List Displays to Full Screen Mode

All PDM list displays initially show list items and the options and function keys available for the display. You can change the mode of list displays so that more list items are displayed (without the options and function keys) by using the *Full screen mode* prompt on the Change Defaults display.

Follow this example to change the *Full screen mode* default value so that list displays appear in full screen mode:

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 233.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___    Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y             Y=Yes, N=No
  Compile in batch . . . . .   N             Y=Yes, N=No
  Run in batch . . . . . . .   N             Y=Yes, N=No
  Save session defaults  . .   N             Y=Yes, N=No
  Save/Restore option  . . .   1             1=Single, 2=All
  Job description  . . . . .   QBATCH____    Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____  Name, *CURLIB, *LIBL
  Change type and text . . .   N             Y=Yes, N=No
  Option file  . . . . . . .   UDO_______    Name
    Library  . . . . . . . .     ATEST_____  Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___    Name
  Full screen mode . . . . .   N             Y=Yes, N=No
  Scan hierarchy . . . . . .   N             Y=Yes, N=No
  Search path  . . . . . . .   *DFT          Name, *DFT
  Build scope  . . . . . . .   1             1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 233. Change Defaults Display—before Changing the Full Screen Mode Prompt

2. On the Change Defaults display, change the *Full screen mode* prompt from N (No) to Y (Yes).

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH___    Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL____  Name, *CURLIB, *LIBL
  Change type and text . . .   N            Y=Yes, N=No
  Option file  . . . . . . .   UDO_______   Name
    Library  . . . . . . . .     ATEST____  Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   Y            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                      More ..

F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 234. Change Defaults Display—after Changing the Full Screen Mode Prompt

3. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears. Until you change this prompt again, all PDM list displays are shown in full screen mode.
4. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Logging Option Commands

You can specify whether or not commands resulting from PDM options or user-defined options are logged. When the *Log option commands* prompt is set to Y (Yes), commands are logged, and can be retrieved on the PDM command line or PDM command entry panel with F9=Retrieve. The default value for this prompt is N (No).

Follow this example to change the *Log option commands* default value so that commands are logged:

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears, as shown in Figure 235 on page 155.

```
                              Change Defaults

Type choices, press Enter.

  Object library . . . . . .   COMPLIB___   Name, *CURLIB, *SRCLIB
  Replace object . . . . . .   Y            Y=Yes, N=No
  Compile in batch . . . . .   N            Y=Yes, N=No
  Run in batch . . . . . . .   N            Y=Yes, N=No
  Save session defaults  . .   N            Y=Yes, N=No
  Save/Restore option  . . .   1            1=Single, 2=All
  Job description  . . . . .   QBATCH____   Name, *USRPRF, F4 for list
    Library  . . . . . . . .     *LIBL_____ Name, *CURLIB, *LIBL
  Change type and text . . .   N            Y=Yes, N=No
  Option file  . . . . . . .   UDO_______   Name
    Library  . . . . . . . .     ATEST_____ Name, *CURLIB, *LIBL
  Member . . . . . . . . . .   QAUOOPT___   Name
  Full screen mode . . . . .   N            Y=Yes, N=No
  Scan hierarchy . . . . . .   N            Y=Yes, N=No
  Search path  . . . . . . .   *DFT         Name, *DFT
  Build scope  . . . . . . .   1            1=Normal, 2=Limited, 3=Extended
                                                                    More ..


F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

Figure 235. Change Defaults Display (First Screen)

2. On the Change Defaults display, press Page Down (Roll up) to display the second screen, shown in Figure 236.

```
                              Change Defaults

Type choices, press Enter.

  Log option commands. . . . .   Y            Y=Yes, N=No
  Exit lists on ENTER. . . . .   Y            Y=Yes, N=No

                                                                  Bottom
F3=Exit      F5=Refresh     F12=Cancel
```

Figure 236. Change Defaults Display (Second Screen)

3. Type Y (Yes) in the *Log option commands* prompt.
4. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.

All PDM options and user-defined options will be logged.

Changing the Default Value of the Enter Key in Lists

You can exit list displays using the Enter key by default. When the *Exit lists on ENTER* prompt is set to N (No), Enter cannot be used to exit list displays. You can still use F3=Exit and F12=Cancel to exit list displays.

Follow this example to change the *Exit lists on ENTER* default value so that Enter cannot be used to exit list displays:

1. On the AS/400 Programming Development Manager (PDM) menu, press F18=Change defaults, and the Change Defaults display appears.
2. On the Change Defaults display, press Page Down (Roll up) to display the second screen, shown in Figure 237.

```
                              Change Defaults

Type choices, press Enter.

  Log option commands. . . . .   N           Y=Yes, N=No
  Exit lists on ENTER. . . . .   N           Y=Yes, N=No

                                                                  Bottom
F3=Exit      F5=Refresh     F12=Cancel
```

Figure 237. Change Defaults Display (Second Screen)

3. Type N (No) in the *Exit lists on ENTER* prompt.
4. Press Enter, and the AS/400 Programming Development Manager (PDM) menu reappears.
5. Press F3=Exit to exit from PDM.

Chapter 8. General Information and Examples for List Displays

This chapter gives general information and shows examples that apply to all PDM list displays. It explains how to use the prompt and repeat function keys and how to enter parameter values on the command line for options you choose on list displays. It also explains the order in which operations are performed if you enter more than one option on a list display, and shows how to change list displays to multiple column format.

Using the Prompt Function Key

When you press F4=Prompt, you see the prompt display for the option selected in a list. Some of the parameters for commands are determined by PDM and cannot be changed. Other parameters may be filled in for your convenience but can be changed. If you type parameters on the command line, they replace the corresponding values on the prompt display, provided you do not enter values for the parameters that cannot be changed.

If you press the F4=Prompt function key for an option for which the prompt key is not valid, an error message is displayed. If you press the F4=Prompt function key when there is a command typed on the command line, the Prompt display for that command is shown. If you press the F4=Prompt function key when no options are typed in the *Opt* column of the list display and no commands are typed on the command line, a menu is displayed where you can choose to display all system commands or specific types of commands.

The following example shows you how to use the F4=Prompt function key to copy the CLSRC object with a type of *FILE in the APROD library:

1. Choose the displays as shown in the following sequence diagram:

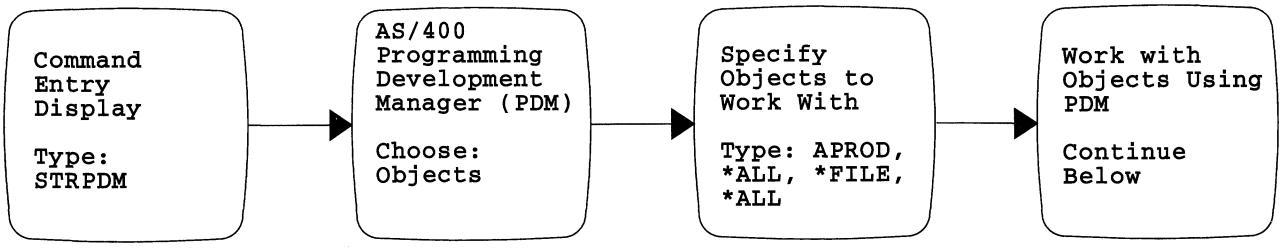


Figure 238. Working with All Objects of Type File in APROD

2. On the Work with Objects Using PDM display as shown in Figure 239 on page 158, type option 3 (Copy) next to the object you want to copy. For this example, type 3 (Copy) beside the CLSRC object. On the command line, type the following to indicate that you want to copy the object CLSRC to the object COMLSRC:

   ```
   NEWOBJ(COMLSRC)
   ```

```
                        Work with Objects Using PDM

Library . . . . .   APROD_____        Position to . . . . . .  _________
                                      Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
3_   CLSRC       *FILE       PF-SRC      Default source for CL source
__   CMDSRC      *FILE       PF-SRC      Source for command definition
__   REGDAT      *FILE       PF-SRC
__   REPORT      *FILE       PF-SRC      Source file for annual reports
__   TESTFILE    *FILE       PF-SRC      Test file
__   TXTSRC      *FILE       PF-SRC      Source file for text information


                                                                      Bottom
Parameters or command
===> NEWOBJ(COMLSRC)_____________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 239. Work with Objects Using PDM Display—Choosing Object to Copy to

3. Press F4=Prompt. The prompt display for the CRTDUPOBJ command appears.

   Notice that the prompt indicating where the CLSRC object should be copied to has the same name (COMLSRC) as the one you typed on the command line in the previous display.

4. Press Enter, and the Work with Objects Using PDM display reappears, as shown in Figure 240.

   The library now contains an object called COMLSRC. You may have to page through the list to find it.

```
                        Work with Objects Using PDM

Library . . . . .   APROD_____        Position to . . . . . .  _________
                                      Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   CLSRC       *FILE       PF-SRC      Default source for CL source
__   CMDSRC      *FILE       PF-SRC      Source for command definition
__   COMLSRC     *FILE       PF-SRC      Default source for CL source
__   REGDAT      *FILE       PF-SRC
__   REPORT      *FILE       PF-SRC      Source file for annual reports
__   TESTFILE    *FILE       PF-SRC      Test file
__   TXTSRC      *FILE       PF-SRC      Source file for text information


                                                                      Bottom
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
Object COMLSRC in APROD type *FILE created.                             +
```

Figure 240. Work with Objects Using PDM Display—after the Object is Copied

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Using the Repeat Function Key

The F13=Repeat function key allows you to repeat an option typed in the *Opt* column for an item on a list display for the remaining items in the list. The option is repeated downwards for all other items on the list for which the option is valid. Preceding items in the list, ahead of the current item, are ignored.

If only one option is typed for one item on a list display, or if one option is typed a number of times for consecutive items on the list, the option is repeated regardless of where the cursor is positioned. Otherwise, the cursor must be positioned on the option you want to repeat.

You can also specify a blank as a repeat option for a list as you would other options. If you have typed options for a group of list items and decide to erase them, you can type a blank next to the first item and press F13=Repeat. A confirmation message appears before each option is overwritten with a blank.

The following example shows you how to use the F13=Repeat function key to repeat an option on a list display when more than one option is typed on the list:

1. Choose the displays as shown in the following sequence diagram:

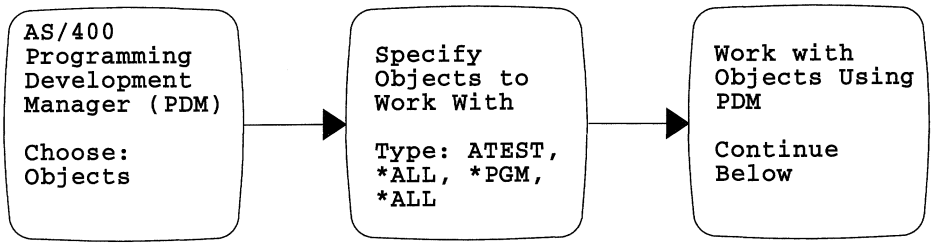


*Figure 241. Working with All Objects of Type *PGM in ATEST*

2. On the Work with Objects Using PDM display, press F24=More keys, and the next set of function keys available for the display appears, as shown in Figure 242.

```
                                                                More...

Parameters or command
===>
F11=Display names and types    F12=Cancel              F13=Repeat
F14=Display Size               F23=More options        F24=More keys
```

Figure 242. Work with Objects Using PDM Display—Second Set of Function Keys

Note: You do not have to display the additional function keys and options when you use them. Although step 2 is not required, you should perform it until you are familiar with PDM.

