AIX PS/2
Usability Services
Reference

Document Number SC23-2039-00

Edition Notice

First Edition (March 1989)

This edition applies to Version 1 Release 1 of the Usability Services Licensed Program, Program Number 5713-AFE, for use with Version 1, Release 1 of the IBM Advanced Interactive Executive Operating System for the Personal System/2, Program Number 5713-AEQ, and to all subsequent releases until otherwise indicated in new editions or technical newsletters. Changes are made periodically to the information herein; these changes will be reported in technical newsletters or in new editions of this publication.

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM licensed program in this publication is not intended to state or imply that only IBM's licensed program may be used. Any functionally equivalent program may be used instead.

International Business Machines Corporation provides this manual "as is," without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this manual at any time.

Products are not stocked at the address given below. Requests for copies of this product and for technical information about the system should be made to your authorized IBM Personal System/2 dealer or your IBM marketing representative.

A reader's comment form is provided at the back of this publication. If the form has been removed, address comments to IBM Corporation, Department 35RB 36 Apple Ridge Road, Danbury, Connecticut 06810.

IBM may use or distribute, in any way it believes appropriate and without incurring any obligation to the sender, whatever information it receives in this manner.

About This Book

This book is a reference for computer users learning to work with the IBM Advanced Interactive Executive (AIX) ( ) PS/2 ( ) Operating System with the Usability Services installed. It discusses a command interpreter program, Usability Services, that simplifies the AIX PS/2 Operating System.

Subtopics

Who Should Read This Book
What You Should Know
How to Use This Book
Related Publications

Who Should Read This Book

This book is intended for both experienced and inexperienced computer users who are learning to use the IBM AIX PS/2 Operating System. With Usability Services installed, you make choices and select commands from display screens.

What You Should Know

Before you use this book, the IBM AIX PS/2 Operating System must be installed and customized, and Usability Services must be installed. To use DOS commands, DOS 3.3 and DOS Merge must be installed. You may also need a user name and password as well as a keyboard reference chart specific to the model you are using. If you do not meet these requirements, contact the person who installed your system (generally known as the System Administrator). To meet the installation requirements yourself, see *Installing and Customizing the AIX PS/2 Operating System* or *DOS Merge User's and Administrator's Guide*.

How to Use This Book

The organization of this book is defined in the Table of Contents. You may wish to consider these additional points:

Chapter 2 contains information on how to run commands in the FILES and TOOLS windows. You should read this chapter before using the commands in Chapter 3.

Chapter 3 contains a list of Usability Services commands in alphabetical order. This list contains commands that you use to handle directories, files, and windows. For each command, a list of steps required to run the command is provided, as well as more detailed information on each step and the choices available. Use the table of contents or the index to help find the command you want to use.

Appendix A contains information on adding new commands and applications to the TOOLS window, as well as default characteristics of file types that are shipped with the system.

Subtopics
Fast-Path Boxes
Highlighting

Fast-Path Boxes

Throughout this book, you will see boxes containing steps you should follow to perform a particular task on the system. Below each box, you'll find a section titled "More Detailed Information." Where necessary, this section gives you additional information about each step in the box above it. This information also may include helpful hints or optional ways of doing a step.

Highlighting

This book uses different type styles to identify certain kinds of information. The following type styles are used:

Boldface type indicates key names, Usability Services commands, and file names that the system supplies or creates. For example, **Help** and **Do** (with initial capital letters) are key names. **PASSWORD** and **DELETE** (with all capital letters) are Usability Services commands. **/bin** is a file name.

Boldface italics type indicates new terms. For example, ***display device*** is a new term introduced in Chapter 1. These words also are defined in the glossary.

Monospace black type indicates names of files used for examples. For example, **/u/pat/project1** is the name of a file.

Monospace blue type indicates text that you type in or that appears on your display screen. For example, the phrase "To File or Directory" is a system-supplied choice that can appear on your display screen.

Related Publications

You may want to refer to the following AIX publications for additional information:

Usability Services Guide, SC23-2038, shows how to create and print text files, work with directories, start application programs, and do other basic tasks with Usability Services.

AIX Commands Reference, SC23-2025, lists and describes the AIX Operating System commands.

AIX Technical Reference, SC23-2032 and SC23-2033, describes the system calls and subroutines a programmer uses to write programs. This book also provides information about the AIX file system, miscellaneous files, and special files.

DOS Merge User's and Administrator's Guide, SC23-2045, provides instructions for using DOS in the AIX environment, including running DOS and AIX programs simultaneously, and running AIX commands from the DOS environment. This books also describes such administrative tasks as installing DOS Merge, adding user accounts, and setting up terminals.

Installing and Customizing the AIX PS/2 Operating System, SC23-2027, provides step-by-step instructions for installing and customizing the AIX Operating System, including instructions for adding devices to and deleting them from the system and for defining device characteristics. This book also explains how to create, delete, and change AIX and non-AIX minidisks.

Managing the AIX PS/2 Operating System, SC23-2031, describes such system-management tasks as adding and deleting user IDs, creating and mounting file systems, backing up the system, repairing file system damage, and setting up an electronic mail system and other networking facilities.

Messages Reference, SC23-2036, lists messages and explains how to respond to the messages.

Using the AIX PS/2 Operating System, SC23-2024, contains information on using AIX Operating System commands, working with the file system, developing shell procedures, and performing such system management tasks as creating and mounting file systems, backing up the system, and repairing file system damage.

Table of Contents

TITLE Title Page
EDITION Edition Notice
PREFACE About This Book
PREFACE.1 Who Should Read This Book
PREFACE.2 What You Should Know
PREFACE.3 How to Use This Book
PREFACE.3.1 Fast-Path Boxes
PREFACE.3.2 Highlighting
PREFACE.4 Related Publications
CONTENTS Table of Contents
1.0 Chapter 1. Working with Files on Minidisks, Diskettes, and Tape
1.1 CONTENTS
1.2 About This Chapter
1.3 What Are Fixed Disks, Diskettes, and Tape?
1.4 Handling Diskettes and Tape
1.5 Formatting Diskettes
1.6 Mounting and Unmounting File Systems
1.7 Backing Up and Restoring File Systems, Directories, and Files
2.0 Chapter 2. Using Commands
2.1 CONTENTS
2.2 About This Chapter
2.3 Running a Command in a FILES, TOOLS, or APPLICATIONS Window
2.4 AIX Device Names
2.5 Pattern-Matching Characters
2.6 Ownership and Protection of Files and Directories
2.7 Displaying Help Information
3.0 Chapter 3. Commands
3.1 CONTENTS
3.2 About This Chapter
3.3 ACTIVATE--Making a Window Active
3.4 BACKUP--Backing Up File Systems and Directories
3.5 CANCEL--Canceling an Activity
3.6 CCOMPILE--Compiling C Source Files
3.7 CHECK--Checking C Source Files
3.8 CLOSE--Closing a Window
3.9 COMBINE--Combining Files
3.10 COMPARE--Comparing Files
3.11 COMPILE--Compiling Source Files
3.12 COPY--Copying Files
3.13 CREATE--Creating a Directory
3.14 CREATE--Creating a File
3.15 CROSSREF--Making a Cross-Reference List
3.16 DATE--Displaying the System Date and Time
3.17 DELETE--Deleting Files or Directories
3.18 DESCRIBE--Describing a Directory
3.19 DESCRIBE--Describing a File
3.20 DEVICES--Showing, Adding, Changing, and Deleting Devices
3.21 ENVIRONMENT--Displaying or Changing the Characteristics of a Wi
3.22 FILETYPES--Adding, Changing, and Deleting File Type Description
3.23 FIND--Finding a File or Directory
3.24 FINDTEXT--Finding Text Within Files
3.25 FORMAT--Formatting a Diskette
3.26 FORMATERRORS--Formatting an Error Log
3.27 FORMATTRACES--Formatting Trace Files
3.28 FREESPACE--Displaying the Amount of Free Space
3.28.1 Output of FREESPACE
3.29 HIDE--Hiding a Window
3.30 INSTALL--Installing a Licensed Program
3.31 INTERPRET--Running the Interpreter

3.32 LINK--Defining Additional File Names
3.33 LINKEDIT--Linking Object Files into a Run File
3.34 LOGOFF--Ending your Session
3.35 MINIDISKS--Adding, Changing, and Deleting Minidisks
3.36 MOUNT--Mounting a File System
3.37 MOVE--Moving Files
3.38 OPEN--Displaying a Window, File, or Directory
3.39 PASSWORD--Changing a Password
3.40 PICK--Displaying Specific Directory Entries
3.41 PRINT--Printing Files
3.42 PRINTQ--Displaying or Changing the Print Queue
3.42.1 Output of PRINTQ
3.43 REFORMAT--Reformatting a C Source File
3.44 RENAME--Renaming a File or Directory
3.45 RESTORE--Restoring Files or Directories
3.46 RETURN--Returning to the Tools Groups List
3.47 RUN--Running a Program or Command
3.48 SHOW--Showing a File
3.49 SORT--Sorting Directory Entries
3.50 SORTMERGE--Sorting File Contents
3.51 STARTTRACE--Starting Trace Activity
3.52 STOPTRACE--Stopping Trace Activity
3.53 SWITCH--Switching Directories
3.54 TOOLSUPDATE--Showing, Adding, Updating, or Deleting Tools Gro
3.55 UNMOUNT--Unmounting a File System
3.56 UPDATE--Updating Window Contents
3.57 UPDATEP--Updating an Installed Licensed Program
3.58 USEDSPACE--Determining the Amount of Used Space
3.58.1 Output of USEDSPACE
3.59 USERS--Showing, Adding, Changing, Deleting Users and Groups
A.0 Appendix A. Advanced Topics
A.1 Adding New Functions to the TOOLS Window
A.1.1 The Tools Group File
A.1.2 The Tools Command File
A.2 File Type Default Characteristics
A.3 Primary File Types
A.4 Running the AIX Command actmngr
A.5 Alternate Selection Method
A.6 Using a Mouse
A.7 AIX Commands
A.7.1 describe
A.7.1.1 Purpose
A.7.1.2 Syntax
A.7.1.3 Description
A.7.1.4 Parameters
A.7.2 filetypes
A.7.2.1 Purpose
A.7.2.2 Syntax
A.7.2.3 Description
A.7.2.4 Parameters
A.7.2.5 Examples
BACK_1 Glossary
INDEX Index

1.0 Chapter 1. Working with Files on Minidisks, Diskettes, and Tape

Subtopics

1.1 CONTENTS
1.2 About This Chapter
1.3 What Are Fixed Disks, Diskettes, and Tape?
1.4 Handling Diskettes and Tape
1.5 Formatting Diskettes
1.6 Mounting and Unmounting File Systems
1.7 Backing Up and Restoring File Systems, Directories, and Files

1.1 CONTENTS

1.2 About This Chapter

This chapter discusses the use of diskettes, minidisks, and tape to back up (or archive) and restore (or retrieve) your Usability Services file systems, directories, and files. It also tells you how to use files stored on diskettes, other minidisks, and tape without having to copy them onto your minidisk.

You must have the proper access permissions to run the commands in this chapter. Also, if more than one person uses the AIX PS/2 Operating System, you may not be able to run some of the commands described here. See "Ownership and Protection of Files and Directories" in topic 2.6 for more information on permissions.

1.3 What Are Fixed Disks, Diskettes, and Tape?

Your PS/2 system is a ***fixed-disk*** based system. This means that you do not have to use diskettes or tape to store your files when you create them. Instead, you store your files on the fixed disk. Your PS/2 system may have multiple fixed disks. Unlike tapes and diskettes, a fixed disk is not removable. You can't take out a fixed disk and loan it to someone as you can a diskette or a tape. That is why this type of disk is called "fixed."

The System Administrator divided the fixed disk into parts called ***minidisks***. When you created files earlier in the *Usability Services Guide*, you created them in the minidisk assigned to you. This minidisk may also be shared by other users on your system.

Unlike minidisks, ***diskettes*** are removable. Like minidisks, you use diskettes to store files. You can copy files onto diskettes or create files on them and loan them to someone. You also can get diskettes from someone and work with the files on those diskettes. You use a diskette by placing it in a diskette drive. Your PS/2 system unit may have one or two diskette drives. See "AIX Device Names" in topic 2.4 for information on the names of the diskette drives.

As you read the rest of this chapter, you'll learn more about working with diskettes.

Your PS/2 system may also have an optional ***tape drive***. Tapes, like diskettes, can be used to store files. They also are removable.

You can use minidisks, diskettes, and tapes to back up, or archive, your file systems or directories. You should back up, or make a copy of, all of your files to avoid losing them should something happen to your PS/2 system. The System Administrator who installed AIX and Usability Services was directed to back up the installation programs and existing files after installation. You or that person should also back up the files you create.

Because they are removable, diskettes and tapes can be very valuable. As you add files to the file system on your fixed disk, the fixed disk can become full. You can use diskettes and tapes for storage space. As long as you have more diskettes or tape, you have more storage space. In addition, if other AIX Operating System users need your files or if you need theirs, you can loan each other these files on diskette or tape.

1.4 Handling Diskettes and Tape

You must handle diskettes and tapes carefully to avoid damaging them and possibly losing the files stored on them. See *Installing and Customizing the AIX PS/2 Operating System* for information on the care and handling of diskettes and tape. Refer to that guide before you begin working with diskettes and tape. The packaging of each diskette also contains tips on the proper care and handling of diskettes.

In addition, this manual tells you how to operate your diskette drives and optional tape drive. Refer to this guide for information about inserting diskettes or tapes and operating the drives.

1.5 Formatting Diskettes

Before you can place information on a diskette, you must format it. Formatting prepares a diskette to receive the information in your files. It is a two-step process:

First, formatting erases all files stored on the diskette

Then, it creates an empty file system on that diskette

You should format a diskette only when you no longer want to see or work with files that are already stored on that diskette. You format a diskette with the **FORMAT** command, which is described in Chapter 3 of this book.

Once you have created a file system on a diskette, you can mount that diskette and store files on it (by copying or creating them, for example.) This topic is discussed in the next section.

1.6 Mounting and Unmounting File Systems

In order to use the **MOUNT** and **UNMOUNT** commands, you must have superuser authority.

You can use or store files on another minidisk or on diskette only if you mount the file system first. When you mount a file system that is on another minidisk or on diskette, you give that file system a place in your file system. Then, you can work with the files in that file system just as though they were on your minidisk. You can use **SWITCH** to switch to the directories in that file system, and do any other tasks that you can do with files on your own minidisk. If, for example, you need to use files on another minidisk. complete the following steps:

1. First, decide on which directory on your minidisk you will mount the file system. The directory can either be empty or can contain files or other directories. If you mount a file system on a directory that already contains files or other directories, you can't use those files and directories until you unmount the file system. If you want to create an empty directory on your minidisk, do this by running the **CREATE** command from the command bar of a FILES window. Or, use the **DELETE** command to permanently delete all files and directories from an existing directory.

2. Next, use the **MOUNT** command to mount it. You select the **MOUNT** command from the File System Handling Tools Group in the TOOLS window. See "MOUNT--Mounting a File System" in topic 3.36 for a description of this command.

When you are finished using the files in a minidisk file system that you have mounted:

Use the **UNMOUNT** command (from the File System Handling Tools Group in the TOOLS window) to remove the file system from the directory on which you mounted it. See "UNMOUNT--Unmounting a File System" in topic 3.55 for a description of this command.

For more information on mounting and unmounting file systems, see *Managing the AIX PS/2 Operating System*.

1.7 Backing Up and Restoring File Systems, Directories, and Files

You or the System Administrator should back up your files on a regular basis. Then if system problems should occur, you can use the archived copies to restore your files.

You back up file systems or directories (and the files they contain) with the **BACKUP** command. This command erases any files stored on the minidisk, diskette, or tape you specify and then places the directories you specify on that minidisk, diskette, or tape. You can't use **BACKUP** to back up a single file. Instead you must use it to back up the entire file system or directory that contains that file. When you back up a file system or directory, you back up all the files and directories in that file system or directory, as well as any directories in those directories, and so on.

If the files stored on your minidisk are lost or damaged, you can use the **RESTORE** command to copy them back onto your minidisk. With **RESTORE**, you can restore all file systems, files, and directories stored on the archive minidisk, diskette, or tape. Or, you can restore only selected file systems, files or directories. If you restore a file system or directory, you restore all files and directories in that file system or directory, and any directories in those directories, and so on.

As an example of the **BACKUP** and **RESTORE** commands, assume you want to back up on diskette a file system that is stored on your minidisk. Follow these steps:

1. Insert a diskette in a diskette drive.

2. If you are backing up data to the diskette for the very first time, use the **FORMAT** command (from the File System Handling Tools Group in the TOOLS window) to prepare the diskette for use. **FORMAT** destroys any files or directories stored on a diskette before it formats the diskette. Generally, you format a diskette if you are using it for the first time and intend to store new information, or if you never want to see or work with the files and directories on that diskette again.

3. Select **BACKUP** from the File Handling Tools Group of the TOOLS window. Specify the name of the file system or directory on your minidisk that you want to back up and the device on which you want to place the backup copy (in this case, the appropriate diskette drive). The **BACKUP** command makes a copy of all files and directories in the directory or file system you specified. After the command completes, you can remove the diskette and store it in a safe place.

If you accidentally delete a file or a system storage error occurs, you can copy the data on the archive diskette back onto your minidisk. Complete the following steps:

1. Use the **RESTORE** command, which is available through the File Handling Tools Group of the TOOLS window. Specify whether you want to restore selected file systems, files or directories, or all of the data you backed up on the diskette. You can retrieve only file systems, directories, or files that you have archived.

2. When the **RESTORE** command ends, the file systems, directories, and files you specified are restored to the same file system or directory

on the minidisk from which they were backed up. Any data already on the file system or directory to which you are restoring data is erased. If the target directory or files have been deleted since a directory was backed up, the **RESTORE** command re-creates them. If the target file system has been deleted since a file system was backed up, you must run the AIX command **mkfs** in the AIX window or command pop-up to create a new file system before running the **RESTORE** command. See *AIX Operating System Commands Reference* for more information on the **mkfs** command.

Note: If you plan to use the backup diskette for any purpose other than archiving other files and directories, you must use the **FORMAT** command to prepare it for its next use.

Backing up and restoring files and directories is discussed in more detail in *Managing the AIX PS/2 Operating System*.

The **FORMAT**, **BACKUP**, and **RESTORE** commands are discussed in Chapter 3 of this book.

2.0 Chapter 2. Using Commands

Subtopics
2.1 CONTENTS
2.2 About This Chapter
2.3 Running a Command in a FILES, TOOLS, or APPLICATIONS Window
2.4 AIX Device Names
2.5 Pattern-Matching Characters
2.6 Ownership and Protection of Files and Directories
2.7 Displaying Help Information

2.1 CONTENTS

2.2 About This Chapter

This chapter contains information on running commands from FILES, TOOLS, or APPLICATIONS windows, including the format of the command output and AIX command and device names that appear in Usability Services messages. For an alphabetical list of Usability Services commands and the steps required to run them, see Chapter 3 of this book.

2.3 Running a Command in a FILES, TOOLS, or APPLICATIONS Window

The commands that are discussed in this book are part of the Usability Services command interpreter. This interpreter translates Usability Services commands into instructions that can be understood by the IBM AIX Operating System. Many of the Usability Services commands map directly to AIX commands. For information on running AIX and DOS commands and on the use of the AIX command pop-up, refer to the chapter called "Entering AIX and DOS Commands" in *Usability Services Guide*.

When you run certain Usability Services commands, the screen clears and a prompt appears at the top of the screen that indicates that the command is running. Any command output appears below the prompt. If the output fills the screen, the prompt disappears from the screen. The words *Command, AIX-command, window-name* are replaced on the screen by a specific Usability Services command name, AIX command name, and Usability Services window name, respectively.

> *Command* is running, using the AIX command:
> *AIX-command*
> If you want to try to cancel the command, press the Break key.

An additional prompt indicates that the running of the command is complete and tells you how to return to the previous screen. Any command output is left unchanged.

> *Command* completed.
> To return to the *window-name*, press the Enter key.

When a command uses the screen for command output, the command processor controls the number of lines that are written to the screen with the AIX command **stty page length 23** in your **.profile** file. If the screen fills with output, the output stops and a bell sounds. To see all of the output at once, press the space bar. To see just the next screen of output, press the **Enter** key. If you want to cancel the output, press the **Break** key.

If you want to stop the screen output temporarily, press the **Stop Output** key sequence to stop the output, and the **Resume Output** key sequence to restart it (see *Usability Services Keyboard Reference Charts* for the proper key sequence on your keyboard).

If you need to change the way that **stty** controls screen output, you can either turn off the command by using an editor to place the character # and a space at the beginning of the line in **.profile** that contains the command or by changing the parameters of the command (see *AIX Operating System Commands Reference* for information on the **stty** command).

When you see the **Command is running** prompt, the name of the AIX command that is running also appears. The list below shows the AIX command that runs when you enter the corresponding Usability Services command.

Usability Services Command	**AIX Command**
ACTIVATE	activate
BACKUP	Shell procedure **archive** which calls the AIX

	command **backup**.
CANCEL	cancel
CCOMPILE	cc
CHECK	lint
CLOSE	(no corresponding AIX command)
COMBINE	cat
COMPARE	cmp
COMPILE	(one of the installed compilers)
COPY	copy
CREATE	touch
CROSSREF	cxref
DATE	date
DELETE	del
DESCRIBE	describe (only when Usability Services is installed)
DEVICES	devices
ENVIRONMENT	(no corresponding AIX command)
FILETYPES	filetypes (only when Usability Services is installed)
FIND	find
FINDTEXT	grep
FORMAT	format, mkfs
FORMATERRORS	errpt
FORMATRACES	trcrpt
FREESPACE	df
HIDE	hide
INSTALL	installp
INTERPRET	(one of the installed interpreters)
LINK	ln
LINKEDIT	cc
LOGOFF	(no corresponding AIX command)

MINIDISKS	minidisks
MOUNT	mount
MOVE	move
OPEN	open (of a window)
PASSWORD	passwd
PICK	(no corresponding AIX command)
PRINT	pr, print
PRINTQ	print
REFORMAT	cb
RENAME	move
RESTORE	Shell procedure **retrieve** which calls the AIX command **restore**.
RETURN	(no corresponding AIX command)
RUN	(no corresponding AIX command)
SHOW	pg
SORT	(no corresponding AIX command)
SORTMERGE	sort
STARTTRACE	trace
STOPTRACE	trcstop
SWITCH	(no corresponding AIX command)
TOOLSUPDATE	toolsupdate (only when Usability Services is installed)
UNMOUNT	unmount
UPDATE	(no corresponding AIX command)
UPDATEP	updatep
USEDSPACE	du
USERS	users

2.4 AIX Device Names

Some Usability Services commands cause messages to appear that refer to AIX device names. Because these names may be unfamiliar to many Usability Services users, the table below maps these names to the type of device they represent:

Type of Device	**AIX Device Name**
Fixed Disk	hdisk0 (hd0) hdisk1 (hd32)
Minidisk	hd1 - hd31; rhd1 - rhd31 hd33 - hd63; rhd33 - rhd63 (raw form used for BACKUP/RESTORE)
Diskette0	fd0; rfd0 fd0l (1); rfd0l (1) (raw form: used for BACKUP/RESTORE)
Diskette1	fd1; rfd1 fd1l (2); rfd1l (2) (raw form: used for BACKUP/RESTORE)
Tape	rmt0
Printer	lp0 - lp2
Screen	console, or tty0 - tty14 pts0 - pts**n** (3) ptc0 - ptc**n**

(1) The last character is the letter "L" and stands for "low."

(2) The last two characters are the number "one" followed by the letter "L."

(3) The letter n represents the upper limit which is determined by the maxminor parameter contained in the pts stanza of **/etc/master**.

2.5 Pattern-Matching Characters

Some Usability Services commands allow you to specify multiple names in some fields. Instead of typing in each name separately, it is possible to type in symbols that stand for all or part of a name. These symbols that stand for characters in a name are called ***pattern-matching characters***.

The four types of pattern-matching characters are as follows:

An asterisk (*****) matches any grouping of zero or more characters. For example, you can search for all files that start with the characters **PERS** by typing

```
PERS*
```

This string matches with **PERS**, **PERSONAL**, **PERSONNEL**, or any other files with names beginning with **PERS**.

A question mark (**?**) matches one-for-one with any character. For example, **?** matches with a single character, **??** matches with a sequence of any two characters, and so on. If you type

```
PERS?
```

you match with **PERS1** and **PERSQ**, for example. By typing **PERS** followed by two question marks, you match with **PERS12** and **PERSQZ**, but not with **PERS8**, for example.

Brackets (**[ ]**) around ranges of characters specify that any one of the characters may appear in a name. For example, **program[1-4]** matches with **program1**, **program2**, **program3**, and **program4**. If you type

```
program[1-4]
```

you match with the four specified programs.

An exclamation point (**!**) inside a [ ] sequence that contains a range of characters specifies that any character except for one of the characters in the range will match. If you type

```
program[!1-4]
```

you match with program5, program6, and program7. among others.

Only some of the Usability Services commands allow the use of pattern-matching characters in certain fields. The command descriptions in Chapter 3 specify where you can use such symbols. You can also use these characters when running an AIX command in the AIX window or AIX command pop-up.

2.6 Ownership and Protection of Files and Directories

There are two practical reasons for protecting files and directories:

Files and directories may contain information that should not b available to everyone who uses the system.

Not everyone who has access to files and directories should have th power to change them.

One way of protecting files is to limit the access of these files to certain users. Each user of the system can be assigned to one or more groups. Each group shares certain protection privileges. For example, users may be placed in the same group because they work on the same project and need access to a common set of files. Belonging to a group increases or restricts the privileges of the users assigned to them.

The user name **su** belongs to the most privileged user of the system (sometimes called the ***superuser***). A person with superuser authority has unlimited privileges and none of the protection checks of the normal user. Refer to *Managing the AIX PS/2 Operating System* for a complete description of the duties and privileges of this user.

You can protect a file or directory by setting its ***access permissions***. Access permissions are codes that determine how the file can be used by anyone who works on your system (except for the superuser, who has unlimited access.)

For file types that are shipped with the system, the values of ownership and protection assigned to a particular file type are already set. You can view these values for all the files and directories that have a particular file type by using the **FILETYPES** command. This command also enables you to assign values of protection and ownership to new file types that you add to the system, as well as set new values of protection and ownership for new files with existing file types. To set these values for a particular file, use the **DESCRIBE** command. Both of these commands are discussed in detail in Chapter 3 of this book.

Three classes of access permissions are available:

Owner: The owner of a selected file or directory. Generally, th owner of a file or directory is the user who created it. The owner usually has full privileges for the files he creates.

Group: The group of users who need to use a selected file o directory. The members of a group may have special access permissions for the files associated with their jobs.

Public: All users other than those in a group. The public may or ma not need access to a selected file or directory.

Several levels of protection are available to you to protect your files and directories. These levels of protection are:

Read (Files and Directories): With read access, a user may view th contents of the selected file or directory, but may not change the contents.

Write (Files and Directories)

- A user may change the contents of the selected file, but may not see the contents of the file unless Read is also selected in the **FILETYPES** or **DESCRIBE** pop-ups.

- A user may change the contents of the selected directory, by creating files or deleting files, if Search is also selected in the **FILETYPES** or **DESCRIBE** pop-ups.

Run (File): A user may use the name of the selected file as command.

Search (Directory): A user may access the selected directory as hi own current directory. A user may not display the contents of the directory unless Read is also selected in the **FILETYPES** or **DESCRIBE** pop-ups.

2.7 Displaying Help Information

A help pop-up gives you information about Usability Services. For example, if you are not sure about what a command or window does, you can read a help pop-up to find out more. Help pop-ups are available for various objects on the display screen. Objects include buttons, input fields, pop-ups, windows, and the command bar. To display a help pop-up for a button or an input field, place the cursor on the button or in the input field and press the **Help** key. (If you have a mouse and point to an object neither in the active pane nor on the command bar, an error message appears. Press the **Next Pane** key until the pane becomes active, then point to the object and press the **Help** key to display the help pop-up.) When you have read the pop-up, press the **Quit** key to remove it.

The following help pop-up information appears when you place the cursor on **FILES** in the WINDOWS window and press the **Help** key:

```
+-------------------------------------------------------------------------------
¦
¦
¦   Help for "FILES"                                                  >>QUIT
¦
¦   A FILES window allows you to create new files and directories, and
¦   work with existing ones. It displays the list of files and
¦   directories in your current directory.
¦
¦   To create a new FILES window, select FILES, then select OPEN from the
¦   Command Bar. The FILES window will appear on your screen.
¦
¦
+-------------------------------------------------------------------------------
```

To display a help pop-up for a choice pop-up, move the cursor to the area inside the pop-up and press the **Help** key. If a help pop-up is not available for the particular object you point to, pressing the **Help** key displays the help text for the command associated with the choice pop-up.

If you want to find out more about a particular Usability Services command (and if selecting the command causes pop-ups to appear), you can read the information in a pop-up and then press **Quit** to remove the pop-up. Pressing **Quit** removes a pop-up without running the command.

3.0 Chapter 3. Commands

Subtopics

3.1 CONTENTS
3.2 About This Chapter
3.3 ACTIVATE--Making a Window Active
3.4 BACKUP--Backing Up File Systems and Directories
3.5 CANCEL--Canceling an Activity
3.6 CCOMPILE--Compiling C Source Files
3.7 CHECK--Checking C Source Files
3.8 CLOSE--Closing a Window
3.9 COMBINE--Combining Files
3.10 COMPARE--Comparing Files
3.11 COMPILE--Compiling Source Files
3.12 COPY--Copying Files
3.13 CREATE--Creating a Directory
3.14 CREATE--Creating a File
3.15 CROSSREF--Making a Cross-Reference List
3.16 DATE--Displaying the System Date and Time
3.17 DELETE--Deleting Files or Directories
3.18 DESCRIBE--Describing a Directory
3.19 DESCRIBE--Describing a File
3.20 DEVICES--Showing, Adding, Changing, and Deleting Devices
3.21 ENVIRONMENT--Displaying or Changing the Characteristics of a Window
3.22 FILETYPES--Adding, Changing, and Deleting File Type Descriptions
3.23 FIND--Finding a File or Directory
3.24 FINDTEXT--Finding Text Within Files
3.25 FORMAT--Formatting a Diskette
3.26 FORMATERRORS--Formatting an Error Log
3.27 FORMATTRACES--Formatting Trace Files
3.28 FREESPACE--Displaying the Amount of Free Space
3.29 HIDE--Hiding a Window
3.30 INSTALL--Installing a Licensed Program
3.31 INTERPRET--Running the Interpreter
3.32 LINK--Defining Additional File Names
3.33 LINKEDIT--Linking Object Files into a Run File
3.34 LOGOFF--Ending your Session
3.35 MINIDISKS--Adding, Changing, and Deleting Minidisks
3.36 MOUNT--Mounting a File System
3.37 MOVE--Moving Files
3.38 OPEN--Displaying a Window, File, or Directory
3.39 PASSWORD--Changing a Password
3.40 PICK--Displaying Specific Directory Entries
3.41 PRINT--Printing Files
3.42 PRINTQ--Displaying or Changing the Print Queue
3.43 REFORMAT--Reformatting a C Source File
3.44 RENAME--Renaming a File or Directory
3.45 RESTORE--Restoring Files or Directories
3.46 RETURN--Returning to the Tools Groups List
3.47 RUN--Running a Program or Command
3.48 SHOW--Showing a File
3.49 SORT--Sorting Directory Entries
3.50 SORTMERGE--Sorting File Contents
3.51 STARTTRACE--Starting Trace Activity
3.52 STOPTRACE--Stopping Trace Activity
3.53 SWITCH--Switching Directories
3.54 TOOLSUPDATE--Showing, Adding, Updating, or Deleting Tools Groups or Comma
3.55 UNMOUNT--Unmounting a File System
3.56 UPDATE--Updating Window Contents
3.57 UPDATEP--Updating an Installed Licensed Program

3.58 USEDSPACE--Determining the Amount of Used Space
3.59 USERS--Showing, Adding, Changing, Deleting Users and Groups

3.1 CONTENTS

3.2 About This Chapter

This chapter contains an alphabetized list of Usability Services commands. A quick summary of the steps required to run each command appears at the beginning of each command section. This is followed by a more detailed description of the same steps, with choices and additional information included where necessary.

For even more detailed information on a particular choice, place the cursor on the choice on the display screen and press the **Help** key. See "Displaying Help Information" in topic 2.7 for the details of getting help.

3.3 ACTIVATE--Making a Window Active

ACTIVATE makes the open window that you select visible and active. This command is available only if your system allows you to open multiple windows. In order to activate a window, you must select it from the Open Windows pane of the WINDOWS window. Using **ACTIVATE** may be quicker than using the **Next Window** and **Previous Window** keys, because you don't have to display each window in the ring of open windows before you get to the window you want.

To temporarily remove a window from the display screen, use the **HIDE** command. Using this command also removes a window from the ring of open windows you can access with the **Next Window** and **Previous Window** keys. See "HIDE--Hiding a Window" in topic 3.29 for more details on the **HIDE** command.

N**Note:** An error condition may occur when a hidden window is cancelled. To Navoid this error condition, do not use CANCEL on a hidden window. To Nclose a hidden window, use ACTIVATE to activate the window and then use NCLOSE to close the window.