3. Type options next to the objects on which you want operations to be performed, as shown in Figure 243 on page 160.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____        Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
3_   ABACK2      *PGM        CLP         Program for administration backups
3_   BBACK2      *PGM        CLP         Program to do backups
5_   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
8_   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________________
F11=Display names and types    F12=Cancel              F13=Repeat
F14=Display Size               F23=More options        F24=More keys
```

Figure 243. Work with Objects Using PDM Display—Selecting Options

4. You can now choose the option to repeat by positioning the cursor on the appropriate option and pressing F13=Repeat.

   Note: If you type the same option for a number of nonconsecutive items on one page of the list display, or if you type more than one option on the list, you must position the cursor on the option you want to repeat. Otherwise, the system cannot determine which option to repeat or from where to repeat it.

   For this example, move the cursor to the *Opt* column beside the BGNPGM object and press F13=Repeat to repeat option 5 (Display).

   A warning message appears on the message line indicating that options have been typed for objects after the BGNPGM object on the list display. If you proceed with the repeat operation, these options will be overlaid.

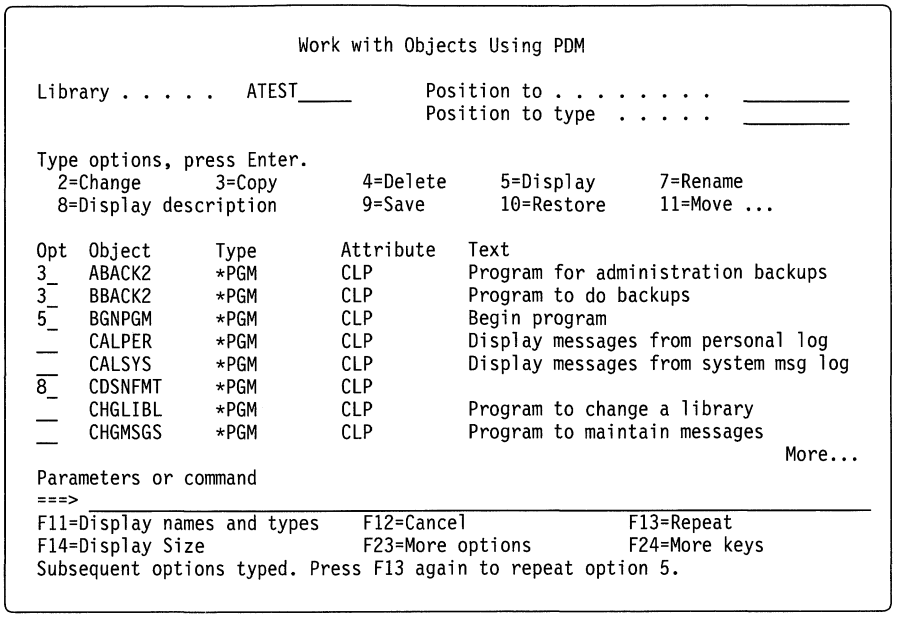


Figure 244. Work with Objects Using PDM Display—Repeating Option 5

5. Press Enter if you decide you do not want to repeat option 5 (Display). The Display option is not repeated, and the first option typed on the list display is processed.

   For this example, press F13=Repeat again to repeat the Display option for all items following the BGNPGM object on all pages of the list display.

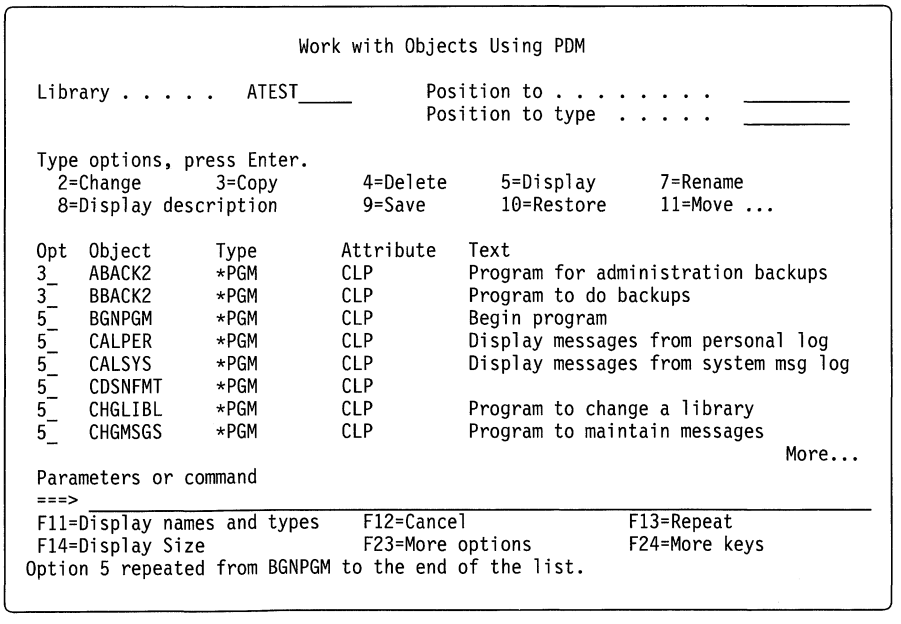


Figure 245. Work with Objects Using PDM Display—Option 5 Repeated

The Display option is repeated for all objects on the list after the BGNPGM object, and option 8 (Display description) in the *Opt* column for the CDSNFMT object is overlaid.

Note: When you select F13=Repeat, the option you choose to repeat is repeated for all items on all pages of the list display, not just for the items on the page that is currently displayed.

6. Press Enter to process each option selected on the list in turn.
7. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Positioning the Object List

You can position the list of objects to a particular object by typing the object name or partial name in the *Position to* prompt of the Work with Objects Using PDM display. The following examples show you how this works.

1. Choose the displays as shown in the following sequence diagram:

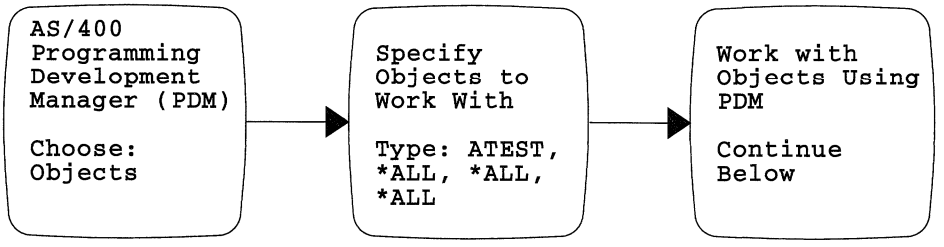


Figure 246. Working with All Objects in ATEST

2. On the Work with Objects Using PDM display, fill in the *Position to* and *Position to type* prompts with the object name and type to which you want to move the list. Press Enter, and the list is repositioned to the object in the list with that name and type. For this example, leave the *Position to type* prompt blank and use a partial name in the *Position to* prompt.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   CB_______
                                      Position to type  . . . .  _________

Type options, press Enter.
  2=Change      3=Copy       4=Delete     5=Display      7=Rename
  8=Display description      9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute    Text
__   ADMBACK     *PGM        CLP          Program for administration backups
__   BACKTEST    *PGM        CLP          Test program for backups
__   BACKUP      *PGM        CLP          Program to do backups
__   BGNPGM      *PGM        CLP          Begin program
__   CALPER      *PGM        CLP          Display messages from personal log
__   CALSYS      *PGM        CLP          Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP          Program to change a library
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 247. Work with Objects Using PDM Display—Positioning the List

3. Press Enter, and the list is positioned to the object with the name that is before the one you specified, because the one specified does not exist.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
__   CLNADM      *PGM        CLP         Clean administration program
__   CLNA7       *PGM        CLP
__   MYDATA      *DTAARA
__   PRODDATA    *DTAARA                 Production Data
                                                                    More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 248. Work with Objects Using PDM Display—Showing the New Position

4. If the list is currently positioned past the place where the specified object would be found within the current object type, the list is positioned to the next object type. In the above example, if you enter A in the *Position to* prompt, the list would move to MYDATA *DTAARA.
5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Order of Operations on List Displays

This section explains the order in which options are processed when you choose different options at the same time on a list display.

Positioning a List with Options Typed

If you change the *Position to* or *Position to type* prompts at the top of a list display and do not change the *File* or *Library* prompts (depending on the list display), the list is repositioned. If you also select options on the list, they are not processed immediately, and are shown when that page of the list is displayed again.

The following example illustrates this situation:

1. Choose the displays as shown in the following sequence diagram:

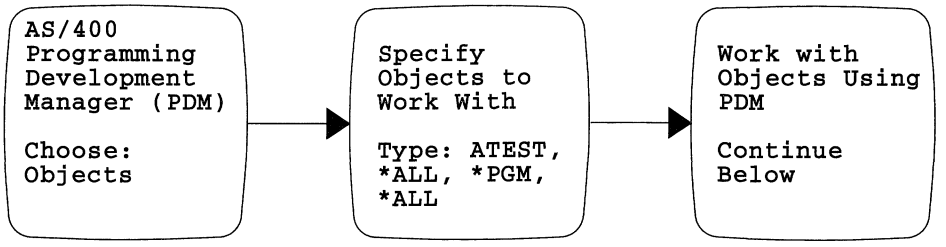


*Figure 249. Working with All Objects of Type *PGM in ATEST*

2. Type C in the *Position to* prompt.
3. Type option 7 (Rename) next to one of the objects. For this example, type 7 (Rename) next to the CHGMSGS object.

```
                          Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  C_________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
7_   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
This is a subsetted list.
```

Figure 250. Work with Objects Using PDM Display—Positioning the List with Options Typed

4. Press Enter, and the Work with Objects Using PDM display reappears, as shown in Figure 251 on page 165.

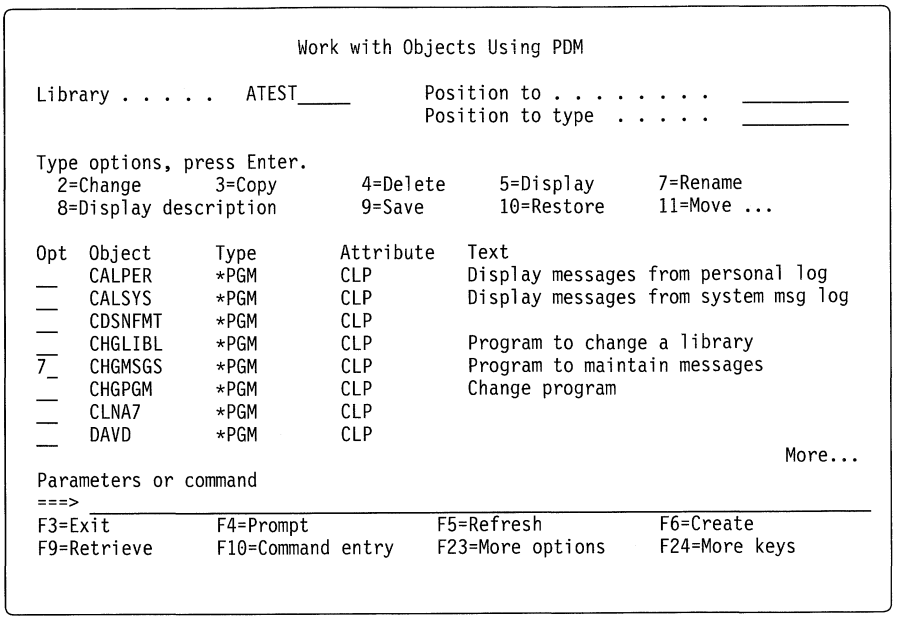


Figure 251. Work with Objects Using PDM—the List Repositioned with Options Pending

The list is positioned to the first object whose name begins with the letter C and whose type is *PGM. The Rename option is not processed; it is still pending. If you press Enter again, the Rename option is performed.

5. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Changing the Library and Position to Prompts

If you change the *Library* and the *Position to* prompts at the top of a list display, the list is changed to display the objects in the new library, and it is also positioned in accordance with the values you specify. The following example illustrates this situation:

1. Choose the displays as shown in the following sequence diagram:

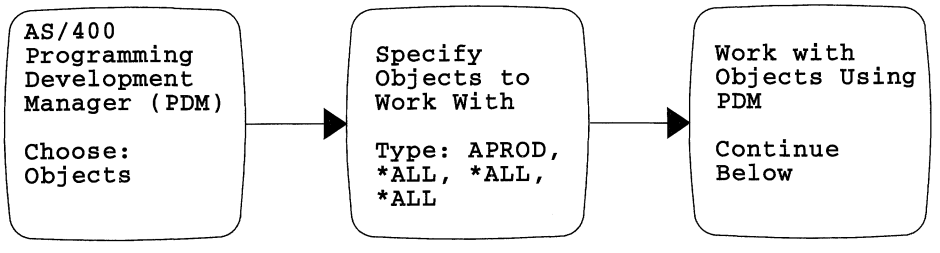


Figure 252. Working with All Objects in APROD

2. Type ATEST in the *Library* prompt and C in the *Position to* prompt.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  C_________
                                      Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy       4=Delete     5=Display      7=Rename
  8=Display description       9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK       *PGM        CLP         Program for administration backups
__   ACCTS       *PGM        CLP         Program to maintain accounts
__   AWAYWEGO    *PGM        CLP         5 - 10 minute warning for backups
__   BACKUP      *PGM        CLP         Program to do backups
__   BBACK       *PGM        CLP         Program to do backups
__   BGNIWSSRV   *PGM        CLP
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 253. Work with Objects Using PDM Display—Changing the Library and the List Position

3. Press Enter to reposition the list and display the objects in the ATEST library.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                      Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy       4=Delete     5=Display      7=Rename
  8=Display description       9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   CALPER      *PGM        CLP         Display messages from personal msg log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
__   CHGPGM      *PGM        CLP         Change program
__   CLNA7       *PGM        CLP
__   DAVD        *PGM        CLP
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 254. Work with Objects Using PDM Display—the Library Changed and the List Repositioned

The objects in the ATEST library are shown, and the list is positioned to the first object beginning with the letter C whose type is *PGM.

4. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.

Sequence in Which Options are Processed

If you select more than one type of option on a list display, the options are processed sequentially, starting with the first option selected.

When you select an option and press Enter, PDM first determines whether it is a grouping option, that is, whether the option chosen is Copy, Rename, Delete, or Move. If it is a grouping option, a grouping display is shown, listing all the items for which a particular option was chosen and requesting confirmation (and, possibly, additional input).

You can choose to perform all the operations on grouping displays interactively, or you can submit them to batch. To submit them to batch, press F19=Submit to batch. When you submit options to batch, each occurrence of the option results in a command that is submitted to batch processing; therefore one batch job is submitted for each item on the grouping screen.

If you want to perform all the operations on the grouping display interactively, press Enter. The operation is performed for the first item on the grouping display but is not necessarily performed on the remaining items on the grouping display right away. Options selected on list displays are processed sequentially, so the option selected for the second item on the list display is now processed. The following example illustrates this situation:

1. Choose the displays as shown in the following sequence diagram:

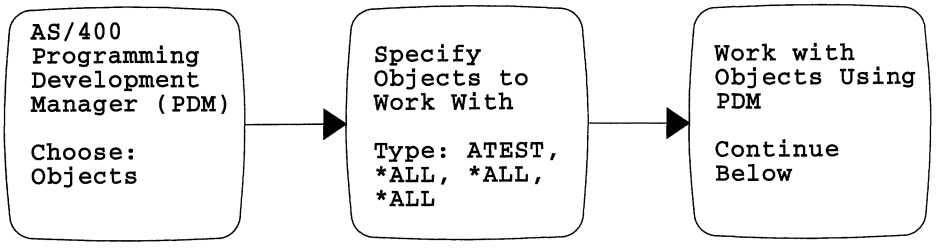


Figure 255. Working with All Objects in ATEST

2. Type different options next to the objects on the list, as shown in Figure 256 on page 168.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   _________
                                      Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy        4=Delete     5=Display      7=Rename
  8=Display description        9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
3_   ABACK2      *PGM        CLP         Program for administration backups
7_   BBACK2      *PGM        CLP         Program to do backups
3_   BGNPGM      *PGM        CLP         Begin program
7_   CALPER      *PGM        CLP         Display messages from personal log
4_   CALSYS      *PGM        CLP         Display messages from system msg log
3_   CDSNFMT     *PGM        CLP
7_   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 256. Work with Objects Using PDM Display—Choosing Different Options

3. Press Enter. The grouping display for the first option entered in the *Opt* column is displayed. For this example, the Copy Objects display appears, because option 3 (Copy) is the first option selected on the list display.

```
                              Copy Objects

From library  . . . . . :   ATEST

Type the library name to receive the copied objects.

  To library  . . . . . .   ATEST_____

To rename copied object, type New Name, press Enter.

Object      Type        New Name
ABACK2      *PGM        ABACK2____
BGNPGM      *PGM        BGNPGM____
CDSNFMT     *PGM        CDSNFMT___
```

Figure 257. Copy Objects Display—Showing Objects to Copy

Notice that this display contains all the objects you chose to copy, regardless of their position in the list and the options selected for preceding items in the list. PDM, however, processes options selected on list displays sequentially, so although all the objects for which you selected the Copy option are listed on the first grouping display that appears, they are not processed until all options selected for preceding objects on the list display are processed.

4. Type the new name for each object you selected to copy under the *New Name* column next to each object listed.

```
                              Copy Objects

From library  . . . . . :   ATEST

Type the library name to receive the copied objects.

  To library  . . . . . .   ATEST_____

To rename copied object, type New Name, press Enter.

Object      Type      New Name
ABACK2      *PGM      ABACK_____
BGNPGM      *PGM      BGNPGM2___
CDSNFMT     *PGM      CDSNFMT2__
```

Figure 258. Copy Objects Display—Showing Where to Copy Objects

5. Press Enter. At this point, only ABACK2 is copied. The grouping display for the second object on the list display for which you selected an option now appears. For this example, the Rename Objects display appears, listing all the objects you chose to rename, as shown in Figure 259.

```
                            Rename Objects

Library . . . . . :   ATEST

To rename object, type New Name, press Enter.

Object      Type      New Name
BBACK2      *PGM      BBACK2____
CALPER      *PGM      CALPER____
CHGLIBL     *PGM      CHGLIBL___
```

Figure 259. Rename Objects Display—Showing Objects to Rename

6. Type the new name for each object listed on the Rename Objects display under the *New Name* column next to each object listed, as shown in Figure 260.

```
                            Rename Objects

Library . . . . . :   ATEST

To rename object, type New Name, press Enter.

Object      Type      New Name
BBACK2      *PGM      BBACK_____
CALPER      *PGM      CALPER2___
CHGLIBL     *PGM      CLIB______
```

Figure 260. Rename Objects Display—Showing New Names Chosen

7. Press Enter. At this point, BBACK2 is renamed, BGNPGM (the third object on the list display for which you selected an option) is copied, and CALPER (the fourth object on the list display for which you selected an option) is renamed.

   The grouping display for the next option is now displayed. For this example, the Confirm Delete of Objects display appears, listing all the objects you chose to delete, as shown in Figure 261 on page 170.

```
                        Confirm Delete of Objects

Library . . . . . :   ATEST

Press Enter to confirm your choices for Delete.
Press F12=Cancel to return to change your choices.

Object      Type      Attribute   Text
CALSYS      *PGM      CLP         Display messages from system msg log
```

Figure 261. Confirm Delete of Objects Display—Listing Objects to Delete

8. Press F12=Cancel to indicate that you do not want to perform this operation.
9. The Work with Objects Using PDM display reappears, and the CALSYS object is not deleted, as shown in Figure 262.

```
                          Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .   _________
                                     Position to type  . . . . .   _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Programs to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
4    CALSYS      *PGM        CLP         Display messages from system msg log
3    CDSNFMT     *PGM        CLP
7    CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________________
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

Figure 262. Work with Objects Using PDM Display—Showing Pending Options

Notice that all the options after and including the first delete option are pending. The options before the first delete option have been performed, but the results are not shown in the list because other options are pending.

To refresh the list, press F5=Refresh. The pending options are removed from the list.

10. If you do not refresh the list, you can press Enter to perform all the options that are pending, or press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu without processing the remaining options.

Changing List Displays to Multiple Column Format

The F11=Display names, Display text function key, which is available on all list displays **except** the Work with User-Defined Options display, allows you to display the items in a list in either single column format with text or multiple column format without text.

One label for the F11 function key is always Display text. The alternate label for the F11 function key is determined by the type of list display you are working on, and can be either Display names only, Display names and types, or Display names and dates.

The following example shows you how to change list displays to multiple column format:

1. Choose the displays as shown in the following sequence diagram:

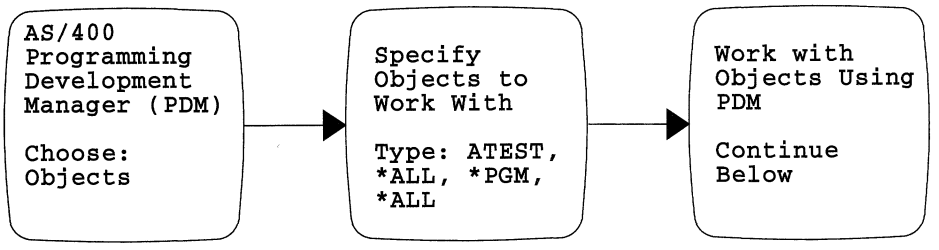


*Figure 263. Working with All Objects of Type *PGM in ATEST*

2. On the Work with Objects Using PDM display, press F24=More keys, and the next set of function keys available for the display appears, as shown in Figure 264.

```
                        Work with Objects Using PDM

Library . . . . .   ATEST_____       Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt  Object      Type        Attribute   Text
__   ABACK2      *PGM        CLP         Program for administration backups
__   BBACK2      *PGM        CLP         Program to do backups
__   BGNPGM      *PGM        CLP         Begin program
__   CALPER      *PGM        CLP         Display messages from personal log
__   CALSYS      *PGM        CLP         Display messages from system msg log
__   CDSNFMT     *PGM        CLP
__   CHGLIBL     *PGM        CLP         Program to change a library
__   CHGMSGS     *PGM        CLP         Program to maintain messages
                                                                      More...
Parameters or command
===> ____________________________________________________________________
F11=Display names and types    F12=Cancel              F13=Repeat
F14=Display Size               F23=More options        F24=More keys
```

Figure 264. Work with Objects Using PDM Display—Showing Additional Function Keys

Note: You do not have to display the additional function keys and options when you use them. Although step 2 is not required, you should perform it until you are familiar with PDM.

3. Press F11=Display names and types, and the Work with Objects Using PDM display reappears in multiple column format, as shown in Figure 265.

```
                          Work with Objects Using PDM

Library . . . . .  ATEST_____        Position to . . . . . .  _________
                                     Position to type  . . . . .  _________

Type options, press Enter.
  2=Change       3=Copy         4=Delete     5=Display      7=Rename
  8=Display description         9=Save       10=Restore     11=Move ...

Opt Object     Type       Opt Object    Type       Opt Object    Type
__  ABACK2     *PGM       __  CHGPGM    *PGM       __  DM        *PGM
__  BBACK2     *PGM       __  CLNA7     *PGM       __  DSRPGM    *PGM
__  BGNPGM     *PGM       __  DAVD      *PGM       __  DTBAK     *PGM
__  CALPER     *PGM       __  DB        *PGM       __  FORSYS    *PGM
__  CALSYS     *PGM       __  DDATA     *PGM       __  HARLIB    *PGM
__  CDSNFMT    *PGM       __  DISAB     *PGM       __  HORSGS    *PGM
__  CHGLIBL    *PGM       __  DLEM      *PGM       __  LEATRL    *PGM
__  CHGMSGS    *PGM       __  DLTID     *PGM       __  MANSMP    *PGM
                                                                  More...
Parameters or command
===> ____________________________________________________________________
F11=Display text              F12=Cancel             F13=Repeat
F14=Display Size              F23=More options       F24=More keys
```

Figure 265. Work with Objects Using PDM Display—in Multiple Column Format

Notice that the *Attribute* and *Text* columns of the Work with Objects Using PDM display are no longer shown, and additional object names and types are listed. Note also that F11=Display names and types has changed to F11=Display text.

From this point on, all PDM list displays appear in multiple column format until you press F11=Display text on a PDM list display again.

4. Press F3=Exit to return to the AS/400 Programming Development Manager (PDM) menu.
5. Press F3=Exit to leave PDM.

Appendix A. Command Reference for Objects, Libraries, and Members

This appendix lists the commands that are called for libraries, members, and object types for each of the options available in PDM.

Command Reference for Objects

The following figures show you the AS/400 system commands that are called for particular object types for each option available on the Work with Objects Using PDM display.

These figures list only the object types on which PDM can perform operations.