+--- **Selecting ACTIVATE** ----------+

1. Display the WINDOWS window.

2. Move to Open Windows pane.

3. Select a window name. Then select **ACTIVATE**.

+----------+

More Detailed Information

1. To display the WINDOWS window, press the **WINDOWS Window** key. The WINDOWS window appears.

2. Go to Open Window pane.

3. Select from the Open Windows pane. The command bar changes to show you the commands that are available.

4. Select **ACTIVATE** from the command bar. The selected window appears.

3.4 BACKUP--Backing Up File Systems and Directories

BACKUP does two things:

First, it erases any file systems, directories, and files stored on specified diskette, tape, or minidisk.

Second, **BACKUP** copies each file system and directory you specify onto the newly erased diskette, tape, or minidisk. **BACKUP** copies all the files and directories in each specified file system or directory, all the files and directories in those directories, and so on.

Note: In order to back up a file system or to back up any data to a minidisk, you must have the proper permissions. Refer to *Managing the AIX PS/2 Operating System* for more information.

If you are backing up data to a diskette for the very first time, use the **FORMAT** command to prepare the diskette for use. Refer to "FORMAT--Formatting a Diskette" in topic 3.25 for instructions on formatting diskettes. You should not mount a diskette before using the **BACKUP** command.

You should use **BACKUP** as often as necessary to make backup copies of your file systems and directories. Then if they are damaged or lost, you can use **RESTORE** to copy them back onto the minidisk.

Warning: If you back up or restore to an existing file system or directory, the contents of the original file system or directory will be destroyed.

Use the **BACKUP** command to back up your own directories.

+--- **Backing up File Systems and Directories** ----------+
| 1. Display a TOOLS window. |
| 2. Select **FILE HANDLING**. Then select **OPEN**. |
| 3. Select **BACKUP**. Then select **RUN**. |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until it appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are

available with the selected window.

b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **BACKUP**. The command bar changes.

   b. Select **RUN** from the command bar. The pop-up containing the choices for **BACKUP** appears.

4. From the **BACKUP** pop-up, make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Options allows you to choose whether to back up selected directories or an entire file system. If you select:

   - **Backup Selected Directories**: a pop-up appears that contains the current directory name. You can change this name or specify more than one name, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names.

   - **Backup a File System**: a pop-up appears that asks you for a file system name. You can specify only one name.

   To Device is the name of the device to which the directories are to be copied. Only the choices available with your system appear. The default name is **Diskette0**, if that device is available. If you select **Other Device**, a pop-up asks you to select a minidisk or an alternative device. If you need to find out the name or other characteristics of the minidisk you want to use, use the **MINIDISKS** command, which appears in the Customization Tools Group of the TOOLS window. (See "MINIDISKS--Adding, Changing, and Deleting Minidisks" in topic 3.35 for details on this command.) See "AIX Device Names" in topic 2.4 for a list of devices and their names.

   Report Status lets you decide if you want status messages sent to you while the command is running. The default here is **Yes**.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.5 CANCEL--Canceling an Activity

CANCEL forces an immediate and abnormal end to any activity in the selected window. By using this command, you remove the selected window from the screen and from the system. When you use **CANCEL**, unpredictable events may happen, including the loss of data. Use this command only if you cannot **ACTIVATE** and **CLOSE** a window, or if you cannot use **ACTIVATE** and the **Close AIX Window** keys or the **Close DOS Window** keys to close an AIX or DOS window.

This command is available only if you are using a console.

N**Note:** Do not use CANCEL on a hidden window. To close a hidden window, Nuse ACTIVATE to activate the window and use CLOSE to close the window.

+--- **Canceling an Activity** ----------+
| 1. Display the WINDOWS window. |
| 2. Move to Open Windows pane. |
| 3. Select a window name. Then select **CANCEL**. |
| 4. Press **Do** to cancel the selected window or **Quit**. |
+---------------------------------------+

More Detailed Information

1. To display the WINDOWS window, press the **WINDOWS Window** key. The WINDOWS window appears.

2. Go to the Open Windows pane. The command bar changes to show you the commands that are available with the selected window.

3. Select **CANCEL** from the command bar. The **CANCEL** pop-up appears and asks you whether you really want to cancel the window.

4. From the **CANCEL** pop-up, press **Do** to cancel the selected window or press **Quit** if you do not want to cancel the window.

3.6 CCOMPILE--Compiling C Source Files

CCOMPILE translates C source files into a machine language program. **CCOMPILE** also gives you the choice of link editing your source files to resolve cross-references between objects such as subroutines and variables. See "LINKEDIT--Linking Object Files into a Run File" in topic 3.33 for more details.

You can also compile various kinds of source files from a FILES window, depending on the licensed programs installed on your system. See "COMPILE--Compiling Source Files" in topic 3.11 for more details.

Compiling C Source Files

1. Display a TOOLS window.
2. Select **PROGRAM DEVELOPMENT**. Then select **OPEN**.
3. Select **CCOMPILE**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until it appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROGRAM DEVELOPMENT**. The command bar changes.

   b. Select **OPEN** from the command bar. The Program Development Tools Group appears on the screen.

3. From the Program Development Tools Group:

   a. Select **CCOMPILE**. The command bar changes.

   b. Select **RUN** from the command bar. The pop-up containing the choices for **CCOMPILE** appears.

4. From the **CCOMPILE** pop-ups, make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Source Files are the files you want to compile. You can specify files with the **.c**, **.o**, and **.s** suffixes in this field. If you type in more than one name, separate each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information. **CCOMPILE** builds each of these source files into an object file.

   Include File Directory allows you to specify the name of the directory that contains the C include files to be compiled with your C program. The default name is **/usr/include**.

   Linkedit After Compile allows you to build a single run file from the specified object files and any object files produced by the compile process. To see the pop-up, you must select yes. If you choose to link edit, the object files disappear after you compile and link edit. If you don't want to link edit the files now, you can use **CCOMPILE**, **COMPILE** (see "COMPILE--Compiling Source Files" in topic 3.11), or **LINKEDIT** (see "LINKEDIT--Linking Object Files into a Run File" in topic 3.33) to link them later.

   If you select **Yes**, a pop-up appears. In this pop-up, you have the following choices:

   - **Other Object Files** lets you type in the names of any other object files that you want to link edit with the program you are compiling. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   - **Library Directory** is the full path name of the directory that contains the libraries you want to use. Only one library directory can be specified. The default name is **/lib**.

   - **Library Names** are the names of the libraries that contain the files you want to use. Separate each name with a space. The default name is **libc.a**. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   - **Run File** is the name that you want to give the single file created when the object files are link edited. The default name is **a.out**.

   Direct Messages To lets you decide if you want error messages sent to the screen, the printer, or a file. By default, messages go to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details on the

prompts.

3.7 CHECK--Checking C Source Files

CHECK searches C source files for errors in variables, structure, and style, then returns the results to you. You can have the results sent to the display screen, the printer, or a file.

You can check C source files from a FILES window or from a TOOLS window.

Checking C Source Files (from FILES)

1. Display a FILES window.
2. Select a file name. Then select **TOOLS**.
3. Select **CHECK**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the name of the C source file you want to check. The command bar changes.

   b. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

3. From the list of commands, select **CHECK**. The pop-up containing the choices for **CHECK** appears. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Source Files are the files you want to check for errors. The

names you selected appear. You can change them or add to them. If you add names, separate each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

Include File Directory is the name of the directory that contains the C include files used by your program. C include files contain information on variables that is useful when compiling large programs. The default name is **/usr/include**.

Report Problems with Variables lets you check for problems with variables. The default value is **Yes**. If you select **Yes**, **CHECK** looks for problems such as undefined variables or defined, but unused, variables.

Report Program Structure Problems lets you check for problems with the structure of a program. The default value is **Yes**. If you select **Yes**, **CHECK** looks for problems such as statements that cannot be reached and loops that were entered at the wrong point.

Report Program Style Problems lets you check for problems with the style of a program. The default value is **Yes**. If you select **Yes**, **CHECK** offers help in finding bugs and reducing waste in your program.

Direct Output To lets you send the results of the check to the screen, the printer, or a file. By default, output is sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select multiple source files to check, the output is sent to a single file. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

+--- **Checking C Source Files (from TOOLS)** ----------+
| 1. Display a TOOLS window. |
| 2. Select **PROGRAM DEVELOPMENT**. Then select **OPEN**. |
| 3. Select **CHECK**. Then select **RUN**. |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

or

Open a window:

a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROGRAM DEVELOPMENT**. The command bar changes.

   b. Select **OPEN** from the command bar. The Program Development Tools Group appears on the screen.

3. From the Program Development Tools Group:

   a. Select **CHECK**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **CHECK** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Source Files are the files you want to check for errors. You can type in more than one name, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   Include File Directory is the name of the directory that contains the C include files used by your program. C include files contain information on variables that is useful when compiling large programs. The default name is **/usr/include**.

   Report Problems with Variables lets you check for problems with variables. The default value is **Yes**. If you select **Yes**, **CHECK** looks for problems such as undefined variables or defined, but unused, variables.

   Report Program Structure Problems lets you check for problems with the structure of a program. The default value is **Yes**. If you select **Yes**, **CHECK** looks for problems such as statements that cannot be reached and loops that were entered at the wrong point.

   Report Program Style Problems lets you check for problems with the style of a program. The default value is **Yes**. If you select **Yes**, **CHECK** offers help in finding bugs and reducing waste in your program.

   Direct Output To lets you send the results of the check to the screen, the printer, or a file. By default, output is sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select multiple source files to check, the output is

sent to a single file. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.8 CLOSE--Closing a Window

CLOSE lets you indicate that you have finished working with a window. By using this command, you remove the selected window from the screen and from the system. You should end any application running in a window before you close that window.

Before you log off the system, close all windows except the WINDOWS window and the CONSOLE window. Use the **Close AIX Window** or **Close DOS Window** key sequence to close any DOS or AIX window before you log off. The WINDOWS window and CONSOLE window are automatically closed by the system when you log off.

N**Note:** To close a hidden window, use ACTIVATE first to activate the window Nand then CLOSE to close the window.

+--- **Closing a Window** ----------+
| |
| 1. Display a FILES, TOOLS, or APPLICATIONS window. |
| |
| 2. Select **CLOSE**. |
| |
+---------------------------------+

More Detailed Information

1. To display an open FILES, TOOLS, or APPLICATIONS window, press the **Next Window** key until the desired window appears.

2. Select **CLOSE** from the command bar of that window. You return to the previous non-hidden window in the ring of open windows.

3.9 COMBINE--Combining Files

COMBINE adds the contents of one or more files to another file. If the file to which you are adding already exists, the additions are placed at the end of this file. If the file does not already exist, **COMBINE** creates a new file and adds the specified files to it.

You can combine files from a FILES window or from a TOOLS window. If you combine files from a FILES window, select the files in the order you want to combine them.

+--- **Combining Files (from FILES)** ----------+
| 1. Display a FILES window. |
| 2. Select the names of the files (in the order you want them combined). Then select **TOOLS**. |
| 3. Select **COMBINE**. |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. The FILES window appears on the screen.

2. From the FILES window:

   a. Select the names of the files you want to add to the end of another file. These files will be added to the other file in the order in which you select them.

   b. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

3. From the list of commands, select **COMBINE**. Another pop-up that contains the choices for **COMBINE** appears.

4. Make the choices and press **Do**. Pressing **Quit** cancels the pop-up without saving your choices. The choices are:

Files are the files you want to combine. The names you selected appear in the pop-up. You can change the names. Or, you can add more names by separating them with a space. Be sure that the names appear in the order you want the files combined. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

To File is the file into which you want the other files copied. You can type in the name of only one file. If the file doesn't exist, **COMBINE** creates it. If the file does exist, the files are added to the end of it.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Combining Files (from TOOLS)

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **COMBINE**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears.

3. From the File Handling Tools Group:

a. Select **COMBINE**. The command bar changes.

b. Select **RUN** from the command bar. A pop-up containing the choices for **COMBINE** appears.

4. Make the choices and press **Do**. Pressing **Quit** cancels the pop-up without saving your choices. The choices are:

   Files are the files you want to combine. Type in the names in the order you want them combined. Separate the names with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   To File is the file into which you want the other files combined. You can type in the name of only one file. If the file doesn't exist, **COMBINE** creates it. If the file does exist, the files are added to the end of it.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.10 COMPARE--Comparing Files

COMPARE checks the contents of one file against the contents of another file to determine if the files contain the same data. **COMPARE** is useful for checking that a file you have copied was copied correctly. It is also useful for checking whether you have made changes to a file you have copied.

If you run the **COMPARE** command on identical files, a message such as **Files letter1.txt and letter2.txt are identical** appears. If you run the command on files that differ, an additional message indicates in what way the files differ, for example, **EOF on letter3.txt** (when the files differ in length) or **letter1.txt letter2.txt differ: char 14, line 1** (when the files differ in content).

You can compare files from a FILES window or from a TOOLS window.

+--- **Comparing Files (from FILES)** ----------+
| 1. Display a FILES window. |
| 2. Select a file name. Then select **TOOLS**. |
| 3. Select **COMPARE**. |
| 4. Make the choices and press **Do**. |
| 5. Follow the prompts on the display screen. |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the name of one of the files you want to compare. The command bar changes.

   b. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

3. From the list, select **COMPARE**. Another pop-up that contains the choices for **COMPARE** appears.

4. Make the choices and press **Do**. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   File is the name of one of the files you want to compare. The name of the file you selected appears. You can change this name.

   With File is the name of the other file you want to compare. You can type in only one name.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Comparing Files (from TOOLS)

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **COMPARE**. Then select **RUN**.
4. Type in the names and press **Do**.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the Tools window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **COMPARE**. The command bar changes.

   b. Select **RUN** from the command bar. The pop-up containing the

choices for **COMPARE** appears.

4. Type in the names and press **Do**. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   File is the name of the first file you want to compare. Type in only one name.

   With File is the name of the other file you want to compare. Type in only one name.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.11 COMPILE--Compiling Source Files

COMPILE starts the compiler associated with the type of the source file you select. The compiler then translates source files into a machine-language program to be run at a later time. **COMPILE** also gives you the choice of link editing your source files. Link editing resolves cross-references between objects such as subroutines and variables. See "LINKEDIT--Linking Object Files into a Run File" in topic 3.33 for more information on this command.

COMPILE will not appear in the command bar unless a compiler has been defined for the file type you select. The **FILETYPES** command allows you to specify the compiler to be associated with a given file type. See "FILETYPES--Adding, Changing, and Deleting File Type Descriptions" in topic 3.22 for details on defining compilers and to see the name of the compiler associated with a particular file type.

After you select the source files you want to compile, a special command bar appears that contains the **COMPILE** command. See "Working with Groups of Files" in the chapter called "Creating and Working with Files" in *Usability Services Guide* for more information.

+--- **Compiling Source Files** ----------+
| 1. Display a FILES window. |
| 2. Select a source file name. Then select **COMPILE**. |
| 3. Make the choices and press **Do** in each pop-up to run the command. |
| 4. Follow the prompts on the display screen. |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the name of the source file you want to compile. Depending on the type of source file, you can select one or more source file names. The command bar changes.

   b. Select **COMPILE** from the command bar. A pop-up appears containing

the choices for the **COMPILE** command.

3. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up shows you the selected name and presents the following choices:

   Source Files are the files you want to compile. You can specify files with the **.c**, **.o**, and **.s** suffixes in this field. If you type in more than one name, separate each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information. **CCOMPILE** builds each of these source files into an object file.

   Include File Directory allows you to specify the name of the directory that contains the C include files to be compiled with your C program. The default name is **/usr/include**.

   Linkedit After Compile allows you to build a single run file from the specified object files and any object files produced by the compile process. To see the pop-up, you must select yes. If you choose to link edit, the object files disappear after you compile and link edit. If you don't want to link edit the files now, you can use **CCOMPILE**, **COMPILE** (see "COMPILE--Compiling Source Files"), or **LINKEDIT** (see "LINKEDIT--Linking Object Files into a Run File" in topic 3.33) to link them later.

   If you select **Yes**, a pop-up appears. In this pop-up, you have the following choices:

   - **Other Object Files** lets you type in the names of any other object files that you want to link edit with the program you are compiling. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   - **Library Directory** is the full path name of the directory that contains the libraries you want to use. Only one library directory can be specified. The default name is **/lib**.

   - **Library Names** are the names of the libraries that contain the files you want to use. Separate each name with a space. The default name is **libc.a**. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   - **Run File** is the name that you want to give the single file created when the object files are link edited. The default name is **a.out**.

   Direct Messages To lets you decide if you want error messages sent to the screen, the printer, or a file. By default, messages go to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

Only the C compiler is shipped with your system. For information on the choices available for the C compiler, see "CCOMPILE--Compiling C Source Files" in topic 3.6. If you install other compilers, the pop-ups for those compilers may have other choices. If so, see the guide that came with the installed compiler or Chapter 4 in this book for more details about the choices.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.12 COPY--Copying Files

COPY makes a copy of one or more files. It does not change the original files. You can copy:

A single file into the same directory. In this case, you must cop the file to a file with a different name. You can't have two files with the same name in the same directory.

A single file into another directory. In this case, you can copy th file to a file with the same name or to a file with a different name.