Commands Called for the Change Option

Figure 266 (Page 1 of 2). Commands Called for the Change Option

Type	Attribute	Command
*AUTL		EDTAUTL
*CFGL		CHGCFGL
*CMD		CHGCMD
*COSD		CHGCOSD
*DTAARA		CHGDTAARA
*FCT		CHGFCT
*FILE	DDMF	CHGDDMF
*FILE	DKTF	CHGDKTF
*FILE	DSPF	CHGDSPF
*FILE	ICFF	CHGICFF
*FILE	LF	CHGLF
*FILE	PF-DTA	CHGPF
*FILE	PF-SRC	CHGSRCPF
*FILE	PRTF	CHGPRTF
*FILE	SAVF	CHGSAVF
*FILE	TAPF	CHGTAPF
*JOBD		CHGJOBD
*JRN		CHGJRN
*LIB		CHGLIB
*MENU		CHGMNU
*MODD		CHGMODD
*MSGQ		CHGMSGQ
*OUTQ		CHGOUTQ
*PGM	ALL	CHGPGM
*SBSD		CHGSBSD

Figure 266 (Page 2 of 2). Commands Called for the Change Option

Type	Attribute	Command
*SSND		CHGSSND
*USRPRF		CHGUSRPRF

Commands Called for the Copy Option

Figure 267 (Page 1 of 2). Commands Called for the Copy Option

Type	Attribute	Command
*ALRTBL		CRTDUPOBJ
*AUTL		CRTDUPOBJ
*CHTFMT		CRTDUPOBJ
*CLD		CRTDUPOBJ
*CLS		CRTDUPOBJ
*CMD		CRTDUPOBJ
*CSPMAP		CRTDUPOBJ
*CSPTBL		CRTDUPOBJ
*DTAARA		CRTDUPOBJ
*FCT		CRTDUPOBJ
*FILE	ALL	CRTDUPOBJ
*FNTRSC		CRTDUPOBJ
*FORMDF		CRTDUPOBJ
*GSS		CRTDUPOBJ
*JOBD		CRTDUPOBJ
*JOBQ		CRTDUPOBJ
*LIB		CPYLIB
*MENU		CRTDUPOBJ
*MSGF		CRTDUPOBJ
*MSGQ		CRTDUPOBJ
*OUTQ		CRTDUPOBJ
*OVL		CRTDUPOBJ
*PAGSEG		CRTDUPOBJ
*PDG		CRTDUPOBJ
*PGM	ALL	CRTDUPOBJ
*PNLGRP		CRTDUPOBJ
*PRDDFN		CRTDUPOBJ
*QMFORM		CRTDUPOBJ
*QMQRY		CRTDUPOBJ
*QRYDFN		CRTDUPOBJ
*SBSD		CRTDUPOBJ

Figure 267 (Page 2 of 2). Commands Called for the Copy Option

Type	Attribute	Command
*SCHIDX		CRTDUPOBJ
*SSND		CRTDUPOBJ
*TBL		CRTDUPOBJ
*USRIDX		CRTDUPOBJ
*USRSPC		CRTDUPOBJ

Commands Called for the Delete Option

Figure 268 (Page 1 of 2). Commands Called for the Delete Option

Type	Attribute	Command
*ALRTBL		DLTALRTBL
*AUTL		DLTAUTL
*CFGL		DLTCFGL
*CHTFMT		DLTCHTFMT
*CLD		DLTCLD
*CLS		DLTCLS
*CMD		DLTCMD
*CNNL		DLTCNNL
*COSD		DLTCOSD
*CSI		DLTCSI
*CSPMAP		DLTCSPMAP
*CSPTBL		DLTCSPTBL
*CTLD		DLTCTLD
*DEVD		DLTDEVD
*DTAARA		DLTDTAARA
*DTADCT		DLTDTADCT
*DTAQ		DLTDTAQ
*EDTD		DLTEDTD
*FCT		DLTFCT
*FILE	ALL	DLTF
*FNTRSC		DLTFNTRSC
*FORMDF		DLTFORMDF
*GSS		DLTGSS
*IGCDCT		DLTIGCDCT
*IGCTBL		DLTIGCTBL
*JOBD		DLTJOBD
*JOBQ		DLTJOBQ
*JRN		DLTJRN

Figure 268 (Page 2 of 2). Commands Called for the Delete Option

Type	Attribute	Command
*JRNRCV		DLTJRNRCV
*LIB		DLTLIB
*LIND		DLTLIND
*MENU		DLTMNU
*MODD		DLTMODD
*MSGF		DLTMSGF
*MSGQ		DLTMSGQ
*NWID		DLTNWID
*OUTQ		DLTOUTQ
*OVL		DLTOVL
*PAGDFN		DLTPAGDFN
*PAGSEG		DLTPAGSEG
*PDG		DLTPDG
*PGM	DFU	DLTDFUPGM
*PGM	other	DLTPGM
*PNLGRP		DLTPNLGRP
*QMFORM		DLTQMFORM
*QMQRY		DLTQMQRY
*QRYDFN		DLTQRY
*SBSD		DLTSBSD
*SCHIDX		DLTSCHIDX
*SPADCT		DLTSPADCT
*SSND		DLTSSND
*TBL		DLTTBL
*USRIDX		DLTUSRIDX
*USRPRF		DLTUSRPRF
*USRQ		DLTUSRQ
*USRSPC		DLTUSRSPC

Commands Called for the Display Option

Figure 269 (Page 1 of 2). Commands Called for the Display Option

Type	Attribute	Command
*AUTL		DSPAUTL
*CFGL		DSPCFGL
*CHTFMT		DSPCHT
*CLS		DSPCLS
*CMD		DSPCMD

Figure 269 (Page 2 of 2). Commands Called for the Display Option

Type	Attribute	Command
*CNNL		DSPCNNL
*COSD		DSPCOSD
*CSI		DSPCSI
*CSPMAP		DSPCSPOBJ
*CSPTBL		DSPCSPOBJ
*CTLD		DSPCTLD
*DEVD		DSPDEVD
*DTAARA		DSPDTAARA
*DTADCT		DSPDTADCT
*EDTD		DSPEDTD
*FILE	DDMF	DSPDDMF
*FILE	DKTF	DSPFD
*FILE	DSPF	STRSDA OPTION (3)
*FILE	ICFF	DSPFD
*FILE	LF	DSPFD
*FILE	PF-DTA	DSPFD
*FILE	PF-SRC	DSPFD
*FILE	PRTF	DSPFD
*FILE	SAVF	DSPSAVF
*FILE	TAPF	DSPFD
*IGCDCT		DSPIGCDCT
*JOBD		DSPJOBD
*JRN		DSPJRN
*JRNRCV		DSPJRNRCVA
*LIB		DSPLIB
*LIND		DSPLIND
*MENU		DSPMNUA
*MODD		DSPMODD
*MSGF		DSPMSGD
*MSGQ		DSPMSG
*NWID		DSPNWID
*PGM	ALL	DSPPGM
*SBSD		DSPSBSD
*USRPRF		DSPUSRPRF

Commands Called for the Rename Option

Figure 270 (Page 1 of 2). Commands Called for the Rename Option

Type	Attribute	Command
*ALRTBL		RNMOBJ
*AUTL		RNMOBJ
*CFGL		RNMOBJ
*CHTFMT		RNMOBJ
*CLD		RNMOBJ
*CLS		RNMOBJ
*CMD		RNMOBJ
*CNNL		RNMOBJ
*CSPMAP		RNMOBJ
*CSPTBL		RNMOBJ
*CTLD		RNMOBJ
*DEVD		RNMOBJ
*DTAARA		RNMOBJ
*DTAQ		RNMOBJ
*EDTD		RNMOBJ
*FCT		RNMOBJ
*FILE	ALL	RNMOBJ
*FNTRSC		RNMOBJ
*FORMDF		RNMOBJ
*GSS		RNMOBJ
*JOBD		RNMOBJ
*JOBQ		RNMOBJ
*LIB		RNMOBJ
*LIND		RNMOBJ
*MENU		RNMOBJ
*MSGF		RNMOBJ
*MSGQ		RNMOBJ
*NWID		RNMOBJ
*OUTQ		RNMOBJ
*OVL		RNMOBJ
*PAGSEG		RNMOBJ
*PDG		RNMOBJ
*PGM	ALL	RNMOBJ
*PNLGRP		RNMOBJ
*PRDDFN		RNMOBJ
*QMFORM		RNMOBJ
*QMQRY		RNMOBJ

Figure 270 (Page 2 of 2). Commands Called for the Rename Option

Type	Attribute	Command
*QRYDFN		RNMOBJ
*RCT		RNMOBJ
*SBSD		RNMOBJ
*SCHIDX		RNMOBJ
*SPADCT		RNMOBJ
*SSND		RNMOBJ
*TBL		RNMOBJ
*USRIDX		RNMOBJ
*USRQ		RNMOBJ
*USRSPC		RNMOBJ

Commands Called for the Display Description Option

Figure 271 (Page 1 of 2). Commands Called for the Display Description Option

Type	Attribute	Command
*ALRTBL		DSPOBJD
*AUTL		DSPOBJD
*CFGL		DSPOBJD
*CHTFMT		DSPOBJD
*CLD		DSPOBJD
*CLS		DSPOBJD
*CMD		DSPOBJD
*CNNL		DSPOBJD
*COSD		DSPOBJD
*CSI		DSPOBJD
*CSPMAP		DSPOBJD
*CSPTBL		DSPOBJD
*CTLD		DSPOBJD
*DEVD		DSPOBJD
*DTAARA		DSPOBJD
*DTADCT		DSPOBJD
*DTAQ		DSPOBJD
*EDTD		DSPOBJD
*FCT		DSPOBJD
*FILE	ALL	DSPOBJD
*FNTRSC		DSPOBJD
*FORMDF		DSPOBJD
*GSS		DSPOBJD

Figure 271 (Page 2 of 2). Commands Called for the Display Description Option

Type	Attribute	Command
*IGCDCT		DSPOBJD
*IGCSRT		DSPOBJD
*IGCTBL		DSPOBJD
*JOBD		DSPOBJD
*JOBQ		DSPOBJD
*JRN		DSPOBJD
*JRNRCV		DSPOBJD
*LIB		DSPOBJD
*LIND		DSPOBJD
*MENU		DSPOBJD
*MODD		DSPOBJD
*MSGF		DSPOBJD
*MSGQ		DSPOBJD
*NWID		DSPOBJD
*OUTQ		DSPOBJD
*OVL		DSPOBJD
*PAGDFN		DSPOBJD
*PAGSEG		DSPOBJD
*PDG		DSPOBJD
*PGM	ALL	DSPOBJD
*PNLGRP		DSPOBJD
*PRDAVL		DSPOBJD
*PRDDFN		DSPOBJD
*PRDLOD		DSPOBJD
*QMFORM		DSPOBJD
*QMQRY		DSPOBJD
*QRYDFN		DSPOBJD
*RCT		DSPOBJD
*SBSD		DSPOBJD
*SCHIDX		DSPOBJD
*SPADCT		DSPOBJD
*SSND		DSPOBJD
*S36		DSPOBJD
*TBL		DSPOBJD
*USRIDX		DSPOBJD
*USRPRF		DSPOBJD
*USRQ		DSPOBJD
*USRSPC		DSPOBJD

Commands Called for the Save Option

Figure 272 (Page 1 of 2). Commands Called for the Save Option

Type	Attribute	Command
*ALRTBL		SAVOBJ
*CFGL		SAVOBJ
*CHTFMT		SAVOBJ
*CLD		SAVOBJ
*CLS		SAVOBJ
*CMD		SAVOBJ
*CSI		SAVOBJ
*CSPMAP		SAVOBJ
*CSPTBL		SAVOBJ
*DTAARA		SAVOBJ
*DTAQ		SAVOBJ
*EDTD		SAVOBJ
*FCT		SAVOBJ
*FILE	DDMF	SAVOBJ
*FILE	DKTF	SAVOBJ
*FILE	DSPF	SAVOBJ
*FILE	ICFF	SAVOBJ
*FILE	LF	SAVOBJ
*FILE	PF-DTA	SAVOBJ
*FILE	PF-SRC	SAVOBJ
*FILE	PRTF	SAVOBJ
*FILE	SAVF	SAVSAVFDTA
*FILE	TAPF	SAVOBJ
*FNTRSC		SAVOBJ
*FORMDF		SAVOBJ
*GSS		SAVOBJ
*IGCSRT		SAVOBJ
*IGCTBL		CPYIGCTBL
*JOBD		SAVOBJ
*JOBQ		SAVOBJ
*JRN		SAVOBJ
*JRNRCV		SAVOBJ
*LIB		SAVLIB
*MENU		SAVOBJ
*MSGF		SAVOBJ
*MSGQ		SAVOBJ

Figure 272 (Page 2 of 2). Commands Called for the Save Option

Type	Attribute	Command
*OUTQ		SAVOBJ
*OVL		SAVOBJ
*PAGDFN		SAVOBJ
*PAGSEG		SAVOBJ
*PDG		SAVOBJ
*PGM	ALL	SAVOBJ
*PNLGRP		SAVOBJ
*PRDAVL		SAVOBJ
*QMFORM		SAVOBJ
*QMQRY		SAVOBJ
*QRYDFN		SAVOBJ
*RCT		SAVOBJ
*SBSD		SAVOBJ
*SCHIDX		SAVOBJ
*SPADCT		SAVOBJ
*SSND		SAVOBJ
*S36		SAVOBJ
*TBL		SAVOBJ
*USRIDX		SAVOBJ
*USRQ		SAVOBJ
*USRSPC		SAVOBJ

Commands Called for the Restore Option

Figure 273 (Page 1 of 2). Commands Called for the Restore Option

Type	Attribute	Command
*ALRTBL		RSTOBJ
*CFGL		RSTOBJ
*CHTFMT		RSTOBJ
*CLD		RSTOBJ
*CLS		RSTOBJ
*CMD		RSTOBJ
*CSI		RSTOBJ
*CSPMAP		RSTOBJ
*CSPTBL		RSTOBJ
*DTAARA		RSTOBJ
*EDTD		RSTOBJ
*FCT		RSTOBJ

Figure 273 (Page 2 of 2). Commands Called for the Restore Option

Type	Attribute	Command
*FILE	ALL	RSTOBJ
*FNTRSC		RSTOBJ
*FORMDF		RSTOBJ
*GSS		RSTOBJ
*IGCSRT		RSTOBJ
*IGCTBL		CPYIGCTBL
*JOBD		RSTOBJ
*JOBQ		RSTOBJ
*LIB		RSTLIB
*MENU		RSTOBJ
*MSGF		RSTOBJ
*MSGQ		RSTOBJ
*OUTQ		RSTOBJ
*OVL		RSTOBJ
*PAGDFN		RSTOBJ
*PAGSEG		RSTOBJ
*PDG		RSTOBJ
*PGM	ALL	RSTOBJ
*PNLGRP		RSTOBJ
*PRDAVL		RSTOBJ
*PRDDFN		RSTOBJ
*PRDLOD		RSTOBJ
*QMFORM		RSTOBJ
*QMQRY		RSTOBJ
*QRYDFN		RSTOBJ
*RCT		RSTOBJ
*SBSD		RSTOBJ
*SCHIDX		RSTOBJ
*SPADCT		RSTOBJ
*SSND		RSTOBJ
*S36		RSTOBJ
*TBL		RSTOBJ
*USRIDX		RSTOBJ
*USRQ		RSTOBJ
*USRSPC		RSTOBJ

Commands Called for the Move Option

Figure 274 (Page 1 of 2). Commands Called for the Move Option

Type	Attribute	Command
*ALRTBL		MOVOBJ
*CHTFMT		MOVOBJ
*CLD		MOVOBJ
*CLS		MOVOBJ
*CMD		MOVOBJ
*CSPMAP		MOVOBJ
*CSPTBL		MOVOBJ
*DTAARA		MOVOBJ
*DTAQ		MOVOBJ
*FCT		MOVOBJ
*FILE	ALL	MOVOBJ
*FNTRSC		MOVOBJ
*FORMDF		MOVOBJ
*GSS		MOVOBJ
*JOBD		MOVOBJ
*JOBQ		MOVOBJ
*JRN		MOVOBJ
*JRNRCV		MOVOBJ
*MENU		MOVOBJ
*MSGF		MOVOBJ
*MSGQ		MOVOBJ
*OUTQ		MOVOBJ
*OVL		MOVOBJ
*PAGSEG		MOVOBJ
*PDG		MOVOBJ
*PGM	ALL	MOVOBJ
*PNLGRP		MOVOBJ
*PRDDFN		MOVOBJ
*QMFORM		MOVOBJ
*QMQRY		MOVOBJ
*QRYDFN		MOVOBJ
*RCT		MOVOBJ
*SBSD		MOVOBJ
*SCHIDX		MOVOBJ
*SPADCT		MOVOBJ
*SSND		MOVOBJ
*TBL		MOVOBJ

Figure 274 (Page 2 of 2). Commands Called for the Move Option

Type	Attribute	Command
*USRIDX		MOVOBJ
*USRQ		MOVOBJ
*USRSPC		MOVOBJ

Commands Called for the Work With Option

Figure 275 (Page 1 of 2). Commands Called for the Work With Option

Type	Attribute	Command
*ALRTBL		WRKALRTBL
*AUTL		WRKAUTL
*CFGL		WRKCFGL
*CHTFMT		WRKCHTFMT
*CLS		WRKCLS
*CNNL		WRKCNNL
*COSD		WRKCOSD
*CSI		WRKCSI
*CSPMAP		WRKOBJCSP
*CSPTBL		WRKOBJCSP
*CTLD		WRKCTLD
*DEVD		WRKDEVD
*DTAARA		WRKDTAARA
*DTADCT		WRKDTADCT
*DTAQ		WRKDTAQ
*EDTD		WRKEDTD
*FILE	PF-DTA	WRKMBRPDM
*FILE	PF-SRC	WRKMBRPDM
*FILE	Other	WRKF
*FNTRSC		WRKFNTRSC
*FORMDF		WRKFORMDF
*GSS		WRKGSS
*JOBD		WRKJOBD
*JOBQ		WRKJOBQ
*JRN		WRKJRNA
*JRNRCV		WRKJRNRCV
*LIB		WRKOBJPDM
*LIND		WRKLIND
*MENU		WRKMNU
*MODD		WRKMODD
*MSGF		WRKMSGF

Figure 275 (Page 2 of 2). Commands Called for the Work With Option

Type	Attribute	Command
*MSGQ		WRKMSGQ
*NWID		WRKNWID
*OUTQ		WRKOUTQ
*OVL		WRKOVL
*PAGDFN		WRKPAGDFN
*PAGSEG		WRKPAGSEG
*PGM		WRKPGM
*PGM	*CSPAE	WRKOBJCSP
*PNLGRP		WRKPNLGRP
*QMFORM		WRKQMFORM
*QMQRY		WRKQMQRY
*SBSD		WRKSBSD
*SCHIDX		WRKSCHIDX
*SPADCT		WRKSPADCT
*TBL		WRKTBL
*USRPRF		WRKUSRPRF

Commands Called for the Change Text Option

Figure 276 (Page 1 of 3). Commands Called for the Change Text Option

Type	Attribute	Command
*ALRTBL		CHGOBJD
*AUTL		CHGOBJD
*CFGL		CHGOBJD
*CHTFMT		CHGOBJD
*CLD		CHGOBJD
*CLS		CHGOBJD
*CMD		CHGOBJD
*CNNL		CHGOBJD
*COSD		CHGOBJD
*CSI		CHGOBJD
*CSPMAP		CHGOBJD
*CSPTBL		CHGOBJD
*CTLD		CHGOBJD
*DEVD		CHGOBJD
*DTAARA		CHGOBJD
*DTADCT		CHGOBJD
*DTAQ		CHGOBJD
*EDTD		CHGOBJD

Figure 276 (Page 2 of 3). Commands Called for the Change Text Option

Type	Attribute	Command
*FCT		CHGOBJD
*FILE	ALL	CHGOBJD
*FNTRSC		CHGOBJD
*FORMDF		CHGOBJD
*GSS		CHGOBJD
*IGCDCT		CHGOBJD
*IGCSRT		CHGOBJD
*IGCTBL		CHGOBJD
*JOBD		CHGOBJD
*JOBQ		CHGOBJD
*JRN		CHGOBJD
*JRNRCV		CHGOBJD
*LIB		CHGOBJD
*LIND		CHGOBJD
*MENU		CHGOBJD
*MODD		CHGOBJD
*MSGF		CHGOBJD
*MSGQ		CHGOBJD
*NWID		CHGOBJD
*OUTQ		CHGOBJD
*OVL		CHGOBJD
*PAGDFN		CHGOBJD
*PAGSEG		CHGOBJD
*PDG		CHGOBJD
*PGM	ALL	CHGOBJD
*PNLGRP		CHGOBJD
*PRDAVL		CHGOBJD
*PRDDFN		CHGOBJD
*PRDLOD		CHGOBJD
*QMFORM		CHGOBJD
*QMQRY		CHGOBJD
*QRYDFN		CHGOBJD
*RCT		CHGOBJD
*SBSD		CHGOBJD
*SCHIDX		CHGOBJD
*SPADCT		CHGOBJD
*SSND		CHGOBJD
*S36		CHGOBJD
*TBL		CHGOBJD

Figure 276 (Page 3 of 3). Commands Called for the Change Text Option

Type	Attribute	Command
*USRIDX		CHGOBJD
*USRPRF		CHGOBJD
*USRQ		CHGOBJD
*USRSPC		CHGOBJD

Commands Called for the Copy File Option

Figure 277. Commands Called for the Copy File Option

Type	Attribute	Command
*FILE	DKTF	CPYF
*FILE	LF	CPYF
*FILE	PF-DTA	CPYF
*FILE	PF-SRC	CPYSRCF

Commands Called for the Run Option

Figure 278. Commands Called for the Run Option

Type	Attribute	Command
*CMD		Command is called
*PGM	DFU	CHGDTA
*PGM	other	CALL
*QRYDFN		RUNQRY

Commands Called for the Change Using DFU Option

Figure 279. Commands Called for the Change Using DFU Option

Type	Attribute	Command
*FILE	PF-DTA	UPDDTA
*FILE	LF	UPDDTA
*PGM	DFU	STRDFU OPTION (3)

Commands Called for the Find String Option

Figure 280. Commands Called for the Find String Option

Type	Attribute	Command
*FILE	PF-DTA	Find character string in member (interactive mode)
		FNDSTRPDM (batch mode)
*FILE	PF-SRC	Find character string in member

Command Reference for Libraries

The following figure shows you the AS/400 system commands that are called for each option that can be performed on a library.

Figure 281. Commands Called for Libraries

Option	Command
Change	CHGLIB
Change text	CHGOBJD
Copy	CPYLIB
Delete	DLTLIB
Display	DSPLIB
Display description	DSPOBJD
Rename	RNMOBJ
Restore	RSTLIB
Save	SAVLIB
Work with	WRKOBJPDM

Command Reference for Members

The following figure shows you the AS/400 system commands that are called for each option that can be performed on a member:

Figure 282 (Page 1 of 2). Commands Called for Members

Option	Command Source Member	Command Data File Member
Change text	CHGPFM	CHGPFM
Change using DFU		UPDDTA
Change using RLU	STRRLU OPTION(2)	
Change using SDA		STRSDA
Compile	See Figure 283 on page 190	
Copy	CPYSRCF	CPYF
Delete	RMVM	RMVM
Display	STRSEU OPTION(5)	DSPPFM
Display description	Display member description	Display member description

Figure 282 (Page 2 of 2). Commands Called for Members

Option	Command Source Member	Command Data File Member
Edit	STRSEU OPTION(2)	Not available
Find string	Search member for character string	FNDSTRPDM
Print	STRSEU OPTION(6)	Not available
Rename	RNMM	RNMM
Run procedure	REXX	STRREXPRC
	OCL36	STRS36PRC
	BASP	STRBASPRC
	BASP38	QSYS38/EXCBASPRC
Save	SAVOBJ	SAVOBJ

The following figure shows you the compile command that is called for each of the member types. If you select the compile option for a member with a type other than one of those listed, an error message is issued.

Figure 283 (Page 1 of 2). Compile Commands Called for Members

Type	Compile Command
BAS	CRTBASPGM
BAS36	CRTBASPGM
BAS38	CRTBASPGM
C	CRTCPGM
CBL	CRTCBLPGM
CBL36	CRTS36CBL
CBL38	CRTCBLPGM
CLD	CRTCLD
CLP	CRTCLPGM
CLP38	CRTCLPGM
CMD	CRTCMD
CMD38	CRTCMD
DSPF	CRTDSPF
DSPF36	CRTS36DSPF
DSPF38	CRTDSPF
FTN	CRTFTNPGM
ICFF	CRTICFF
LF	CRTLF
LF38	CRTLF
PAS	CRTPASPGM
PF	CRTPF
PF38	CRTPF
PLI	CRTPLIPGM

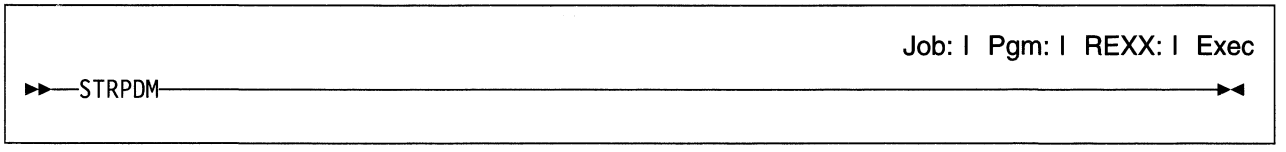
Figure 283 (Page 2 of 2). Compile Commands Called for Members

Type	Compile Command
PLI38	CRTPLIPGM
PNLGRP	CRTPNLGRP
PRTF	CRTPRTF
PRTF38	CRTPRTF
QRY38	CRTQRYAPP
RMC	CRTRMCPGM
RPG	CRTRPGPGM
RPG36	CRTS36RPG
RPG38	CRTRPGPGM
RPT	CRTRPTPGM
RPT36	CRTS36RPT
RPT38	CRTRPTPGM
SPADCT	CRTSPADCT
SQLC	CRTSQLC
SQLCBL	CRTSQLCBL
SQLFTN	CRTSQLFTN
SQLPLI	CRTSQLPLI
SQLRPG	CRTSQLRPG
TBL	CRTTBL

Appendix B. Control Language Commands in the Programming Development Manager

This appendix lists the CL commands that are specific to the programming development manager. Each of the command parameters is followed by a description of its use.

STRPDM (Start Programming Development Manager) Command



Purpose

The STRPDM command calls the programming development manager (PDM) utility. A menu is shown allowing you to choose from a set of options so that you can work with libraries, objects, members, and user-defined options.