More than one file into another directory. In this case, you can' give a new file name to the copies. After you make the new copies, however, you can use **RENAME** to rename them. See "RENAME--Renaming a File or Directory" in topic 3.44 for more information about renaming files.

Warning: If you copy a file to an already existing file, the contents of the target file will be destroyed.

You can copy files from a FILES window or from a TOOLS window.

Copying Files (from FILES)

1. Display a FILES window.
2. Select the names of the files you want to copy. Then select **TOOLS**.
3. Select **COPY**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the names of the files you want to copy. The command bar

changes.

b. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

3. From the list, select **COPY**. Another pop-up containing the options for **COPY** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Files are the names of the files you want to copy. The names of the files you selected appear. You can change the names or add names by separating them with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   To File or Directory is the name of the single file or directory into which you want the copies placed.

   - If you are copying a single file to the same directory, type in a new file name for this choice.

   - If you are copying a single file to another directory, type in the full or relative path name, including a new file name, if you wish.

   - If you are copying more than one file to another directory, type in the full or relative path name of the directory into which you want the copies placed. To rename the copied files, use the **RENAME** command. See "RENAME--Renaming a File or Directory" in topic 3.44 for more information on this command.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Copying Files (from TOOLS)

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **COPY**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

If the window is already open, press the **Next Window** key until the window appears.

or

Open a window:

a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **COPY**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **COPY** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Files are the names of the files you want to copy. Type in one or more file names. Separate each name with a space.

   To File or Directory is the name of a single file or directory into which you want the copies placed.

   - If you are copying a single file to the same directory, type in a new file name for this choice.

   - If you are copying a single file to another directory, type in the full or relative path name, and a new file name, if you wish.

   - If you are copying more than one file to another directory, type in the full or relative path name of the directory into which you want the copies placed. To rename the copied files, use the **RENAME** command. See "RENAME--Renaming a File or Directory" in topic 3.44 for more information on this command.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.13 CREATE--Creating a Directory

CREATE makes a new directory in the current directory. Be sure that the current directory is the one into which you want to place the new directory. If it is not the right directory, use **SWITCH** to change directories before you use **CREATE**. See "SWITCH--Switching Directories" in topic 3.53 for details about changing directories.

You also can create files with the **CREATE** command. See "CREATE--Creating a File" in topic 3.14 for details.

+--- **Creating a Directory** ----------+
| 1. Display a FILES window. |
| 2. Select **CREATE**. |
| 3. Make the choices and press **Do** in each pop-up to run the command. |
| 4. Follow the prompts on the display screen. |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.
   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the command bar of the FILES window, select **CREATE**. A pop-up lists the different types of files you can create and asks what type you want.

3. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   In the first pop-up, select **Directory**.
   The second pop-up asks you to type in the name of the new directory. You can type in only one name.

   The new directory is not created until you press **Do** in both pop-ups.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details.

Each directory you create is added to the current directory. Depending on the number of files and directories already in the current directory, you may not be able to see the newly created directory name immediately. To view additional directory names, use the cursor movement keys or the Scroll button of the mouse to scroll the window. If you want to view only selected objects in the directory, use the **PICK** command. If you want to change the sort order of the objects you are viewing, use the **SORT** command.

3.14 CREATE--Creating a File

CREATE makes an empty file that you can later open and type in or change with an editing program. With **CREATE**, you can create many types of files, including text files, source code files, and shell programs. You also can create directories with this command. See "CREATE--Creating a Directory" in topic 3.13 for information about creating directories.

Before you can use this command to create a file with a particular file type, the file type must be defined in your system. A set of file types is shipped with the system. The **CREATE** pop-up contains those file types that you can create. Each time that you specify with the **FILETYPES** command that a file type can be created, the system adds the file type into the pop-up for the **CREATE** command. The editor associated with a particular file type is also assigned by using the **FILETYPES** command. See "FILETYPES--Adding, Changing, and Deleting File Type Descriptions" in topic 3.22 for more information.

+--- **Creating a File** ----------+
| |
| 1. Display a FILES window. |
| |
| 2. Select **CREATE**. |
| |
| 3. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 4. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the command bar of the FILES window, select **CREATE**. A pop-up containing the choices for **CREATE** appears.

3. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The first pop-up shows you all the possible file types and asks you to select the type of file you want to create.

   The second pop-up asks you to type in the name of the new file.

You can type in only one name.

The new file is not created until after you press **Do** in each pop-up.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

   Each file you create is added to the current directory. Depending on the number of files already in the directory, you may not be able to see the newly created file name immediately. To view additional file names, use the cursor movement keys or the Scroll button of the mouse to scroll the window. If you want to view only selected files in the directory, use the **PICK** command. If you want to change the sort order of the files you are viewing, use the **SORT** command.

3.15 CROSSREF--Making a Cross-Reference List

CROSSREF makes a cross-reference list of C source files and assembler source files. With this list, you can see where variables, functions, and other objects are defined and used within your programs.

You can select **CROSSREF** from a FILES window or from a TOOLS window.

Making a Cross-Reference List (from FILES)

1. Display a FILES window.
2. Select C Source file names.
3. Select **TOOLS**.
4. Select **CROSSREF**.
5. Make the choices and press **Do** in each pop-up to run the command.
6. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window, select the name of the C source files for which you want a cross-reference list. The command bar changes.

3. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

4. From the list of commands, select **CROSSREF**. Depending on your choices, one or more pop-ups may appear.

5. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Source Files are the names of the files for which you want to create a cross-reference list. The names you selected appear. You can change them or add to them. Separate each name with a

space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

Include File Directory is the name of the directory that contains the C include files used by your program. C include files contain information on variables that may be useful when you compile large programs. The default name is **/usr/include**.

Direct Output To lets you decide where to send the cross-reference list. You can show it on the display screen, print it, or store it in a file. By default, all output goes to the screen. If you select **File**, a pop-up asks you to type in the name of the file in which you want the cross-reference list stored. If you select **Printer**, the output is sent to the printer.

Direct Messages To lets you send error messages to the display screen, to the printer, or to a file. By default, all output goes to the screen. If you select **File**, a pop-up asks you to type in the name of the file.

6. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Making a Cross-Reference List (from TOOLS)

1. Display a TOOLS window.
2. Select **PROGRAM DEVELOPMENT**. Then select **OPEN**.
3. Select **CROSSREF**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

a. Select **PROGRAM DEVELOPMENT**. The command bar changes.

b. Select **OPEN** from the command bar. The Program Development Tools Group appears.

3. From the Program Development Tools Group:

a. Select **CROSSREF**. The command bar changes.

b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **CROSSREF**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Source Files are the names of the files for which you want to create a cross-reference list. You can type in more than one name. Separate the names with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   The remaining choices are the same as those in the **CROSSREF** pop-up that appears in a FILES window. See page 3.15 for more information about those choices.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.16 DATE--Displaying the System Date and Time

DATE shows you the date and time in the system. The system uses the date and time for a number of purposes. For example, the system uses the date and time to show you when you last changed a file. This information displays when you run the **DESCRIBE** command on a particular file. See "DESCRIBE--Describing a Directory" in topic 3.18 and "DESCRIBE--Describing a File" in topic 3.19 for more details.

Whenever you run the **UPDATE** command in a FILES window, the current time and the contents of the window are displayed. See "UPDATE--Updating Window Contents" in topic 3.56 for more information on this command.

The steps for using the **DATE** command to display the date and time appear in the following box.

Displaying the Date and Time

1. Display a TOOLS window.
2. Select **STATUS**. Then select **OPEN**.
3. Select **DATE**. Then select **RUN**. A pop-up shows you the current date and time in the system.
4. Press **Quit** to remove the pop-up.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **STATUS**. The command bar changes.

   b. Select **OPEN** from the command bar. The Status Tools Group appears.

3. From the Status Tools Group:

   a. Select **DATE**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up shows you the current date and time in the system.

4. Press **Quit** to remove the pop-up.

3.17 DELETE--Deleting Files or Directories

DELETE permanently erases files or directories from storage on a diskette or on the fixed disk. Before you delete information, determine whether there are files or other directories that you want to save. You can move the files or directories you want to keep to another directory. (See "MOVE--Moving Files" in topic 3.37.)

In order to delete the current directory, you must switch to the parent directory of the current directory. To do this, either use the **SWITCH** command to switch to the parent directory or select the parent directory name in the Path pane of the FILES window and select **OPEN** from the command bar.

You can delete files or directories from a FILES window or from the TOOLS window.

Deleting Files or Directories (from FILES)

1. Display a FILES window.
2. Select file or directory names. Then select **TOOLS**.
3. Select **DELETE**. Then press the **Do** key.
4. The file or directory names you selected are displayed, one at a time. To delete each one, type in **y** (for "Yes") after the prompt and press **Enter**. Pressing any other key cancels the deletion of the file or directory.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   OR

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the names of the files or directories you want to delete. The command bar changes.

   b. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

3. From the list of commands, select **DELETE**. Then press the **Do** key.

4. The file or directory names you selected appear, one at a time. To delete each one, type in **y** (for "Yes") after the prompt and press **Enter**. Pressing any other key cancels the deletion of the file or directory.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

+--- **Deleting Files or Directories (from TOOLS)** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **FILE HANDLING**. Then select **OPEN**. |
| |
| 3. Select **DELETE**. Then select **RUN**. |
| |
| 4. Type in the names and press **Do** in the pop-up to run the command. |
| |
| 5. The file or directory names you specified are displayed, one at a time. To delete them, type in **y** (for "Yes") after each prompt and press **Enter**. Pressing any other key cancels the deletion of the file or directory. |
| |
| 6. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.
   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.
   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **DELETE**. The command bar changes.
   b. Select **RUN** from the command bar. A pop-up containing the choices

for **DELETE** appears.

4. In the pop-up, type in the names of the files or directories you want to delete. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. You can type in more than one name. Separate the names with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5.

5. The file or directory names you specified are displayed, one at a time. To delete them, type in **y** (for "Yes") after each prompt and press **Enter**. Pressing any other key cancels the deletion of the file or directory.

6. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.18 DESCRIBE--Describing a Directory

DESCRIBE shows you details about a directory. For example, with **DESCRIBE** you can learn:

Who owns the directory

Who can read, change, or search the directory

When the directory was last changed or read

If you have the proper access permissions, you can change any of the characteristics that you can select in the **DESCRIBE** pop-up. When you attempt to change these values and press **Do**, **DESCRIBE** checks to ensure that you have proper authority to make the change. If you don't have the proper authority, no changes are made. See "Ownership and Protection of Files and Directories" in topic 2.6 for more information.

See "DESCRIBE--Describing a File" in topic 3.19 for details on describing a file.

Describing a Directory

1. Display a FILES window.
2. Select a directory name. Then select **DESCRIBE**.
3. If you are changing the description, make the choices and press **Do** in each pop-up to run the command.
4. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the name of the directory you want to describe. The command bar changes.

   b. Select **DESCRIBE** from the command bar. A pop-up shows you the directory description, with all appropriate values filled in.

3. If you are changing the description, make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

   Name is the name of the directory you selected. You can change this name.

   File Type is the type of file (in this case, directory). You can't change the type.

   Comment lets you type in any characters to help you identify the selected file.

   Owner is the owner of the directory. The user who created the directory is the owner. Depending on your own access permissions to a directory, you can change certain characteristics of a directory, such as owner, name, and permissions. See "Ownership and Protection of Files and Directories" in topic 2.6 and "USERS--Showing, Adding, Changing, Deleting Users and Groups" in topic 3.59 for more information.

   Group is the user group associated with the directory. You can change this name to the name of another group, if you have the proper permissions. You can define groups with the **USERS** command. See "USERS--Showing, Adding, Changing, Deleting Users and Groups" in topic 3.59 for more information.

   Owner Access Permissions lets you decide if the owner can display, change, or search the directory.

   Group Access Permissions lets you decide if users in the group associated with the selected directory can display, change, or search the directory.

   Public Access Permissions lets you decide if other users, besides the owner or associated group members, can read or change the directory or access it as their current directory.

   Inode Modified shows the last time link and access information was changed. You can't change this value.

   Changed and **Accessed** are the dates on which the directory was last changed and last accessed as a current directory. You can't change these dates.

   Size shows the size (in bytes) of the file. You can't change this value.

   Inode Number, or i-number, points to an inode, which identifies a file in terms of access, links, location, and so on. You can't change this number.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.19 DESCRIBE--Describing a File

DESCRIBE shows you details about a file. For example, with **DESCRIBE** you can learn:

Who owns the fil

Who can read, change, or run the fil

When the file was last changed and last read

If you have the proper access permissions, you can change any of the characteristics that you can select in the **DESCRIBE** pop-up. See "Ownership and Protection of Files and Directories" in topic 2.6 for more information.

See "DESCRIBE--Describing a Directory" in topic 3.18 for details on describing a directory.

Describing a File

1. Display a FILES window.
2. Select a file name. Then select **DESCRIBE**.
3. If you are changing the description, make the choices and press **Do** in the pop-up to run the command.
4. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the name of the file you want to describe. The command bar changes.

   b. Select **DESCRIBE** from the command bar. A pop-up shows you the description with all the appropriate values filled in.

3. If you are changing the description, make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The possible choices and types of information are listed below. However, only the choices that apply to the specific file type appear in the pop-up.

   Name is the name of the file you selected. You can change this name.

   File Type is the type of file (for example, Text or Shell program). You can't change the type.

   Comment lets you type in any characters to help you identify the selected file.

   Owner is the owner of the file. If you created the file, you are the owner. Depending on your own access permissions to a file, you can change certain characteristics of a file, such as owner, name, and permissions. See "Ownership and Protection of Files and Directories" in topic 2.6 and "USERS--Showing, Adding, Changing, Deleting Users and Groups" in topic 3.59 for more information.

   Group is the user group associated with the file. You can change this name to the name of another group, if you have the proper permissions. You define groups with the **USERS** command. See "USERS--Showing, Adding, Changing, Deleting Users and Groups" in topic 3.59 for more details.

   Owner Access Permissions lets you decide if the owner can display, change, or run the file.

   Group Access Permissions lets you decide if users in the group associated with the selected file can display, change, or run the file.

   Public Access Permissions lets you decide if other users, besides the owner or associated group members, can read or change the file, or use it as part of a command.

   Inode Modified shows the last time link and access information about the file was changed. You can't change this time.

   Changed and **Accessed** are the dates on which the file was last changed or used as part of a command. You can't change these dates.

   Size shows the size (in bytes) of the file. You can't change this value.

   Inode Number, or i-number, is a number that points to an inode, which identifies a file in terms of access, links, location, and so on. You can't change this number.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.20 DEVICES--Showing, Adding, Changing, and Deleting Devices

With **DEVICES**, you show, add, change, or delete descriptions of devices attached to your PS/2 system. Some examples of these devices are printers, diskette drives, and tape drives.

When you select **DEVICES**, an AIX window appears so that you can complete the command. The steps in the following box show you how to select **DEVICES** to begin the command. If you are not a member of the system group, you must supply the superuser password in order to run this command. For instructions on how to complete the command, see *Installing and Customizing the AIX PS/2 Operating System*.

For a list of the Usability Services device names, refer to "AIX Device Names" in topic 2.4.

+--- **Selecting Devices** ----------+

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **DEVICES**. Then select **RUN**.
4. Follow the prompts on the display screen.

+----------+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.
   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.
   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **DEVICES**. The command bar changes.
   b. Select **RUN** from the command bar. The **DEVICES** command begins to run. See "Customizing System Devices" in *Installing and Customizing the AIX PS/2 Operating System* for more details.

4. Follow the prompts on the display screen. You may be prompted for the superuser password in order to run the command. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for other details of the prompts.

3.21 ENVIRONMENT--Displaying or Changing the Characteristics of a Window

ENVIRONMENT allows you to display or change the characteristics of a window, including the path names that are searched during a command and the printer that will be used for all output from this window. **ENVIRONMENT** allows you to display or change only the characteristics of the WINDOWS, FILES, or TOOLS window currently displayed on the screen.

When you **OPEN** a new window, the environment of that window is automatically the same as the environment of the window from which it was opened. For example, if you open a new TOOLS window from the WINDOWS window, the printer and search paths used for commands by the WINDOWS window will also be defined for the TOOLS window, unless you specify otherwise with the **ENVIRONMENT** command.

+--- **Selecting Environment** ----------+
| |
| 1. Display a WINDOWS, FILES, or TOOLS window. |
| |
| 2. Select **ENVIRONMENT**. |
| |
| 3. Make the choices and press **Do** in the pop-up to run the command. |
| |
+---+

More Detailed Information

1. To display a WINDOWS, FILES, or TOOLS window:

   If the window is already open (the WINDOWS window is always open), press the **Next Window** key until the desired window appears. Press the **WINDOWS Window** key to display the WINDOWS window immediately.

   or

   Open a window:

   a. Select **FILES** or **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES or TOOLS window appears on the screen.

2. From the command bar of the WINDOWS, FILES, or TOOLS window, select **ENVIRONMENT**. A pop-up appears that contains the choices for **ENVIRONMENT**.

3. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The pop-up for the **ENVIRONMENT** command gives you the information and choices listed below:

   Path lets you specify the names of the directories, or paths, that are searched for the program necessary to run a command. Type in the directory names in the order you wish them searched, one path

per line (except for the last line, in which you can separate path names with a colon.) Do not remove the directories **/bin** and **/usr/bin** from the list of paths.

Printer Name lets you specify the name of the printer to be used when you print a file or send the output of a command to the printer. The name must already be known to the system. The default printer name is **lp0**. See "AIX Device Names" in topic 2.4 for a list of printer names.

3.22 FILETYPES--Adding, Changing, and Deleting File Type Descriptions

With **FILETYPES**, you can add, change, or delete descriptions of file types in your system. The **FILETYPES** command tells the system:

> The programs that the file type needs in order to run commands such a **CREATE**, **COMPILE**, **INTERPRET**, and **PRINT**, and to carry out functions such as editing. The **FILETYPES** command sets these values for all files of a particular file type.
>
> If the owner, group, or all users can read, write, or run all files o a file type (or read, write, or search all directories of a file type).

When your system was installed, the descriptions of some file types were defined for you. You can create objects of these file types with the **CREATE** command. If you want to create any other types of files with the **CREATE** command, you must first define them with the **FILETYPES** command. For instance, if you specify that a file type can be created (by specifying the name of a create program in the **FILETYPES** pop-up), that file type will appear in the pop-up for the **CREATE** command.

You can set the access permissions for a particular new file or directory with the **DESCRIBE** command. See "DESCRIBE--Describing a Directory" in topic 3.18 and "DESCRIBE--Describing a File" in topic 3.19 for more information on this command.

+--- **Adding a File Type Description** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **CUSTOMIZATION**. Then select **OPEN**. |
| |
| 3. Select **FILETYPES**. Then select **RUN**. |
| |
| 4. Select **ADD**. |
| |
| 5. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 6. Select **RETURN** to return to the Customization Tools Group. |
| |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open the window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on

the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears.

3. From the Customization Tools Group:

   a. Select **FILETYPES**. The command bar changes.

   b. Select **RUN** from the command bar. The list of existing file types replaces the Customization Tools Group. The command bar changes.

4. From the command bar, select **ADD**. A pop-up containing the choices for **FILETYPES** appears.

5. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. Refer to "File Type Default Characteristics" in topic A.2 for information on the default characteristics of file types shipped with the system. The pop-ups give you the following choices:

   File Type is the name of the file type you want to add. This name appears in the FILES window next to the file name to identify files of this type.

   Suffix allows you to specify a suffix that must be included as part of the name of all files of this type.

   Owner is either **User** or **System**, and refers to the creator of a new file type or the owner of an existing file type.

   Editor is the name of the editing program, if any, that you wish to assign to the file type. Assigning an editor here allows you to type in or change files of this file type from a FILES window. The default editor for most file types is **ed**, which runs ed. When installed on your system, this editing program is started by the **OPEN** command. If you have installed the INed Program and you wish to assign it as the default editor for a file type, type in **e** in this field. If you do not wish to assign a default editor for the file type (for example, file types such as Run Files and Object Files do not require editing), leave this field blank.

   Compiler is the name of the program that will compile source files of this file type in a FILES window. If you do not wish to define a compiler for this file type (for example, file types such as **Directory** and **Text** cannot be compiled), leave this field blank.

   Interpreter is the name of the program that will interpret files of this type in a FILES window. If you do not wish to define a interpreter for this file type (for example, file types such as **Directory** and **Text** cannot be interpreted), leave this field blank.

   Create Program is the name of the program that will create files of this type using the **CREATE** command in a FILES window. If you do not wish to create files of this file type with the **CREATE**

command (for example, Run Files and Object Files are not created in this way), leave the field blank.

Print Program is the name of the program that will print files of this type from a FILES window. If you do not wish to print files of this type (for example, Run Files and Object Files), leave this field blank.

Owner Access Permissions lets you decide if the owner can display or change the file type, or run it as a program. You are assigning a default set of permissions to all new objects of the file type. The value you define is specific to a file type, not a particular object. The default values are **Read** and **Write**.

Group Access Permissions lets you decide if users in the group associated with the file type can display or change such a file or run it as a program. You are assigning a default set of permissions to all new objects of the file type. The value you define is specific to a file type, not a particular object. The default value is **Read**.

Public Access Permissions lets you decide if other users, besides the owner or associated group members, can read or change such a file, or use it as part of a command. You are assigning a default set of permissions to all new objects of the file type. The value you define is specific to a file type, not a particular object. The default value is **Read**.

Help File lets you type in the name of the file that contains the Help for this new file type. When you press **Help** while pointing to this new file type in the **CREATE** pop-up or in the **FILETYPES** window, the help information in this file displays.

The help file must already exist in the following format:

```
COMPONENT ID = sysdir

**(((Start help)))**
INDEX#:
COMPSRC: ======
MSGSRC: ===
DCOMPID: ___
DMSGID: ___
STATUS: current
TITLE:
"name of help object"
TEXT:
text of the help panel
```

You need only specify the title (for example, "Basic Src") and the text (the help information that displays).

6. Select **RETURN** from the command bar to return to the Customization Tools Group.

+--- **Changing a File Type Description** ----------+
¦ ¦
¦ 1. Display a TOOLS window. ¦

2. Select **CUSTOMIZATION**. Then select **OPEN**.

3. Select **FILETYPES**. Then select **RUN**.

4. Select the file type you want to change. Then select **CHANGE**.

5. Make the choices and press **Do** in the pop-up to run the command.

6. Select **RETURN** to return to the Customization Tools Group.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **FILETYPES**. The command bar changes.

   b. Select **RUN** from the command bar. A list of the existing file types replaces the Customization Tools Group.

4. From the list of file types:

   a. Select the file type you want to change. The command bar changes.

   b. Select **CHANGE** from the command bar. A pop-up appears that contains the choices for **FILETYPES**.

5. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. See page 3.22 for more details about the choices in the pop-up.

6. Select **RETURN** from the command bar to return to the Customization

Tools Group.

When you select **CHANGE** in the command bar of the window, you cannot change the fields **File Type** or **Suffix**.

Deleting a File Type Description

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **FILETYPES**. Then select **RUN**.
4. Select the file type you want to delete. Then select **DELETE**.
5. Make the choices and press **Do** in the pop-up to run the command.
6. Select **RETURN** to return to the Customization Tools Group.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **FILETYPES**. The command bar changes.

   b. Select **RUN** from the command bar. A list of the existing file types replaces the Customization Tools Group.

4. From the list of file types:

   a. Select the file type you want to delete.

b. Select **DELETE** from the command bar. A pop-up shows you the name of the file type and warns you that **DELETE** permanently erases the file type.

5. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

6. Select **RETURN** from the command bar to return to the Customization Tools Group.

When you select **DELETE** in the **FILETYPES** command, existing files of the deleted type become "untyped," which means they lose their file type. You will not be able to run certain commands, such as **COMPILE**, on untyped files. Delete a file type only if you never want to see or work with that file type again.

If you accidentally delete a file type or change the default values of an existing file type, refer to "File Type Default Characteristics" in topic A.2 for the defaults of each file type that was shipped with the system.

You can delete only the file types that you have defined. Only the user who logs in as **su** can delete the file types that are system-defined.

3.23 FIND--Finding a File or Directory

FIND searches the file system for files or directories that match the name you specify. If any matches are found, the full path names of those files or directories are sent to the display screen, to the printer, or to a file of your choice.

Finding a Path Name

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **FIND**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **FIND**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **FIND** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

Names Matching allows you to type in all or part of the name of the files and directories you want to find. You can type in only one name, but you can use the pattern-matching characters *****, **?**, **[ ]**, and **!** to stand for parts of names. See "Pattern-Matching Characters" in topic 2.5 for more information.

In Directories lets you type in the name of the directories where you want the search to begin. The default directory is the root directory. You can type in more than one name, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

Direct Output To lets you decide where full path names of any matching file or directory names are sent. You can send the names to the display screen, the printer, or a file. By default, all output is sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for more details of the prompts.

3.24 FINDTEXT--Finding Text Within Files

FINDTEXT searches one or more files for a specific word or phrase. After the search, the system finds:

The names of the files that contain the word or phras

The lines containing the word or phras

The number of lines that contain matches

The system can send the results to the display screen, to the printer, or to a file.

+--- **Finding Text** ----------+

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **FINDTEXT**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

+----------+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears.

3. From the File Handling Tools Group:

   a. Select **FINDTEXT**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **FINDTEXT**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The pop-ups for the **FINDTEXT** command gives you the following choices:

   Text Matching is the pattern or list of characters you want to find. The pattern-matching characters that can be used in this command are discussed in the **ed** and **grep** command descriptions in *AIX Operating System Commands Reference*.

   In Files are the names of the files in which you want to find a word or phrase. You can type in more than one name. Separate each name with a space. You can specify multiple names with pattern-matching characters.

   Report lets you specify the kind of information you want to search for. You can request only one of the following three reports in a single search:

   - The names of the files containing matches
   - The actual lines containing matches
   - The total number of lines containing matches.

   The default value for **Report** is **Lines Containing Matches**.

   Direct Output To lets you decide whether the results of the search will be displayed, printed, or stored in a file. By default, all output is sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for more details of the prompts.

3.25 FORMAT--Formatting a Diskette

FORMAT prepares a diskette to receive information (files and directories). You must format all diskettes before you put information on them, including those diskettes that you are going to use with the **BACKUP** and **RESTORE** commands.

Warning: All existing information on a diskette is destroyed when you format it.

+--- **Formatting a Diskette** ----------+
| 1. Display a TOOLS window. |
| 2. Select **FILE SYSTEM HANDLING**. Then select **OPEN**. |
| 3. Select **FORMAT**. Then select **RUN**. |
| 4. Make the choices and press **Do** in the pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE SYSTEM HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File System Handling Tools Group appears on the screen.

3. From the File System Handling Tools Group:

   a. Select **FORMAT**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **FORMAT** appears.

4. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices.

Pressing **Quit** cancels a pop-up without saving your choices. The pop-up for **FORMAT** asks you to select the name of the diskette drive that contains the diskette you want to format.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.26 FORMATERRORS--Formatting an Error Log

FORMATERRORS creates a report that contains specific error log information. This information is posted by application programs and by the various devices attached to the system. With this command, you can select the events and the span of time that interest you, as well as the amount of information you want to see for each event.

Formatting an Error Log

1. Display a TOOLS window.
2. Select **PROBLEM INVESTIGATION**. Then select **OPEN**.
3. Select **FORMATERRORS**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open the window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROBLEM INVESTIGATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Problem Investigation Tools Group appears on the screen.

3. From the Problem Investigation Tools Group:

   a. Select **FORMATERRORS**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **FORMATERRORS** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The pop-ups for the **FORMATERRORS** command give you the following choices:

Event Files are the names of the event files you want to format. The default name is **/usr/adm/ras/errfile**. You can type in more than one name, if you separate the names with a space. To specify multiple names, use the pattern-matching characters *****, **?**, **[ ]**, and **!**. See "Pattern-Matching Characters" in topic 2.5 for information.

Report lets you select the type of information you want included in the formatted report of the event file. By default, **Summary Information** is selected. The choices are:

- **Summary Information** includes a synopsis of the error in the formatted report.

- **Detailed Information** includes both a synopsis of the error, and the contents of the registers at the time of the error.

  When you select either option, a **Report** pop-up appears that allows you to select the classes of events you want reported. By default, all classes are selected.

From Date, Time lets you specify the starting date and time for which you want events reported. The default date and time is **Beginning**. The choices are:

- **Beginning**--starts formatting the specified files with the first entry in each file.

- **Other Date, Time**-- causes another pop-up to appear that asks you for a beginning date and time, using the 24-hour clock. For example, 8:00 a.m. is 08:00, and 8:00 p.m. is 20:00. The defaults are **01/01/86** for date and **00:00** for time.

To Date, Time is the ending date and time for which you want events reported. The default date and time is **End**. The choices are:

- **End**--stops formatting the specified files with the last entry in each file.

- **Other Date, Time**-- causes another pop-up to appear that asks you for an ending date and time, using the 24-hour clock. For example, 8:00 a.m. is 08:00, and 8:00 p.m. is 20:00. The defaults are **01/01/86** for date and **00:00** for time.

Direct Output To lets you decide whether to display, print, or store the results of the command in a file. By default, all output is displayed on the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

Direct Messages To lets you decide whether to display, print, or store messages in a file. By default, all messages are displayed. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.27 FORMATTRACES--Formatting Trace Files

FORMATTRACES creates a file of organized information about system events. Before using this command, you must request a trace of certain system events with the **STARTTRACE** command and then end the trace with the **STOPTRACE** command. See "STARTTRACE--Starting Trace Activity" in topic 3.51 and "STOPTRACE--Stopping Trace Activity" in topic 3.52 for details on these commands. **FORMATTRACES** sorts this information by date and time. You can send this report to the display screen, the printer, or a file of your choice.

Formatting Trace Files

1. Display a TOOLS window.
2. Select **PROBLEM INVESTIGATION**. Then select **OPEN**.
3. Select **FORMATTRACES**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window using either of the following methods:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROBLEM INVESTIGATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Problem Investigation Tools Group appears on the screen.

3. From the Problem Investigation Tools Group:

   a. Select **FORMATTRACES**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **FORMATTRACES**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices.

Pressing **Quit** cancels a pop-up without saving your choices. The pop-ups for the **FORMATTRACES** command give you the following choices:

Trace Files are the names of the trace files you want to organize. The default name is **/usr/adm/ras/trcfile**. You can type in more than one name, separating each name with a space. You can specify multiple names by using the pattern-matching characters *****, **?**, **[ ]**, and **!**. See "Pattern-Matching Characters" in topic 2.5 for more information.

From Date, Time lets you specify the starting date and time for which you want events reported. The default date and time is **Beginning**. The choices are:

- **Beginning**--starts formatting the specified files with the first entry in each file.
- **Other Date, Time**-- causes another pop-up to appear that asks you for a beginning date and time, using the 24-hour clock. For example, 8:00 a.m. is 08:00, and 8:00 p.m. is 20:00. The defaults are **01/01/86** for date and **00:00** for time.

To Date, Time is the ending date and time for which you want events reported. The default date and time is **End**. The choices are:

- **End**--stops formatting the specified files with the last entry in each file.
- **Other Date, Time**-- causes another pop-up to appear that asks you for an ending date and time, using the 24-hour clock. For example, 8:00 a.m. is 08:00, and 8:00 p.m. is 20:00. The defaults are **01/01/86** for date and **00:00** for time.

Direct Output To lets you decide whether to display, print, or store the results of the command in a file. By default, the results are displayed. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

Direct Messages To lets you decide whether to display, print, or store the messages in a file. By default, the messages are displayed. If you select **File**, a pop-up asks you to type in the file name. If you select **Screen**, the output is sent to the screen.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.28 FREESPACE--Displaying the Amount of Free Space

FREESPACE displays data that tells you how much unused space (in 512-byte blocks) each of your mounted file systems contains.

+--- **Displaying the Amount of Free Space** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **STATUS**. Then select **OPEN**. |
| |
| 3. Select **FREESPACE**. Then select **RUN**. |
| |
| 4. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **STATUS**. The command bar changes.

   b. Select **OPEN** from the command bar. The Status Tools Group appears on the screen.

3. From the Status Tools Group:

   a. Select **FREESPACE**. The command bar changes.

   b. Select **RUN** from the command bar. The output of **FREESPACE** appears on the screen.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

The following is an example of the output of **FREESPACE**

+---+
| |

```
FREESPACE is running using the AIX command
df
If you want to try to cancel this command, press the Break key.

GFS#   Filesystem      Mounted on   blocks    used   free   %used
   1   /aix/dev/hd02      /          64728   58688   6040     91%
   2   /aix/dev/hd03      /aix       10480    8288   2192     79%
   3   /aix/dev/hd11      /u        129472   75512  53960     58%
```

Subtopics
3.28.1 Output of FREESPACE

3.28.1 Output of FREESPACE

Mounted on is where the file system is mounted. In this example, it is mounted on the root directory.

blocks is the number of 512-byte blocks in the file system.

used is the percentage of the entire device that is in use.

free is the number of blocks in the file system that are available.

%used is the percentage of i-nodes in use.

3.29 HIDE--Hiding a Window

HIDE removes a window from the ring of windows that you can access with the **Next Window** key. By using this command, you do not cancel a window; instead, you make it temporarily inaccessible.

To display a window again after hiding it, select it in the Open Windows pane of the WINDOWS window, then select **ACTIVATE**. See "ACTIVATE--Making a Window Active" in topic 3.3 for more information on this command.