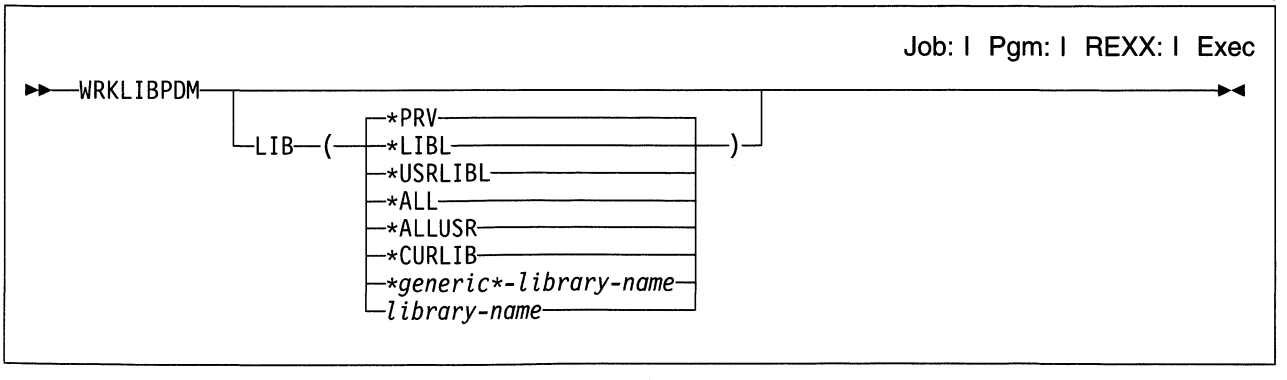
There are no parameters for this command.

Example

```
STRPDM
```

This command calls the PDM utility.

WRKLIBPDM (Work with Libraries Using PDM) Command



Purpose

The WRKLIBPDM command allows you to work with lists of libraries. Using this command, you can bypass the programming development manager (PDM) menu and the Specify Libraries to Work With display.

Optional Parameters

LIB

Specifies the libraries with which to work. This parameter can be used to create a subset of a list of libraries by a library name or a generic library name.

***PRV:** The library list type that was used during the previous session is used.

***LIBL:** All the libraries in the user *and* system portions of the job's library list are used.

***USRLIBL:** Only the libraries listed in the user portion of the job's library list are used.

***ALL:** All the libraries in the system, including QSYS and QTEMP, are used.

***ALLUSR:** All the non-system libraries, including a list of all user-defined libraries, are used. The list is displayed alphabetically by library.

***CURLIB:** The current library in the library list is used. If a current library is not specified, the QGPL library is used.

**generic*-library-name:* Specify a partial library name qualified by an asterisk (*) to show a list of libraries whose names begin with the prefix that precedes the asterisk. For a list of generic library names, see "Library List" on page 17. For more information on the use of generic functions, refer to the *CL Reference*.

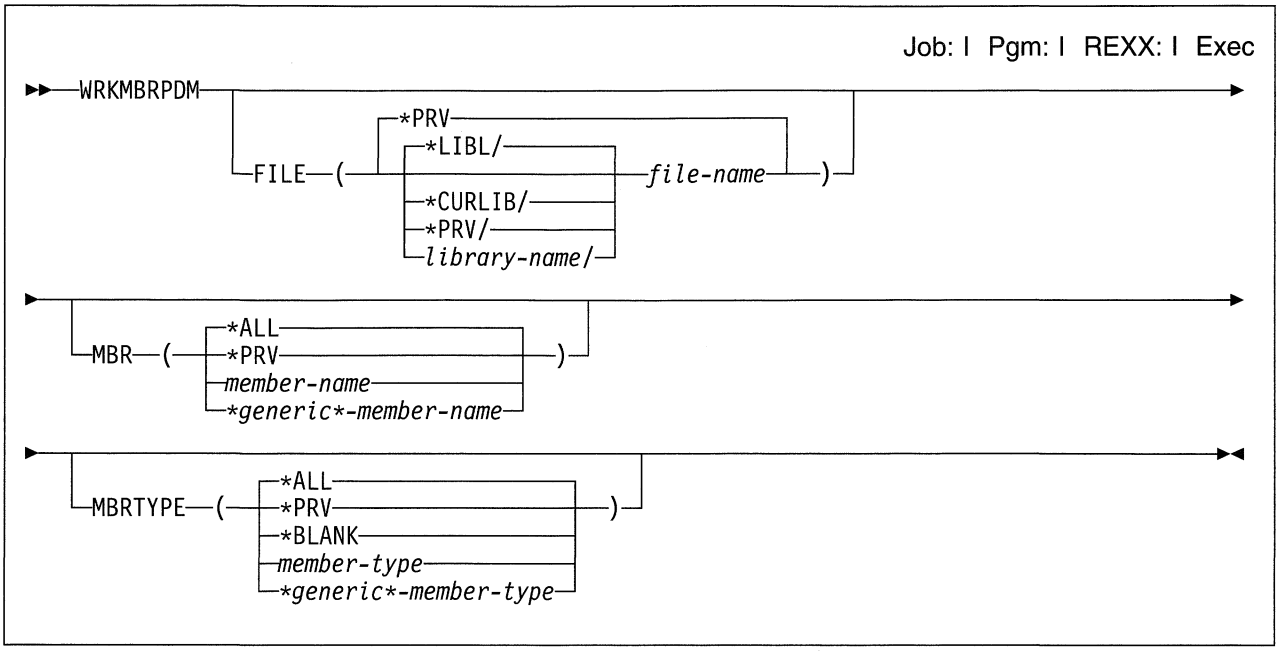
library-name: Specify a library name for a display with only that library name in the list.

Example

```
WRKLIBPDM  LIB(ABC*)
```

This command shows the Work with Libraries using PDM Display and shows all libraries starting with ABC.

WRKMBRPDM (Work with Members Using PDM) Command



Purpose

The WRKMBRPDM command allows you to work with lists of members. Using this command, you can bypass the Programming Development Manager (PDM) menu and the Specify Members to Work With display.

Optional Parameters

FILE

Specifies the qualified name of the file (in the form LIB/FILE) that contains the members with which to work. The first time this command is used, you must specify a file name; no default is supplied. The file can be a source physical file or a data physical file.

***PRV:** Specifies that PDM uses the file name and library name used in the previous PDM session.

The possible library values are:

***LIBL:** The library list is used to locate the file.

***CURLIB:** The current library for the job is used to locate the file. If no current library entry exists in the library list, the QGPL library is used.

***PRV:** Specifies that PDM uses the library name used in the previous PDM session.

library-name: Specify the library name containing the file.

MBR

Specifies the member name. This parameter can be used to work with all the members or a subset of members in the specified file.

***ALL:** Displays a list of all the members in the specified file.

***PRV:** Specifies the member name that was used in the previous PDM session.

member-name: Specify a member name for a display with only that member name in the list.

**generic*-member-name:* Specify a partial member name qualified by an asterisk (*) to display a list of members that meet the specific criteria. For a list of generic names, see "Library List" on page 17. For more information on the use of generic functions, refer to the *CL Reference*.

MBRTYPE

Specifies the member type. This parameter can be used to work with all member types in a specified file or a subset of members.

***ALL:** Displays a list of all members with any member type.

***PRV:** Specifies the member type that was used in the previous PDM session.

member-type: Specify any member type to display a list of all members of that particular type.

You can use a member type that you have created, or use one of the following standard member types used by PDM commands:

BAS	Basic
BAS36	Basic System/36
BAS38	Basic System/38
BASP	Basic Native Procedure
BASP38	Basic System/38 Native Procedure
C	C Language
CBL	COBOL
CBL36	COBOL System/36
CBL38	COBOL System/38
CICSMAP	CICS Map
CLD	C Locale Description
CLP	Control Language
CLP38	System/38 Control Language
CMD	Command
CMD38	Command System/38
DSPF	Display File
DSPF36	Display File System/36
DSPF38	Display File System/38
FTN	Systems Application Architecture* FORTRAN
ICFF	Inter-System Communications Function File
LF	Logical File
LF38	Logical File System/38
MNU	Menu
MNUCMD	Menu Command
MNUDDS	Menu Data Description Specifications
MNU36	Menu System/36
MSGF36	Message File For System/36
OCL36	System/36 Operator Control Language

PAS	Pascal
PF	Physical File
PF38	Physical File System/38
PLI	PL/I
PLI38	PL/I System/38
PNLGRP	Panel Group
PRTF	Printer File
PRTF38	Printer File System/38
QRY38	System/38 QUERY
REXX	Restructured Extended Executor Language
RMC	RM/COBOL-85**
RPG	RPG
RPG36	RPG System/36
RPG38	RPG System/38
RPT	Report
RPT36	Report System/36
RPT38	Report System/38
SPADCT	Spelling Aid Dictionary
SQLC	Structured Query Language C
SQLCBL	Structured Query Language COBOL
SQLFTN	Structured Query Language FORTRAN
SQLPLI	Structured Query Language PL/I
SQLRPG	Structured Query Language RPG
TBL	Table
TXT	Text

**generic*-member-type:* Specify a partial name of a member type qualified by an asterisk (*) to display a specific subset of members in the file that meets the specific criteria.

The generic member type can be in one of the following typical formats:

- RPG* displays a list of all members whose member type begins with the characters RPG. For example, RPG, RPG36, or RPG38.
- *C displays a list of all members whose member type ends with the character C. For example, C or SQLC.
- *I* displays a list of all members that have the character I anywhere in the member type. For example, ICFF, PLI, PLI38, or SQLPLI.
- R*36 displays a list of all members whose member type begins with the character R and ends with the characters 36. For example, RPG36 or RPT36.
- "a*7" displays a list of all members that are in quotation marks and start with a. For example, "a", "aB", or "aD".
- **ALL displays a list of all members whose member type ends with ALL. For example, ALL, BALL, or TESTALL. The double asterisk is needed in this case because *ALL is defined as a special value.

For more information on the use of generic functions, refer to the *CL Reference*.

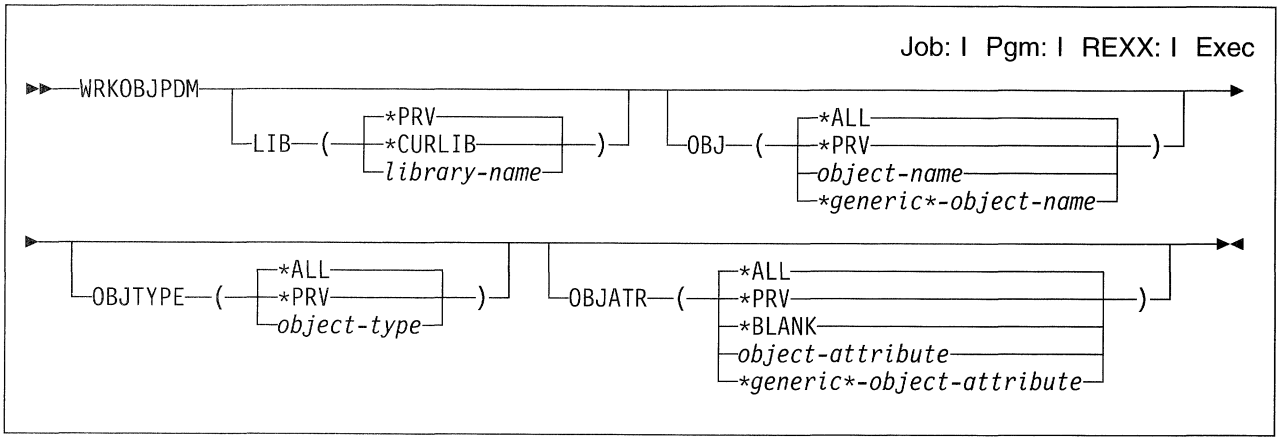
***BLANK:** Displays a list of all members with no type.

Example

```
WRKMBRPDM  FILE(MYLIB/QDDSSRC)  MBR(*ALL) MBRTYPE(DSPF)
```

This command allows you to work with the Work with Members Using PDM display and lists all members in file QDDSSRC in library MYLIB that are of type DSPF.

WRKOBJPDM (Work with Objects Using PDM) Command



Purpose

The WRKOBJPDM command allows you to work with lists of objects. Using this command, you can bypass the Programming Development Manager (PDM) menu and the Specify Objects to Work With display.

Optional Parameters

LIB

Specifies the library that contains the objects you want to work with.

The possible library values are:

***PRV:** Specifies that PDM uses the library name used in your previous session.

library-name: Specify the library containing the objects.

***CURLIB:** The current library for the job is used to locate the objects. If no current library entry exists in the library list, the QGPL library is used.

OBJ

Specifies the object name. You can use this parameter to work with all the objects or a subset of objects in the specified library.