Selecting Hide

1. Display the WINDOWS window.
2. Select a window name. Then select **HIDE**.

More Detailed Information

1. To display the WINDOWS window, press the **WINDOWS Window** key.

2. From the WINDOWS window:

    a. Select a window name from the Open Windows pane. The command bar changes to show you the commands that are available with the selected window.

    b. Select **HIDE** from the command bar. The Open Windows pane of the WINDOWS window now lists the selected window as **Hidden**.

3.30 INSTALL--Installing a Licensed Program

INSTALL adds a licensed program to your system. After you have pressed **Do** to remove the pop-ups for this command, you may see more prompts on your display screen. If you are not a member of the system group, you must supply the superuser password in order to run this command. Other prompts may vary for each licensed program. Please refer to the installation instructions shipped with each licensed program for more information.

Warning: Do not attempt to install Usability Services from within Usability Services. Damage to certain files may result.

+--- **Installing a Licensed Program** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **CUSTOMIZATION**. Then select **OPEN**. |
| |
| 3. Select **INSTALL**. Then select **RUN**. |
| |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 5. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **INSTALL**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices

for **INSTALL** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The pop-ups for **INSTALL** give you the following choices:

   By User allows you to type in the name of the user that will appear in the history file **/usr/***lpp/lppname/lpp.***hist** as the installer of the licensed program. By default, your user name appears in that file.

   Using Device lets you select the device on which the program you want to install is currently stored. The default device is **Diskette0**. If you select **Other Device**, a pop-up asks you to select a minidisk or an alternative device. For more information on device names, see "AIX Device Names" in topic 2.4.

5. Follow the prompts on the display screen. You will be required to supply the superuser password. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the other prompts.

3.31 INTERPRET--Running the Interpreter

INTERPRET runs the interpreter appropriate to the type of source file you select (if the interpreter is installed on your system). It allows you to type in one or more statements in an interpretive language and run them immediately, or to run a program you have already written and saved.

+--- **Using the Interpreter** ----------+
| |
| 1. Display a FILES window. |
| |
| 2. Select a source file name. Then select **INTERPRET**. |
| |
| 3. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 4. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select a source file name. The command bar changes.

   b. Select **INTERPRET** from the command bar.

3. Make the choices and press **Do** in each pop-up. Depending on your choices, one or more pop-ups may appear. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up shows you the source file name you selected and gives you some choices as well. These choices may vary, depending on the interpreters you install. Consult the guide that came with the installed interpreter, or Chapter 4 in this book for more details about the choices.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for more details on the prompts.

3.32 LINK--Defining Additional File Names

LINK defines an additional name for one or more files. This command enables you, for instance, to use a different name to refer to a file in a different directory or a file that is owned by another user. Both names refer to the same file. You can link to files in the same file system only.

Warning: If you link a file to another file with different contents, the contents of the file to which you are linking will be destroyed.

Defining an Additional File Name

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **LINK**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **LINK**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **LINK** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The pop-up for **LINK** gives you the following choices:

   Files allows you to type in the names of the files for which you want to define an additional name. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   To File or Directory allows you to either type in the additional name for the files you are linking to or type in the name of the directory in which you want to create the additional names. You can type in only one name.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.33 LINKEDIT--Linking Object Files into a Run File

LINKEDIT combines object files and resolves references to create a run file.

You can link edit object files from a FILES window or from a TOOLS window.

Linking Object Files (from FILES)

1. Display a FILES window.
2. Select names of object files. Select **LINKEDIT**.
3. Make the choices and press **Do** in each pop-up to run the command.
4. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open the window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the names of the object files you want to link. The command bar changes.

   b. Select **LINKEDIT** from the command bar. A pop-up appears that contains the choices for **LINKEDIT**.

3. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. When you select **LINKEDIT**, pop-ups give you the following choices:

   Object Files are the files you want to link edit. The names you selected appear. You can change them or add to them. Separate the names with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   Library Directory is the name of the directory containing definitions of the procedures, functions, or variables that your

object files use. The default directory is **/lib**.

Library Names allows you to type in the names of the libraries that contain the files you want to use. The default library name is **libc.a**. Type in one or more names, separating each with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

Run File is the name of the run file created when the object files are link edited. The default name is **a.out**.

Direct Messages To lets you decide whether to send messages to the screen, to the printer, or to a file. By default, messages are sent to the screen. If you select **File**, a pop-up asks you to type in the name of the file in which you want the messages stored. If you select **Printer**, the output is sent to the printer.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

+--- **Linking Object Files (from TOOLS)** ----------+
| 1. Display a TOOLS window. |
| 2. Select **PROGRAM DEVELOPMENT**. Then select **OPEN**. |
| 3. Select **LINKEDIT**. Then select **RUN**. |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROGRAM DEVELOPMENT**. The command bar changes.

b. Select **OPEN** from the command bar. The Program Development Tools Group appears on the screen.

3. From the Program Development Tools Group:

   a. Select **LINKEDIT**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **LINKEDIT**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-ups for the **LINKEDIT** command give you several choices:

   Object Files are the files you want to link edit. You can type in more than one name, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   The remaining choices are the same as those in the **LINKEDIT** pop-up that appears in a FILES window. See page 3.33 for more information on those choices.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.34 LOGOFF--Ending your Session

Using the **LOGOFF** command ends your session and forces an immediate and abnormal end to all activities in any open window. Before using this command, you should use the **Close AIX Window** or **Close DOS Window** key sequence to close any open AIX and DOS windows. Use the **CLOSE** command to close all other windows, except for the WINDOWS and CONSOLE windows. The WINDOWS and CONSOLE windows close automatically when you log off.

Selecting LOGOFF

1. Display the WINDOWS window.
2. Select **LOGOFF**.
3. Make a choice and press **Do** in the pop-up to run the command.

More Detailed Information

1. To display the WINDOWS window, press the **WINDOWS Window** key.

2. From the WINDOWS window, select **LOGOFF** in the command bar. A pop-up appears containing the choice for the **LOGOFF** command.

3. The pop-up for **LOGOFF** allows you to choose, if you have the proper authority, whether to shut down the system. **Shutdown** prepares the system to be turned off. The default value for **Shutdown** is **No**.

   Warning: Do not turn off the power to the system without first performing a Shutdown.

   Make a choice and press **Do** in the pop-up. Pressing **Do** runs the command with your choice. Pressing **Quit** cancels a pop-up without saving your choice.

Whether you choose to shut down the system or not, the failure to close all windows except the WINDOWS window and the CONSOLE window before you log off may cause loss of information. If you choose **No** for **Shutdown**, the WINDOWS and CONSOLE windows are closed and the **Login** prompt appears on the screen.

3.35 MINIDISKS--Adding, Changing, and Deleting Minidisks

The **MINIDISKS** command shows, adds, changes, or deletes descriptions of minidisks (portions of the fixed disk).

When you select **MINIDISKS**, then **RUN**, an AIX window appears. If you are not a member of the system group, you must supply the superuser password in order to run this command. For instructions on completing the command, see "Customizing System Minidisks" in *Installing and Customizing the AIX PS/2 Operating System*.

+--- **Selecting MINIDISKS** ----------+

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **MINIDISKS**. Then select **RUN**.
4. Follow the prompts on the display screen.

+----------+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **MINIDISKS**. The command bar changes.

   b. Select **RUN** from the command bar. An AIX window may appear that prompts you for the superuser password. Then a list of commands appears that you can use in **MINIDISKS**. See "Customizing System Minidisks" in *Installing and Customizing the AIX PS/2 Operating System* for information on completing the command.

4. Follow the prompts on the display screen. See "Running a Command in a

FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.36 MOUNT--Mounting a File System

MOUNT connects a file system from a diskette, another fixed disk, or a different minidisk on your fixed disk with a directory on your fixed disk. You must mount any file system not stored on your fixed disk before you can use any of its files.

The directory on which you mount a file system can either be empty or can contain files or other directories. However, if you mount a file system on a directory that already contains files or other directories, you can't use those files and directories until you unmount the file system.

Before mounting to a minidisk for the first time, you must define the minidisk with the **MINIDISKS** command. See "MINIDISKS--Adding, Changing, and Deleting Minidisks" in topic 3.35 for more information on this command.

Do not attempt to mount a file system to the current directory. Before running the **MOUNT** command, make sure the directory on which you are mounting is not the current directory. Use the **SWITCH** command to change current directories.

If you are not a member of the system group, you must supply the superuser password in order to mount a file system. The **MOUNT** command automatically finds a file system on the device that is associated with the directory you specify (as defined in **/etc/filesystems**). For more information on mounting a file system, see *Managing the AIX PS/2 Operating System*.

+--- **Mounting a File System** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **FILE SYSTEM HANDLING**. Then select **OPEN**. |
| |
| 3. Select **MOUNT**. Then select **RUN**. |
| |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 5. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE SYSTEM HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File System Handling Tools Group appears on the screen.

3. From the File System Handling Tools Group:

   a. Select **MOUNT**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up asks you where the file system you want to mount is stored.

4. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The **MOUNT** command choices are:

   File System, which allows you to select the file system that you want to mount. The choices are:

   - **Default Device**
   - **Minidisk**
   - **Diskette0**
   - **Diskette1**.

   By default, the choice is **Diskette0**.

   If you select the pop-up icon for any of the above choices, a pop-up appears asking you to type in the name of the directory to which you want to mount the selected file system. In addition, if you choose the device **Minidisk**, the pop-up asks you to type in the name of the minidisk that contains the file system you want to mount. The name of the minidisk is **hd** followed by a one or two digit number. Before mounting to a minidisk for the first time, you must define the minidisk with the **MINIDISKS** command. See "MINIDISKS--Adding, Changing, and Deleting Minidisks" in topic 3.35 for more information on this command.

   See "AIX Device Names" in topic 2.4 for more information on device names.

5. Follow the prompts on the display screen, including the prompt that asks for the superuser password. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for other details of the prompts.

3.37 MOVE--Moving Files

MOVE moves a file from one directory to another. You can also rename a file with this command, if you specify a new name for the file and move it within the same directory.

Warning: If you move a file to an already existing file, the contents of the file to which you are moving will be destroyed.

You can move files from a FILES window or from a TOOLS window.

Moving Files (from FILES)

1. Display a FILES window.
2. Select file names. Then select **TOOLS**.
3. Select **MOVE**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open the window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the names of the files you want to move. The command bar changes.

   b. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

3. From the list of commands, select **MOVE**. Another pop-up appears that contains the choices for **MOVE**.

4. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

The pop-up for the **MOVE** command gives you the following choices:

Files lists the files you want to move. The names you selected appear. You can change the names or add to them. If you add names, separate them with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

To File or Directory is the name of the file or directory to which you want to move the files you've selected. Type in only one name.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Moving Files (from TOOLS)

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **MOVE**. Then select **RUN**.
4. Type in the names and press **Do** in the pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **MOVE**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **MOVE** appears.

4. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up for the **MOVE** command gives you the following choices:

   Files are the names of the files you want to move. Type in one or more names, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   To File or Directory is the name of the file or directory to which you want to move the files you've selected. Type in only one name.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.38 OPEN--Displaying a Window, File, or Directory

OPEN displays an object that you have selected. This command can be selected for four different types of objects: windows, Tools Groups, directories, and files.

When you select a window from the Window Types pane of the WINDOW window, and then select **OPEN** from the command bar, Usability Services opens a new window of the type you selected.

When you open a window, the environment for the newly opened window (for example, directories to be searched when running a command and printer name) is the same as the environment for the window from which you opened it. For more details on windows and their characteristics, see "ENVIRONMENT--Displaying or Changing the Characteristics of a Window" in topic 3.21.

When you select a Tools Group from the TOOLS window, and then selec **OPEN** from the command bar, a list of the commands in the selected Tools Group appears.

When you select a directory name and then select **OPEN** from the command bar, you see a list of the files and directories contained in the selected directory.

When you select a file name and then select **OPEN** from the command bar, the contents of the selected file appear. You can then edit the selected file with the editor specified for that file type with the **FILETYPES** command (**OPEN** also starts the editing program associated with the file).

If you only want to display a file without changing it, you can use the **SHOW** command. (See "SHOW--Showing a File" in topic 3.48 for more details.)

+--- **Opening an Object** ----------+

1. Display a WINDOWS, TOOLS, or FILES window.

2. Select a name. Then select **OPEN**.

3. The selected window or Tools Group appears on the screen. If you are opening a file, follow the instructions that came with the editor.

+----------+

More Detailed Information

1. To display a WINDOWS, TOOLS, or a FILES window:

   If the window is already open (the WINDOWS window is always open), press the **Next Window** key until the window appears. To display the WINDOWS window immediately, press the **WINDOWS Window** key.

   or

   Open a FILES or TOOLS window:

a. Select **FILES** or **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

b. Select **OPEN** from the command bar. A FILES or TOOLS window appears on the screen.

2. If you want to open a file or directory from the FILES window or a Tools Group from the TOOLS window:

   a. Select the name of the object you want to display. The command bar changes.

   b. From the command bar, select **OPEN**.

3. If you are opening a file with **ed** as the default editor, see the description of **ed** in *Using the AIX PS/2 Operating System* for more details.

3.39 PASSWORD--Changing a Password

PASSWORD changes your login password. This command, along with the permissions choices of the **DESCRIBE** and **FILETYPES** commands, allows you to control other users' access to your files. Another user who knows your password also has the access rights you have defined for your files. You may want to change your password regularly to prevent others from learning and using it.

Changing a Password

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **PASSWORD**. Then select **RUN**.
4. Make a choice, if desired, and press **Do** in the pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.
   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.
   b. Select **OPEN** from the command bar. The Customization Tools Group appears.

3. From the Customization Tools Group:

   a. Select **PASSWORD**. The command bar changes.
   b. Select **RUN** from the command bar. A pop-up appears that contains your user name.

4. Change the name, if desired, and press **Do** in the pop-up. Pressing **Do** removes the pop-up and runs the command with the user name specified. Pressing **Quit** removes the pop-up without saving the user name. The pop-up shows you the following input field:

User is the name that you use to log in to the system. The screen automatically displays your user name. In order to change the password of another user, you must supply the user name and the current password of that user.

5. You are prompted for your old password and your new password, then your new password again to confirm the change. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for further details of the prompts. For more information on changing your password, see *Using the AIX PS/2 Operating System*.

3.40 PICK--Displaying Specific Directory Entries

PICK displays only the entries in a FILES window that match a file name or file type you specify. This command is useful if you want to display only those files that have the same or similar file names or file types.

Picking Directory Entries

1. Display a FILES window.
2. Select **PICK**.
3. Make the choices and press **Do** in the pop-up to run the command.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the command bar of the FILES window, select **PICK**. A pop-up appears that contains the choices for **PICK**.

3. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up for the **PICK** command gives you the following choices:

   Names Matching are the names of the files or directories within the current directory that you want to display. For example, if you want to display a list of only those file names in the current directory that begin with **hero**, type in **hero*** after the prompt. The default value for this field is * (all file names). The **PICK** command allows only the use of the * pattern-matching character in this field to specify multiple names. In addition, this pattern-matching character can only appear alone or at the beginning or end of the string you want to find (not imbedded in the string).

   File Types Matching are the types of the files within the current directory that you want to display. For example, if you want to see a list of only those files with the file type **Text Doc**, type in **Text Doc** after the prompt. The default value for this field is * (all file types). The **PICK** command allows only the use of the *

pattern-matching character in this field to specify multiple names. In addition, this pattern-matching character can only appear alone or at the beginning or end of the string you want to find (not imbedded in the string).

Show Hidden Files allows you to select whether you want to show the hidden files in the current directory. Files and directories are termed "hidden" if their names begin with a period (.). Normally, such files do not display in the FILES window. The default value for this field is **No**.

When the **PICK** command completes, the list of files in the FILES window has changed to include only those file names or file types that match the pattern you specified. To display the complete list of files in your current directory, run **PICK** again, using the defaults.

3.41 PRINT--Printing Files

PRINT sends files to be printed. **PRINT** also lets you decide how many copies you want, whether you want all or part of the files printed, whether you want double-spacing and line numbers, and so on.

If you specify more than one file name in a single **PRINT** command, each of the choices you make applies to all of the files. For example, if you decide that you want line numbers, all the files will have line numbers.

When you use the **PRINT** command in Usability Services, a header is automatically inserted at the top of each page of the document. To print a document without this header, you must use the AIX command **print** with the correct option in the AIX window or command pop-up.

To attach printers to the AIX system, see "DEVICES--Showing, Adding, Changing, and Deleting Devices" in topic 3.20. To assign a printer to the output of a particular window, use the **ENVIRONMENT** command. See "ENVIRONMENT--Displaying or Changing the Characteristics of a Window" in topic 3.21 for details.

You can select **PRINT** from a FILES window or from a TOOLS window.

+--- **Printing Files (from FILES)** ----------+
| 1. Display a FILES window. |
| 2. Select file names. Then select **PRINT**. |
| 3. Make the choices and press **Do** in each pop-up to run the command. |
| 4. Follow the prompts on the display screen. |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the names of the files you want to print. The command bar changes.

   b. Select **PRINT** from the command bar. A pop-up appears that contains

the choices for **PRINT**.

3. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-ups for the **PRINT** command give you the following choices:

   Files lists the files you want to print. The names you selected appear here. You can change the names or add to them if necessary, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** to specify multiple names in this field. See "Pattern-Matching Characters" in topic 2.5 for more information.

   Number of Copies is the number of printed copies you want of each file. The default number of copies is **1**.

   Beginning Page is the number of the page at which printing is to start for each file. For example, if you want to start printing on the third page, type in a **3** here. By default, the beginning page number is **1**.

   Page Length is the number of lines you want to print on each page. The default page length is **66** lines.

   Top Margin Line is the last line you want to leave blank at the top of each page before the body text of the page begins. The top margin might be blank or might contain some sort of top margin information. The default top margin line is **2**.

   Bottom Margin Line is the last line that can be used for printing on each piece of paper. The bottom margin might be blank or might contain some sort of information, such as a page number. By default, the bottom margin line is **64**.

   Left Margin Column is the number of the column at which you want to begin printing the contents of the file. One column is equal to the width of a single character. By default, the left margin is **1** column wide.

   Right Margin Column is the number of the column at which you want to stop printing the contents of the file. One column is equal to the width of a single character. By default, the right margin begins after column **80**.

   Characters Per Inch is the number of characters you want to print in each inch of text on each line of a page.

   Change Header lets you decide if you want to change the text that appears on the first line of each page of your output. The default value is **No**, which causes the file name only to print on the first line of each page. If you select **Yes**, a pop-up asks you to type in the header text.

   Print Line Numbers lets you decide if you want to print numbers beside each line on each page. By default, line numbers are not printed.

   Double Space Output lets you decide if you want a blank line left

between each line of printed text. The default value here is **No**. If you select **Yes**, you double the vertical spacing between lines in the printed file.

Priority is the importance of printing this file. If more than one file is waiting to be printed, the files with the highest priority print first. The highest priority is **20** and the lowest priority is **1**. The default priority is **15**.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Printing Files (from TOOLS)

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **PRINT**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears.

3. From the File Handling Tools Group:

   a. Select **PRINT**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **PRINT**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up for the **PRINT** command asks you to type in the names of the files you want to print. Type in the names, separating them with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** to specify multiple names in this field. See "Pattern-Matching Characters" in topic 2.5 for more information.

   The remaining choices are the same as in the pop-ups that display for **PRINT** in a FILES window. See page 3.41 for details about these choices.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.42 PRINTQ--Displaying or Changing the Print Queue

With the **PRINTQ** command, you can:

Show a list of the files waiting to be printe

Change the priority of files waiting to be printe

Cancel a print request

+--- **Displaying or Changing the Print Queue** ----------+
| 1. Display a TOOLS window. |
| 2. Select **STATUS**. Then select **OPEN**. |
| 3. Select **PRINTQ**. Then select **RUN**. |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **STATUS**. The command bar changes.

   b. Select **OPEN** from the command bar. The Status Tools Group appears on the screen.

3. From the Status Tools Group:

   a. Select **PRINTQ**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **PRINTQ**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-ups for **PRINTQ** give you the following choices:

   Options are the actions you can take with the **PRINTQ** command. These actions are:

   - **Show Print Queue**, which displays the list of files waiting to be printed. This list replaces the list of commands in the Status Tools Group. This option is the default action.

   - **Change Priority**, which allows you to change the order of the files waiting to be printed. A pop-up appears that asks you to specify the name of the file and its priority for printing. If you give a file a high priority (in a range where "1" is low and "20" is high), it will be printed before all files with a lower priority. You must type in the file name as it appears on the print queue.

   - **Cancel Print Request**, which presents a pop-up that asks for the name of the file you no longer want to print. You must type in the file name as it appears on the print queue.

   Direct Output To applies only to the **Show Print Queue** choice. You can display a list of the jobs in the print queue, print the list, or store it in a file. If you select **File**, a pop-up asks you to type in the file name. If you select **Screen**, you see a list of files waiting to be printed. **Screen** is the default choice. After you press **Do**, the print queue is shown in a window similar to the AIX window. This window replaces the list of commands in the Status Tools list.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

The following illustration is an example of the output from the **PRINTQ** command:

```
+-------------------------------------------------------------------------+
|                                                                         |
|                                                                         |
|     PRINTQ is running, using the AIX command:                           |
|         printq -q.                                                      |
|     If you want to try to cancel the command, press the Break key.      |
|                                                                         |
|      Dev    arg   status   request   pp output   %done                  |
|                                                                         |
|      lp0    -a    running  file2     0          7                       |
|                                                                         |
|     PRINTQ completed.                                                   |
|     To return to the TOOLS window, press the ENTER key.                 |
|                                                                         |
|                                                                         |
+-------------------------------------------------------------------------+
```

Subtopics
3.42.1 Output of PRINTQ

3.42.1 Output of PRINTQ

Dev is the name of the printer.

arg is the print option requested.

status is the status of the file in the print queue.

request is a file name assigned by the program for the purposes of printing.

pp output is the number of pages printed.

%done is the percentage of the printing task completed.

3.43 REFORMAT--Reformatting a C Source File

REFORMAT indents and spaces statements in a C source file so that they reflect the logic of the program and therefore may be easier to read.

You can reformat a C source file from a FILES window or from a TOOLS window.

+--- **Reformatting a C Source File (from FILES)** ----------+
| 1. Display a FILES window. |
| 2. Select a file name. Then select **TOOLS**. |
| 3. Select **REFORMAT**. |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the name of a C source file that you want to reformat. The command bar changes.

   b. Select **TOOLS** from the command bar. A pop-up displays a list of commands.

3. From the list of commands, select **REFORMAT**. Another pop-up appears that contains the choices for **REFORMAT**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-ups for the **REFORMAT** command give you the following choices:

   Source File is the name of the file you want to reformat. The name you selected appears. You can change this name, but you

can't add names.

Direct Output To lets you decide whether to display, print, or store the formatted file. By default, the output is stored in a file. If you select **File**, a pop-up asks you to type in the file name. By default, the file name is **reformat.c**. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

+--- **Reformatting a C Source File (from TOOLS)** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **PROGRAM DEVELOPMENT**. Then select **OPEN**. |
| |
| 3. Select **REFORMAT**. Then select **RUN**. |
| |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 5. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.
   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROGRAM DEVELOPMENT**. The command bar changes.
   b. Select **OPEN** from the command bar. The Program Development Tools Group appears on the screen.

3. From the Program Development Tools Group:

   a. Select **REFORMAT**. The command bar changes.
   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **REFORMAT**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

The pop-ups for the **REFORMAT** command give you these choices:

Source File is the name of the file you want to reformat. Type in only one name.
Direct Output To lets you decide whether to display, print, or store the formatted file. By default, the output is stored in a file. If you select **File**, a pop-up asks you to type in the file name. By default, the file name is the name of the source file with the suffix **.c**. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.44 RENAME--Renaming a File or Directory

RENAME gives a new name to a file or directory. You also can change the name of a file or directory using the **DESCRIBE** command. See "DESCRIBE--Describing a Directory" in topic 3.18 and "DESCRIBE--Describing a File" in topic 3.19 for more details.

You can rename a file or directory from a FILES window or from a TOOLS window.

+--- **Renaming a File or Directory (from FILES)** ----------+
| |
| 1. Display a FILES window. |
| |
| 2. Select a file or directory name. Then select **TOOLS**. |
| |
| 3. Select **RENAME**. |
| |
| 4. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select a file or directory name. The command bar changes.

   b. Select **TOOLS** from the command bar. A pop-up appears that contains a list of commands.

3. From the list of commands, select **RENAME**. Another pop-up appears that contains the choices for **RENAME**.

4. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up for the **RENAME** command gives you the following choices:

   File or Directory is the name of the file or directory that you want to change. The name you selected appears. You can change this name, if you wish.

New Name is the name you want to give to the file or directory.

5. Follow the prompts on the display. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Renaming a File or Directory (from TOOLS)

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **RENAME**. Then select **RUN**.
4. Type in the names and press **Do** in the pop-up to run the command.
5. Follow the prompts on the display.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears.

3. From the File Handling Tools Group:

   a. Select **RENAME**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **RENAME**.

4. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up for the **RENAME** command gives you the following choices:

File or Directory is the name of the file or directory that you want to change. You can specify only one name.

New Name is the name you want to give to the file or directory.

5. Follow the prompts on the display. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.45 RESTORE--Restoring Files or Directories

RESTORE copies backup files, directories, or file systems back onto a minidisk. You make these backup copies with the **BACKUP** command. (See "BACKUP--Backing Up File Systems and Directories" in topic 3.4 for more information.) With **RESTORE**, you can restore the file systems, directories, or files stored on diskette, minidisk, or tape. You also have the option of restoring only selected file systems, directories, or files.

When the **RESTORE** command is used, the file systems, directories, and files you specified are restored to the same file system or directory on the minidisk from which they were backed up. Any data already on the file system or directory to which you are restoring data is erased. If the target directory or files have been deleted since a directory was backed up, the **RESTORE** command re-creates them. If the target file system has been deleted since a file system was backed up, you must run the AIX command **mkfs** in the AIX window or command pop-up to create a new file system before running the **RESTORE** command. See *AIX Operating System Commands Reference* for more information on the **mkfs** command.

Warning: If you back up or restore to an existing file system or directory, the contents of the original file system or directory will be destroyed.

After restoring data from a diskette, you must reformat it before using it for anything other than **BACKUP**. See "FORMAT--Formatting a Diskette" in topic 3.25 for more details.

When you restore data from a tape, the tape rewinds to the beginning of the tape each time you run the **RESTORE** command.

+--- **Restoring Files or Directories** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **FILE HANDLING**. Then select **OPEN**. |
| |
| 3. Select **RESTORE**. Then select **RUN**. |
| |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 5. Follow the prompts on the display screen. |
| |
+---+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are

available with the selected window.

b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears.

3. From the File Handling Tools Group:

   a. Select **RESTORE**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **RESTORE**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-ups for the **RESTORE** command give you the following choices:

   Options lets you select the following:

   - **Show List of Contents** displays the list of files stored on a backup diskette, tape, or minidisk.

   - **Restore Selected Files**, when selected, presents a pop-up that asks for the names of the files you want to restore. You can type in more than one name, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   - **Restore Selected Directories**, when selected, presents a pop-up that asks for the names of the directories that contain the files you want to restore. You can type in more than one name, separating each name with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   - **Restore All Files** restores each of the files on the backup diskette, tape, or minidisk you specify. This option is selected by default.

   - **Restore a File System** restores a file system that you have backed up. When the pop-up appears, type in a file system name.

   From Device is the device on which the backup copies are stored. The default device is **Diskette0**. If you select **Other Device**, a pop-up asks you to select a minidisk or an alternative device. See "AIX Device Names" in topic 2.4 for more information on device names.

Report Status lets you decide if you want to receive messages on the progress of the task. The default here is **Yes**.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.46 RETURN--Returning to the Tools Groups List

RETURN ends the current activity and returns to the screen displayed before the activity was begun. This command allows you to go back to the list of Tools Groups in a TOOLS window.

Returning to the Tools Groups List

1. Display a TOOLS window.
2. Select a Tools Group name. Then select **OPEN**.
3. Select **RETURN**.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. Open a Tools Group:

   a. Select a Tools Group name from the TOOLS window. The command bar changes.

   b. Select **OPEN** from the command bar. A Tools Group command list appears on the screen.

3. From the Tools Group command list, select **RETURN** from the command bar. The previous Tools Groups list appears.

3.47 RUN--Running a Program or Command

RUN enables you to start a program (run file or shell procedure) from the FILES window or a command from the TOOLS window.

The shell procedures that are sent with the system and that you create in the FILES window are ready to run. If you create a new shell procedure in the AIX window, you must enter the AIX command **chmod** in the AIX window or AIX command pop-up before running the shell procedure for the first time. The syntax of the command is: **chmod 0100** *file name* (where *file name* is the file name of the shell procedure). Using the option **0100** enables only the owner of the shell procedure to run it. For more information on the **chmod** command, see *AIX Operating System Commands Reference*.

See "Adding New Functions to the TOOLS Window" in topic A.1 for instructions on adding your own commands to the TOOLS window.

+--- **Running a Program (from FILES)** ----------+

1. Display a FILES window.
2. Select a run file or shell procedure. Then select **RUN**.
3. Make the choices and press **Do** in each pop-up to run the command.
4. The output of the program appears on the display screen. Follow the prompts on the display screen.

+----------+

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the run file or shell procedure that you want to run. The command bar changes.

   b. Select **RUN** from the command bar. Depending on your choices, one or more pop-ups may appear.

3. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last

remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

Some of the choices are listed below. For information on running a particular command, see the description of that command elsewhere in this chapter.

Accept Input From allows you to specify the input device for the command. By default, the input comes from the keyboard. If you select **File**, a pop-up asks you to type in the file name.

Direct Output To lets you decide whether you want your output sent to the screen, the printer, or a file. By default, the output is sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

Direct Messages To lets you decide if you want your error messages sent to the screen, the printer, or a file. By default, messages are sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

4. The output of the program replaces the FILES window on the screen. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

Running a Command (from TOOLS)

1. Display a TOOLS window.
2. Select a Tools Group. Then select **OPEN**.
3. Select a command. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. The output of the command appears on the display screen. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select a Tools Group. The command bar changes.

   b. Select **OPEN** from the command bar. The particular Tools Group appears on the screen.

3. From the Tools Group:

   a. Select the command that you want to run. The command bar changes.

   b. Select **RUN** from the command bar. Depending on your choices, one or more pop-ups may appear.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   Some of the choices appear below. For information on running a particular command, see the description of the command elsewhere in this chapter.

   Direct Output To lets you decide if you want your output sent to the screen, the printer, or a file. By default, the output is sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

   Direct Messages To lets you decide if you want your error messages sent to the screen, the printer, or a file. By default, messages are sent to the screen. If you select **File**, a pop-up asks you to type in the file name. If you select **Printer**, the output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts. If you run a command that you have installed in the TOOLS window, the prompts that you see may differ from the standard command prompts.

3.48 SHOW--Showing a File

SHOW displays a file, but doesn't allow you to change it. The contents of the file replace the contents of the active window. If you specify more than one file, the files are shown in the order you selected them, one after the other.

If the contents of the file extend beyond one page, you are prompted at the end of each page: **To continue, press Enter :**. To continue to the next page, press the **Enter** key. To stop the output before the end of the file, type the subcommand **q**. For a complete list of the subcommands available for **SHOW**, refer to the description of the **pg** command in *AIX Operating System Commands Reference*.

You can show a file from a FILES window or from a TOOLS window.

Showing a File (from FILES)

1. Display a FILES window.
2. Select a file name. Then select **SHOW**.
3. When the **(EOF:)** prompt appears, press **Enter** to return to the FILES window.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window using either of the following methods:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the FILES window:

   a. Select the name of the file you want to show. You can select one or more names. The command bar changes.

   b. Select **SHOW** from the command bar. The file appears on the display screen.

3. When you have viewed the file and the prompt **(EOF:)** appears, press **Enter** to return to the FILES window.

Showing a File (from TOOLS)

1. Display a TOOLS window.
2. Select **FILE HANDLING**. Then select **OPEN**.
3. Select **SHOW**. Then select **RUN**.
4. Type in the name and press **Do** in the pop-up to run the command.
5. When the **(EOF:)** prompt appears, press **Enter** to return to the TOOLS window.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears.

3. From the File Handling Tools Group:

   a. Select **SHOW**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **SHOW**.

4. Type in one or more file names that you want to see and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The file appears on the display screen.

5. After you have viewed the file and the prompt **(EOF:)** appears, press **Enter** to return to the TOOLS window.

3.49 SORT--Sorting Directory Entries

The **SORT** command rearranges the order in which file and directory names are listed in a FILES window. Rearranging the order may help you find a file or directory name more easily.

With the **SORT** command, you can sort directory contents by:

Nam
Typ
Dat
Size

You can also sort directory contents in either ascending or descending order in each of the above categories. See "More Detailed Information" below for more details of the possibilities for sorting.

Sorting Directory Entries

1. Display a FILES window.
2. Select **SORT**.
3. Make the choices and press **Do** in each pop-up to run the command.
4. The re-ordered list appears.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. From the command bar of the FILES window, select **SORT**. A pop-up appears that contains the choices for **SORT**.

3. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The choices for the **SORT** command are:

   By, which lets you decide if you want to sort by: **Name**, **File**

Type, **Date Changed**, or **Size**. The default is to sort by **Name**.

In Order which allows you to choose whether to sort the names in **Ascending** or in **Descending** order. The default is to sort in ascending order. If you sort uppercase and lowercase names together, the uppercase names are listed first when sorting in ascending order and last when sorting in descending order.

If you choose to sort by **Name** in **Ascending** order, the names beginning with "A" appear first in the list. If you choose **Descending**, the names beginning with "z" are sorted first.