***ALL:** Displays a list of all the objects in the specified library.

***PRV:** Specifies the object name that was used in your previous PDM session.

object-name: Specify an object name for a list of all the objects with that name.

**generic*-object-name:* Specify a partial object name qualified by an asterisk (*) to display a list of objects that meet the specific criteria. For a list of generic names, see "Library List" on page 17. For more information on the use of generic functions, refer to the *CL Reference*.

OBJTYPE

Specifies the object type. You can use this parameter to work with all object types or a subset of objects. See Appendix A, "Command Reference for Objects, Libraries, and Members" on page 173 for a list valid OS/400 object types.

***ALL:** Displays a list of all objects regardless of the object type.

***PRV:** Specifies the object type that was used in your previous PDM session.

object-type: Specify any valid system object type to display a list of all objects of that particular type.

OBJATR

Specifies the object attribute. You can use this parameter to work with all object attributes or only specific object attributes.

***ALL:** Displays a list of all objects regardless of the object attribute.

***PRV:** Specifies the object attribute that was used in your previous PDM session.

object-attribute: Specify any object attribute to display a list of all objects with that particular attribute. If you specify the object attribute, you do not have to specify the object type.

The following are valid attributes:

BAS	Basic
BAS36	Basic System/36
BAS38	Basic System/38
BSCF38	Binary Synchronous Communication File System/38
C	C Language
CBL	COBOL
CBL36	COBOL System/36
CBL38	COBOL System/38
CICSMAP	CICS Map
CLP	Control Language
CLP38	Control Language System/38
CMD	Command
CMD38	Command System/38
CMNF38	Communications File
CSPAE	Cross-System Product Application Execution
DDMF	Distributed Data Management
DFU	Data File Utility
DFUEXEC	Data File Utility Executable File
DFUNOTEXC	Data File Utility Non-Executable File
DKTF	Diskette File
DSPF	Display File
DSPF36	Display File System/36
DSPF38	Display File System/38
FTN	Systems Application Architecture FORTRAN
ICFF	Inter-System Communications Function File
LF	Logical File

LF38	Logical File System/38
MXDF38	Mixed File System/38
PAS	Pascal
PF - DTA	Physical File - Data
PF - SRC	Physical File - Source
PF38	Physical File System/38
PLI	PL/I
PLI38	PL/I System/38
PRTF	Printer File
PRTF38	Printer File System/38
QRY38	System/38 QUERY
RMC	RM/COBOL-85**
RPG	RPG
RPG36	RPG System/36
RPG38	RPG System/38
RPT	RPG Auto Report
RPT36	RPG Auto Report System/36
RPT38	RPG Auto Report System/38
SAVF	Save File
SPADCT	Spelling Aid Dictionary
SQLC	Structured Query Language C
SQLCBL	Structured Query Language COBOL
SQLFTN	Structured Query Language FORTRAN
SQLPLI	Structured Query Language PL/I
SQLRPG	Structured Query Language RPG
TAPF	Tape File
TBL	Table

**generic*-object-attribute:* Specify a partial attribute type qualified by an asterisk (*) to display a specific subset of objects in the file that meets the criteria.

The partial attribute type can be in one of the following formats:

- RPG* displays a list of all objects whose attribute type begins with the characters RPG. For example, RPG, RPG36, or RPG38.
- *C displays a list of all objects whose attribute type ends with the characters C. For example, C or SQLC.
- *I* displays a list of all objects that have the character I anywhere in the attribute type. For example, ICFF, PLI, PLI38, or SQLPLI.
- P*38 displays a list of all objects whose attribute type begins with the character P and ends with the characters 38. For example, PLI38 or PRTF38.
- "a*" displays a list of all objects that have quoted attribute types that start with a. For example, "a", "aB", or "aD".
- **ALL displays a list of all objects whose attribute type ends with ALL. For example, ALL, BALL, or TESTALL. **ALL is a value needed for only these cases because *ALL is already used as a special value.

For more information on the use of generic functions, refer to the *CL Reference*.

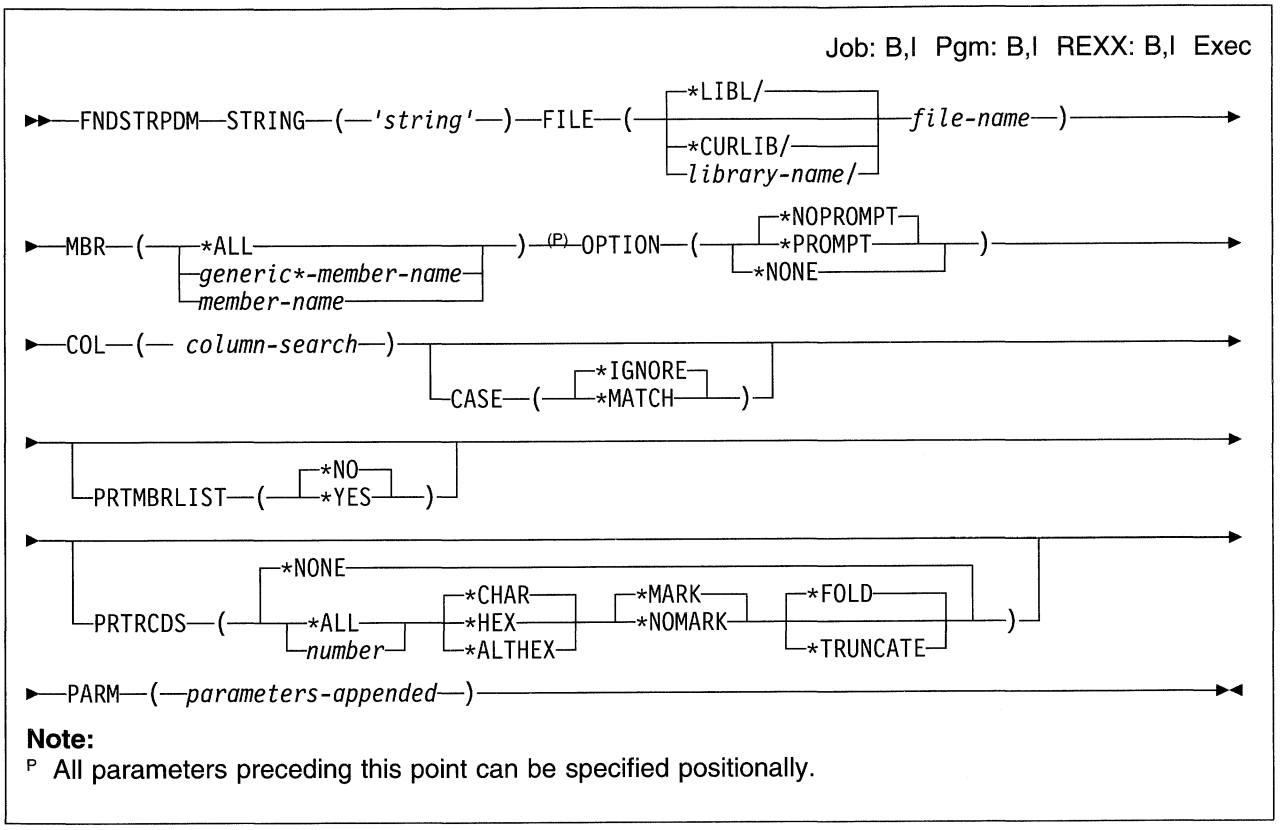
***BLANK:** Displays a list of all objects with no attribute.

Example

```
WRKOBJPDM  LIB(TESTLIB)  OBJ(*TEST*)  OBJTYPE(*FILE)  OBJATR(PF*)
```

This command allows you to work with all physical files in library TESTLIB with TEST anywhere in the name.

FNDSTRPDM (Find String Using PDM) Command



Note:
P All parameters preceding this point can be specified positionally.

Purpose

The FNDSTRPDM command allows you to search for character or hexadecimal strings in source or data physical file members. Any valid PDM option or a user-defined option on the member that contains a match for the string can be used.

Required Parameters

STRING

Specifies the string, enclosed in quotation marks, for which a search operation is performed. If a single word is specified in lowercase letters without being enclosed in quotation marks, it is folded to uppercase letters for the search. A character or a hexadecimal string can be specified.

FILE

Specifies the qualified name of the file that contains the members to be searched. The file searched can be a source physical file or a data physical file.

The library prompt specifies the name of the library with the file and members to be searched. If this prompt is left blank, it defaults to *LIBL. The possible library values are:

***LIBL:** The current library list is used to locate the file to be searched. PDM will search the library list for the file specified.

***CURLIB:** The current library for the job is used to locate the file to be searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library that contains the file and members to be searched.

file-name: Specify the name of the file that contains the members to be searched.

MBR

Specifies the name of the member to be searched. This parameter can be used to search all the members or a subset of members in the specified file.

***ALL:** All the members in the file are searched.

generic-member-name:* Specify a partial member name qualified by an asterisk (*) to search a list of members that meet the specific criteria. For a list of generic names, see "Library List" on page 17. For more information on the use of generic functions, refer to the *CL Reference*.

member-name: Specify the name of the member to be searched. Type + to enter a list of member names to search.

OPTION

Specifies the options to be performed on each member for which a match for the FIND string is found. The parameter is comprised of two parts; one part for choosing an option and one part for prompting.

The option can be any PDM option that is valid for this type of file, or any user-defined option in your active option file. The valid options differ for source physical files and data physical files.

***NOPROMPT:** The user is not prompted.

***PROMPT:** The user is prompted.

***NONE:** Specifies that no options are performed. This implies that the PRTMBRLIST or PRTRCDS parameters must be selected for printing.

Source Physical File Member List

Choose:

***EDIT** to edit one or more members using the SEU (Source Entry Utility) editor.

***COPY** to copy one or more members to one or more new members. You can also copy members to another file, another library, or both.

***DLT** to delete one or more members from the file.

***DSP** to display one or more members using SEU.

***PRT** to print one or more members using SEU.

***RNM** to change the name of one or more members.

***DSPD** to display information about one or more members.

***SAVE** to save a member on diskette or tape.

***CHGT** to change some of the attributes of one or more members.

***CMPL** to compile one or more members. The system creates an object based on the member being compiled. The member is compiled interactively or in batch mode, depending on what you have specified on the change defaults display.

The following member types can be compiled: BAS, BAS36, BAS38, C, CBL, CBL36, CBL38, CICSMAP, CLD, CLP, CLP38, CMD, CMD38, DSPF, DSPF36, DSPF38, FTN, ICFF, LF, LF38, MNU, MNUCMD, MNUDDS, MNU36, MSGF36, PAS, PF, PF38, PLI, PLI38, PNLGRP, PRTF, PRTF38, QRY38, RMC, RPG, RPG36, RPG38, RPT, RPT36, RPT38, SPADCT, SQLC, SQLCBL, SQLFTN, SQLPLI, SQLRPG, TBL, and TXT.

When PDM compiles a program using the necessary create commands, the object name to create is always specified as the source member name. The object name parameter can be changed to another object name by prompting the option or typing the correct parameter on the command line. PDM checks whether the object name already exists. If it does, the Confirm Compile of Member display appears. This display can be used to delete the existing object.

Note: This display does not appear if Y (Yes) is specified on the *Replace object* prompt on the Change Defaults display.

If the object name parameter has been changed to a special value, PDM does not check whether the object exists. For example, if an RPG program has been compiled and the *Program* prompt has been changed to *CTLSPEC, PDM does not check whether the object exists.

***RUNP** to run a source member with a member type of REXX, OCL36, BASP, or BASP38. If you try to run a member with a type that cannot be run, an error message is sent. To run an OCL36 procedure, the file name must be QS36PRC. The member can be run in batch mode or interactively, depending on what is specified in the *Run in batch* prompt on the Change Defaults display.

***SDA** to use SDA (Screen Design Aid) to work with the members containing the string.

- If the member type is DSPF, DSPF36, or DSPF38, SDA is called to work with a display.
- If the member type is MNU, MNUDDS, MNUCMD or MNU36, SDA is called to work with a menu.
- If the former type of member MNU is specified, SDA converts this to MNUDDS.
- Note that menu members for PDM have type MNUDDS for the image member and type MNUCMD for the command source member. The two are linked together to constitute a group, so that specifying one of the types means that you are also operating on the linked member at the same time.

***RLU** to use RLU (Report Layout Utility) to work with the members containing the string.

User-defined options to use an option defined in the active option file.

Data Physical File Member List

Choose:

***COPY** to copy one or more members to one or more new members. Members can also be copied to another file, another library, or both.

***DLT** to delete one or more members from the file.

***DSP** to display one or more members.

***RNM** to change the name of one or more members.

***DSPD** to display information about one or more members.

***SAVE** to save a member on diskette or tape.

***CHGT** to change some of the attributes of one or more members in a physical file.

***DFU** to invoke DFU (Data File Utility) to change the member containing the string.

User-defined options to use an option defined in your active option file.

The prompt portion of the OPTION parameter specifies whether you are prompted each time the command for the option is carried out.

Optional Parameters

COL

Specifies the column numbers where the search begins and ends the search for each record. The format for the parameter is COL (starting_column ending_column) where the start and end values range from 1 through the end of the record (*RCDLEN). The default starts at the beginning of the record (column 1) and searches to the end of the record (*RCDLEN).

CASE

Specifies whether the match is case sensitive.

***IGNORE:** The member is searched for the string without case sensitivity.

***MATCH:** The member is searched for an exact match to the string.

PRTMBRLIST

Specifies whether a list of those members for which a match is found is printed.

***NO:** The list of members that contain a match to the string are not printed.

***YES:** The list of members containing the string are printed.

PRTRCDS

Specifies whether each record that contains the string is printed. The rest of the member is not printed. The format for the parameter is PRTRCDS (number format mark overflow).

Specify the number of records with the Find string to be found during the search and printed. The possible values are:

***NONE:** None of the records that contain the Find string are printed.

***ALL:** All records that contain the Find string are printed.

number: Only a certain number of records that match the Find string are printed. Valid values range from 1 through 99999.

Records can be printed in character or hexadecimal format. Choose from the following print formats:

***CHAR** Records are printed in character format.

***HEX** Records are printed in hexadecimal over/under style format. This means that the character value is printed with the hexadecimal below it.

***ALTHEX** Records are printed in hexadecimal side-by side format.

The string on the printed record can be marked. The string itself is used as a marker for character searches for quick recognition. For hexadecimal searches, the string is marked with asterisks (*).

***MARK**: The occurrence of the string in the record is marked.

***NOMARK**: The occurrence of the string in the record is not marked.

If the record is greater than the length of the print line, it can be folded or truncated.

***FOLD**: The entire record is printed over multiple print lines.

***TRUNCATE**: Only that part of the record that fits on the print line is shown. When *ALTHEX is used, only columns 1 through 32 are printed. When *CHAR or *HEX are used, columns 1 through 100 are printed.

PARM

Specifies the parameters to be appended to the command carried out as a result of the option specified on the OPTION parameter.

Example

```
FNDSTRPDM STRING('h') FILE(MYLIB/QDDSSRC) MBR(*ALL)
  OPTION(*EDIT *PROMPT) COL(2 4) PRTMBRLIST(*YES)
  PRTRCDS(2 *CHAR *NOMARK *TRUNCATE)
```

This command allows you to search from columns 2 through 4 in all members in file QDDSSRC in library MYLIB for the string h. Once the string is found, you are prompted on the EDIT command and then able to edit the member containing the h. A list of the names of all the members containing the string is printed. Also, the first two records containing the string is printed in character format. The string is not marked and if the record is longer than the length of the print line, it is truncated.

Appendix C. PDM Problem Analysis

If a problem occurs while you are using PDM, the cause of the problem may not be obvious. An error in your application, in system operation, or in the PDM program are all possible causes of an error condition. The problem analysis procedure in this appendix can help you isolate the cause of the problem and solve it. If you need more information, refer to "Contacting Your Service Representative" on page 213.

How to Use This Procedure

This procedure is arranged as a sequence of questions to which you can answer **Yes** or **No**. Depending on your answer, you are either directed to another question or to a recommendation for action.

Start at Question 1 and follow the question-and-answer sequence, answering each question to which you are directed. If the problem is a condition that requires more detailed procedures, you are referred to those procedures.

Identifying PDM Problems

When a PDM problem occurs, follow the procedure below to pinpoint its possible cause:

MAP

001

Did you receive a message indicating an error condition that prevented you from continuing the job?

Yes **No**

002

Go to Step 004 on page 208.

003

Take the actions indicated by the message. If the action requires operator intervention, call your system operator. If the action requires you to call for help, see "Contacting Your Service Representative" on page 213.

Second-level message text describes the message in more detail. To display the second-level message text, position the cursor on the message line and press F1 (Help). The Cause and Recovery message explains the possible cause of the problem and appropriate recovery actions.

If you still cannot solve your problem after fully examining the message, see "Contacting Your Service Representative" on page 213.

004

(From step 002)

Are other system users having problems communicating with the system?

Yes **No**

005

Go to Step 007.

006

Call your system operator, describe the problem, and ask the system operator to determine what is causing the problem.

007

(From step 005)

Is this the first time you have ever run the job?

Yes **No**

008

You may have a system problem. Call your system operator, describe your problem, and ask the operator to determine what is causing the problem.

009

Go to Step 010.

010

(From step 009)

Have changes been made to PDM since the job last ran successfully?

Yes **No**

011

Go to Step 013.

012

Read on, but consider what has been changed. For example, have operating procedures changed, have new device files been used, or have program changes been applied recently? A good starting point for problem analysis is a changed item.

013

(From step 011)

(Step **013** continues)

013 (continued)

Are you having a nonprogramming problem, such as the printer or other devices not working?

Yes **No**

014

Go to Step 016.

015

You may have a system problem. Call your system operator and ask the operator to determine what is causing the problem.

016

(From step 014)

Has the input inhibited light stayed on longer than expected?

Yes **No**

017

Go to Step 021 on page 210.

018

Press Error/Reset. If the light does not go off, do one of the following:

- Press System Request and then press Enter. When the system request menu appears, start an alternative job.
- Go to another workstation and sign on.

Enter the Work with Subsystems (WRKSBS) command to request the Work with Subsystems display. Choose the *Work with subsystems jobs* option for the subsystem you are running under. Look for a job entry that has the same job name as the workstation with the problem. If two entries are shown, look at both. Write down the names.

Does the job entry (or entries) indicate a status of HELD?

Yes **No**

019

You could have a loop or wait condition. Do the following to gather helpful information and cancel the failing job:

Type the Work Job (WRKJOB) command and press F4 (Prompt). Choose the following values for the command parameters:

Parameter	**Value**
Job name	Job name, user name, and job number for the failing job.
Output	*PRINT to print the job information for later use.

(Step **019** continues)

019 (continued)

1. When the Work with Job menu appears, select option 11 (Display program stack). Press Print to print the program stack for the failing job.

   The program stack lists the instruction the program or application is currently on. This may help you determine why the loop or delay occurred.

2. Press F3 (Exit) until you return to the Command Entry display.
3. Type the End Job (ENDJOB) command to cancel the failing job. For example:

   ```
   ENDJOB JOB(008299/QUSER/WS1)
   ```

   Check with the system operator to ensure that the job log for the failing job is printed. The job log is a record of each program action and any messages resulting from these program actions.

   Note: Your job log should be printed if you use the default value for the log limit (LOGLMT) parameter on the ENDJOB command. If the job description specifies a 0 for the message level in the LOG parameter, a job log is not printed.

4. Examine the job log, program stack, and program listing to determine why the problem occurred.

   If you cannot solve the problem, see "Contacting Your Service Representative" on page 213.

020

Enter 6 in the input prompt next to the job name to release the job.

021

(From step 017)

Is PDM producing unexpected results?

Yes **No**

022

Go to Step 024 on page 211.

023

Do the following to determine why these results were produced:

1. Get the job log for this job by choosing LOG(*LIST) at sign off. For example

   SIGNOFF LOG(*LIST)

   The job log is written to a spooled output file, and is a record of each job action and any messages received by the job in the order in which they occurred.

2. Examine the job log and any other information available to determine why the problem occurred.

If this procedure fails to solve the problem, see "Contacting Your Service Representative" on page 213.

024

(From step 022)

Have changes been made to PDM since the PDM command was last used successfully?

Yes **No**

025

Go to Step 027.

026

Consider what has been changed. For example:

- Has the library list (*LIBL) been changed?
- Has a device file been overridden?
- Have any changes been applied to PDM or to the OS/400 System?

If no changes have been made, go to Step 027.

027

(From steps 025 and 026)

Was the STRPDM command (or any other command used during sign on) found?

Yes **No**

028

Go to Step 030.

029

Go to Step 033 on page 212.

030

(From step 028)

Is this the current release of the Application Development Tools program? To verify the release number, type `GO LICPGM` **on the command line of the AS/400 Main Menu, and press Enter. Choose option 10 (Display installed licensed programs) on the Work with Licensed Programs display. On the Display Installed Licensed Programs display, move forward to the ADT program. The current release number appears in the** *Installed Release* **column.**

Yes **No**

031

Do one of the following:

(Step **031** continues)

031 (continued)

- Install the current release of PDM.
- Install all current program changes for PDM.
- Retry the PDM command.

See the *Licensed Programs and New Release Installation Guide* for a description of how to install PDM and make program changes.

032

Go to Step 033.

033

(From steps 029 and 032)

Have all IBM-supplied program changes that you received for the current release of PDM been installed?

Yes **No**

034

Install the program changes that have not yet been applied and try to re-enter the PDM command. See the *Licensed Programs and New Release Installation Guide* for a description of how to install program changes.

035

Go to Step 036.

036

(From step 035)

Other than the program changes supplied by IBM, have any other modifications been made to PDM or to the OS/400 System?

Yes **No**

037

Go to Step 039 on page 213.

038

If PDM has been changed:

- Install the current release of PDM.
- Install all current IBM program changes for PDM.
- Retry the PDM command.

If the OS/400 System has been changed:

- Reinstall the current release of the OS/400 System.

(Step **038** continues)

038 (continued)

- Install all current IBM program changes for the OS/400 System.
- Retry the PDM command.

See the *Licensed Programs and New Release Installation Guide* for a description of how to install PDM, the OS/400 System, and program changes.

039

(From step 037)

Do you require additional assistance?

Do the following when you require additional assistance:

- Cancel the failing job and print the job log. Sign off the workstation, choosing *LIST for the LOG parameter. For example:

  ```
  SIGNOFF LOG (*LIST)
  ```

  Call the system operator to verify that the job log was printed.
- Examine the job log and any other available information relating to the job.

Contacting Your Service Representative

If you cannot solve a problem using the problem analysis procedure listed in this appendix, you may want to contact your service representative. Before contacting your service representative, be prepared to provide the following information:

- A tape/diskette copy of the data file or library processed by PDM
- A tape/diskette copy of the user-defined option file processed by PDM, if needed
- A tape/diskette copy of the procedures used to start PDM
- A printed copy of the PDM displays that demonstrate the problem
- A list of the PDM specifications that were used when the problem occurred (for example, command parameters and values used to create subsets of list displays)
- A description of the data used as input to PDM
- A description of the PDM option the user is having trouble with as well as the steps that were taken before the problem occurred

Bibliography

The manuals below are listed with their full titles and base order numbers. When these manuals are referred to in the text, a shortened version of the title is used.

For more information, refer to the following IBM publications:

- *Application Development Tools: Data File Utility User's Guide and Reference*, SC09-1381
  Short title: *DFU User's Guide and Reference*
- *Application Development Tools: Report Layout Utility User's Guide and Reference*, SC09-1416
  Short title: *RLU User's Guide and Reference*
- *Application Development Tools: Screen Design Aid User's Guide and Reference*, SC09-1340
  Short title: *SDA User's Guide and Reference*
- *Application Development Tools: Source Entry Utility User's Guide and Reference*, SC09-1338
  Short title: *SEU User's Guide and Reference*
- *Application Development by Example*, SC41-9852
  Short title: *Application Development by Example*
- *Publications Guide*, GC41-9678
  Short title: *Publications Guide*
- *Licensed Programs and New Release Installation Guide*, SC41-9878
  Short title: *Licensed Programs and New Release Installation Guide*
- *Programming: Control Language Programmer's Guide*, SC41-8077
  Short title: *CL Programmer's Guide*
- *Programming: Control Language Reference*, SC41-0030
  Short title: *CL Reference*
- *System Concepts*, GC41-9802
  Short title: *System Concepts*

If you have the Application Development Manager/400 product installed, you may also want to refer to the following IBM publications:

- *IBM SAA* AD/Cycle* Application Development Manager/400 Introduction and Planning Guide*, GC09-1377
  Short title: *Application Development Manager/400 Introduction and Planning Guide*
- *IBM SAA* AD/Cycle* Application Development Manager/400 User's Guide*, SC09-1376
  Short title: *Application Development Manager/400 User's Guide*

Index

Special Characters

A

B

C

D

E

F

G

H

I

J

L

M

N

O

P

T

U

V

W

Readers' Comments — We'd Like to Hear from You

Application System/400
Application Development Tools:
Programming Development Manager
User's Guide and Reference
Version 2

Publication No. SC09-1339-02

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