If you choose to sort by **File Type** in **Ascending** order, files and directories with the same file type are grouped together. The names with file types beginning with "A" appear first in the list. If you choose **Descending**, the names with file types beginning with "z" are sorted first.

If you choose to sort by **Date Changed** in **Ascending** order, the earliest changed files and directories appear first in the list. If you choose **Descending**, the latest changed files and directories are sorted first.

If you choose to sort by **Size** in **Ascending** order, the smallest files and directories appear first in the list. If you choose **Descending**, the largest files and directories are sorted first.

4. The reordered list appears on the display screen.

3.50 SORTMERGE--Sorting File Contents

The **SORTMERGE** command sorts the contents of one or more files. It creates another file containing all of the contents of the selected files sorted together.

With this command, you can sort the specified files in one of two ways: either on the entire contents of each line or a particular field in each line. If the lines in your file are separated into columns with spaces between each column, the first column contains the first field, the second column contains the second field, and so on. The output of this command is a single ordered list.

See "More Detailed Information" below for examples of the various sorting sequences you can choose.

+--- **Sorting File Contents** ----------+
| |
| 1. Display a TOOLS window. |
| |
| 2. Select **FILE HANDLING**. Then select **OPEN**. |
| |
| 3. Select **SORTMERGE**. Then select **RUN**. |
| |
| 4. Make the choices and press **Do** in each pop-up to run the command. |
| |
| 5. Follow the prompts on the display screen. |
| |
+---------------------------------------+

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File Handling Tools Group appears on the screen.

3. From the File Handling Tools Group:

   a. Select **SORTMERGE**. The command bar changes.

b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **SORTMERGE**.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-ups for the **SORTMERGE** command let you decide how you want to sort the file contents.

   Files lets you type in the names of the files that you want to sort into a single ordered list. Separate the name of each file with a space. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

   By Field allows you to sort the files either by the entire line or by a particular field. If you select **All Fields**, which is the default, the command orders and merges the files using the contents of each line. If you select **Other Field**, a pop-up appears that asks for the number of the field by which you want to order the file. The default is field **1**.

   In Order lets you select the ordering of the output. If you sort uppercase and lowercase contents together, the uppercase names are listed first when sorting in ascending order and last when sorting in descending order.

   - If you select **Ascending**, the fields you selected are presented with the lowest entry first. For example, "A" comes before "z" and "1" before "9." In addition, uppercase characters (such as "A," "B") precede their lowercase counterparts ("a," "b") in sorting sequence, if case differences are not ignored (see the **Ignore Upper/Lower Case** option below).

   - If you select **Descending**, which is the default, you order the fields with the highest entry first: "z" before "A" and "9" before "1" (and "a" before "A," if case differences are not ignored).

   Ignore Leading Blanks lets you decide whether you want to ignore any blanks and tab characters at the start of a field or line. If you select **Yes**, for example, the following strings are sorted in this order: "AB," " ABC," "ABC," "ABCD."

   If you select **No**, the same strings are sorted in this way: " ABC," "AB," "ABC," "ABCD."

   By default, leading blanks are ignored.

   Ignore Upper/Lower Case lets you decide whether to disregard case differences during sorting. If you select **Yes**, the following strings are sorted in this way in ascending order: "ABC," "abc," "DEF," "def."

   If you select **No**, the same strings are sorted in this way: "ABC," "DEF," "abc," "def."

   By default, case differences are ignored.

Direct Output To lets you direct your output to either the display screen, the printer, or a file. If you select **File**, a pop-up asks you for the file name. By default, the output is sent to a file called **sortmerge**.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.51 STARTTRACE--Starting Trace Activity

STARTTRACE begins an activity that traces the events specified in a trace profile and then stores those events in a trace file.

+--- **Starting Trace Activity** ----------+
| 1. Display a TOOLS window. |
| 2. Select **PROBLEM INVESTIGATION**. Then select **OPEN**. |
| 3. Select **STARTTRACE**. Then select **RUN**. |
| 4. Change the name, if you wish, and press **Do** in the pop-up to run the command. |
| 5. Follow the prompts on the display screen. |
+---

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROBLEM INVESTIGATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Problem Investigation Tools Group appears on the screen.

3. From the Problem Investigation Tools Group:

   a. Select **STARTTRACE**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **STARTTRACE** appears.

4. Change the profile name, if you wish, and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The default name of the profile is **/etc/trcprofile**. The names of the events you can trace are listed in the profile. To select trace on a

particular event, use an editor to remove the asterisk in front of that event name. The profile also tells the system in which file to log the events.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.52 STOPTRACE--Stopping Trace Activity

STOPTRACE ends the trace activity that you started with the **STARTTRACE** command. See "STARTTRACE--Starting Trace Activity" in topic 3.51 for details.

Stopping Trace Activity

1. Display a TOOLS window.
2. Select **PROBLEM INVESTIGATION**. Then select **OPEN**.
3. Select **STOPTRACE**. Then select **RUN**.
4. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **PROBLEM INVESTIGATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Problem Investigation Tools Group appears on the screen.

3. From the Problem Investigation Tools Group:

   a. Select **STOPTRACE**. The command bar changes.

   b. Select **RUN** from the command bar.

4. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

3.53 SWITCH--Switching Directories

Using **SWITCH**, you can choose another directory to be your current directory.

+--- **Switching Directories** ----------+
| 1. Display a WINDOWS, TOOLS, or FILES window. |
| 2. Select **SWITCH**. |
| 3. Type in a name beside the **New Current Directory** prompt and press **Do** in the pop-up to run the command. |
+---+

More Detailed Information

1. To display a WINDOWS, TOOLS, or FILES window:

   If the window is already open (the WINDOWS window is always open), press the **Next Window** key until the window appears. To display the WINDOWS window immediately, press the **WINDOWS Window** key.

   or

   Open a TOOLS or FILES window:

   a. Select **TOOLS** or **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS or FILES window appears on the screen.

2. From the command bar of a WINDOWS, TOOLS, or FILES window, select **SWITCH**. A pop-up appears that contains the choices for **SWITCH**.

3. The pop-up for the **SWITCH** command displays the name of the current directory and displays in the **New Current Directory** field, by default, the name of your home directory. If you want to switch to a directory other than your home directory, type in the desired directory name. Press **Do**. Pressing **Do** runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   If you run the **SWITCH** command from a FILES window, the new current directory replaces the old current directory in the window. All information, including that in the path pane, is updated.

3.54 TOOLSUPDATE--Showing, Adding, Updating, or Deleting Tools Groups or Comma

The **TOOLSUPDATE** command allows you to add commands and shell procedures to the list of commands included in the TOOLS window. You may want to write programs that start other application programs for you or programs that perform tasks other than those included in the Tools Groups provided with the Usability Services system.

With this command, you can also show, update, or delete a Tools Group or Command.

In order to run this command, you must be a member of the system group or have write access permissions to the **/usr/lib/screen** directory. For more information on the structure of the Tools files and on the procedure for personalizing only your own Tools window, see the section called "Adding New Functions to the TOOLS Window" in topic A.1.

Adding a Tools Group

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **TOOLSUPDATE**. Then select **RUN**.
4. Select **ADD**.
5. Make the choices and press **Do** in the pop-up to run the command.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

a. Select **TOOLSUPDATE**. The command bar changes.

b. Select **RUN**. The TOOLSUPDATE screen appears with a new command bar.

4. Select **ADD** from the command bar. A pop-up appears that contains the choices for adding a Tools Group.

5. Make the choices and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up gives you the following choices:

   Group List File is a file containing several one-line entries, one for each Tools Group installed in the TOOLS window. The default for this field is **/usr/lib/screen/tolgroup.txt**. You can change this name in order to add a new Tools Group to another file.

   Group Name contains the title of the new Tools Group, for example, **FILE HANDLING**.

   Group Description is a short explanation of the function of the new Tools Group, for example, **Work with individual files**. This field is optional and is displayed beside the Group Name on the screen.

   Command List Path is the name of the file that contains the list of commands in the new Tools Group, for example, **/usr/lib/screen/tolfile.txt** in the case of the File Handling Tools Group.

   Group Help Index consists of two parts:

   - An optional first part that identifies the component from which the help text for the new Tools Group is extracted. The default for this field is **tol**.

   - A numeric second part that indicates the location of the help data for the Tools Group. The **puttext** command assigns this number when the entry is created. The default for this field is **17**. See the description of this command in *AIX Operating System Commands Reference* for more information.

   This is an optional field.

+--- **Showing or Changing an Existing Tools Group** ----------+
| 1. Display a TOOLS window. |
| 2. Select **CUSTOMIZATION**. Then select **OPEN**. |
| 3. Select **TOOLSUPDATE**. Then select **RUN**. |
| 4. Select a Tools Group. Then select **CHANGE**. |
| 5. Make the choices and press **Do** in each pop-up to run the command. |

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **TOOLSUPDATE**. The command bar changes.

   b. Select **RUN** from the command bar. A list of Tools Groups appears on the screen.

4. From the list of Tools Groups:

   a. Select a Tools Group. The command bar changes.

   b. Select **CHANGE** from the command bar. A pop-up appears that contains the choices for changing a Tools Group.

5. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. Pressing **Quit** also allows you to show the information without changing it.

   The pop-up gives you the same choices as described for adding a Tools Group on page 3.54. You can change any of the fields.

Deleting a Tools Group

1. Display a TOOLS window.

2. Select **CUSTOMIZATION**. Then select **OPEN**.

3. Select **TOOLSUPDATE**. Then select **RUN**.

4. Select a Tools Group. Then select **DELETE**.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **TOOLSUPDATE**. The command bar changes.

   b. Select **RUN** from the command bar. The list of Tools Groups appears on the screen.

4. From the list of Tools Groups:

   a. Select a Tools Group. The command bar changes.

   b. Select **DELETE** from the command bar. A pop-up displays. Pressing **Do** in the pop-up deletes the selected Tools Group. Pressing **Quit** cancels the deletion of the Tools Group.

Adding a Tools Command

1. Display a TOOLS window.

2. Select **CUSTOMIZATION**. Then select **OPEN**.

3. Select **TOOLSUPDATE**. Then select **RUN**.

4. Select a Tools Group. Then select **OPEN**.

5. Select **ADD**.

6. Make the choices and press **Do** in each pop-up to run the command.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window.

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **TOOLSUPDATE**. The command bar changes.

   b. Select **RUN** from the command bar. The list of Tools Groups appears on the screen.

4. From the list of Tools Groups:

   a. Select a Tools Group. The command bar changes.

   b. Select **OPEN** from the command bar. The command bar changes again.

5. From the command bar, select **ADD**. A pop-up appears that contains the choices for adding a Tools Command.

6. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up gives you the following choices:

   Command List File is a file that contains a list of the commands in a Tools Group. If you have selected the Applications Tools Group, for example, the default name here is the Command List File **/usr/lib/screen/tolappl.txt**. You can change this name to any of the other defined Command List Files.

Command Name is the title of a command, for example, **DATE**. This is a required field.

Command Description is a short explanation of the function of a command, for example, **Show the system date and time**. This is an optional field and displays next to the Command Name on the screen.

Dialog Path Name contains either the full or relative path name for a command. This is an optional field. If no name is specified, the values in the file **actwind.d** are used by default.

Dialog Object Name is the name of the dialog object that is used to display a dialog pop-up for the specified command. This object is taken from the file specified in **Dialog Path Name**. This is an optional field.

Setup Routine Path contains the path name of a command setup routine. This file contains steps that must be completed before you can open and display the command dialog file. This is an optional field.

Help Index consists of two parts:

- An optional first part that identifies the component from which the help text for the new command is extracted. The default for this field is **tol**.
- A numeric second part that indicates the location of the help data for the command. The **puttext** command assigns this number when the entry is created. The default for this field is **18**. See the description of this command in *AIX Operating System Commands Reference* for more information.

This is an optional field.

Execution File is the name of the program that runs when the command is selected. This is a required field.

Changing a Tools Command

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **TOOLSUPDATE**. Then select **RUN**.
4. Select a Tools Group. Then select **OPEN**.
5. Select a Tools Command. Then select **CHANGE**.
6. Make the choices and press **Do** in each pop-up to run the command.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **TOOLSUPDATE**. The command bar changes.

   b. Select **RUN**. The list of Tools Groups appears.

4. From the list of Tools Groups:

   a. Select a Tools Group. The command bar changes.

   b. Select **OPEN** from the command bar. The list of Tools commands appears.

5. From the list of Tools Commands:

   a. Select a Tools Command. The command bar changes.

   b. Select **CHANGE** from the command bar. A pop-up appears that contains the choices for changing a Tools Command.

6. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. Pressing **Quit** also allows you to show the information without changing it.

   The pop-up gives you the same choices as described for adding a Tools Command on page 3.54.

+--- **Deleting a Tools Command** ----------+
| |
| 1. Display a TOOLS window. |

2. Select **CUSTOMIZATION**. Then select **OPEN**.

3. Select **TOOLSUPDATE**. Then select **RUN**.

4. Select a Tools Group. Then select **OPEN**.

5. Select a Tools Command. Then select **DELETE**.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that you can use with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **TOOLSUPDATE**. The command bar changes.

   b. Select **RUN** from the command bar. The list of Tools Groups appears.

4. From the list of Tools Groups:

   a. Select a Tools Group. The command bar changes.

   b. Select **OPEN** from the command bar. The list of commands in the selected Tools Group appears.

5. From the list of Tools Commands:

   a. Select a Tools Command. The command bar changes.

   b. Select **DELETE** from the command bar. A pop-up displays. Pressing **Do** in the pop-up deletes the selected Tools Command. Pressing **Quit** cancels the deletion of the Tools Command.

3.55 UNMOUNT--Unmounting a File System

UNMOUNT removes a selected file system that you previously mounted in a directory. See "Mounting and Unmounting File Systems" in topic 1.6 for more details.

If you are not a member of the system group, you must supply the superuser password in order to unmount a file system.

Do not attempt to restore files or directories from a mounted file system. You must unmount any diskette containing a file system before using the **RESTORE** command. Unmounting the diskette frees up the device so that backup files from another diskette can be restored.

If a diskette file system is mounted on one of the diskette drives, that file system is automatically unmounted when the diskette is removed. See "RESTORE--Restoring Files or Directories" in topic 3.45 for more details.

Unmounting a File System

1. Display a TOOLS window.
2. Select **FILE SYSTEM HANDLING**. Then select **OPEN**.
3. Select **UNMOUNT**. Then select **RUN**.
4. Select a file system name and press **Do** in the pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **FILE SYSTEM HANDLING**. The command bar changes.

   b. Select **OPEN** from the command bar. The File System Handling Tools Group appears.

3. From the File System Handling Tools Group:

   a. Select **UNMOUNT**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up appears that contains the choices for **UNMOUNT**.

4. Select a file system name and press **Do** in the pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

   The pop-up for the **UNMOUNT** command shows you a list of all the mounted file systems. You can select from the list the one you want to unmount. If the list is larger than the pop-up, you may have to scroll the pop-up pane to see all of the mounted file systems.

5. Follow the prompts on the display screen, including the prompt that asks for the superuser password. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for other details of the prompts.

3.56 UPDATE--Updating Window Contents

UPDATE makes the contents of a FILES window current. Because commands that you run in other windows may affect the contents of a FILES window, **UPDATE** provides you with a way of displaying an updated list of the files and directories in your current directory.

The time of the last **UPDATE** command you issued for a FILES window is always displayed in that window.

Displaying Window Contents

1. Display a FILES window.
2. Select **UPDATE**. An updated FILES window appears.

More Detailed Information

1. To display a FILES window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a FILES window:

   a. Select **FILES** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A FILES window appears on the screen.

2. Select **UPDATE** from the command bar. An updated FILES window appears that shows a list of the files and directories in the current directory.

3.57 UPDATEP--Updating an Installed Licensed Program

UPDATEP enables you to update a licensed program that is already installed. If you are not a member of the system group, you must supply the superuser password in order to run this command.

Updating a Licensed Program

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **UPDATEP**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a TOOLS window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.

   b. Select **OPEN** from the command bar. The Customization Tools Group appears on the screen.

3. From the Customization Tools Group:

   a. Select **UPDATEP**. The command bar changes.

   b. Select **RUN** from the command bar. A pop-up containing the choices for **UPDATEP** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices. The choices are:

Show List of Pending Updates, which is the default choice, allows you to view the updates which are available.

Apply Updates takes the pending updates and applies them to the appropriate licensed program. If you select the pop-up icon, you see the following choices:

- **By User** is the name of the user who will be listed in the history file as adding, committing, or rejecting the changes. The default is your user name.

- **Using Device** allows you to specify from which device the updates are coming. The default for this option is **Diskette0**. If you select **Other Device**, a pop-up asks you to select a minidisk or an alternative device.

Commit Updates allows you to commit already added changes. You must commit updates before any additional changes can be made. A pop-up appears that contains the **By User** field. Specify in the pop-up the name that you want to appear in the history file.

Reject Updates allows you to remove changes that have already been made to an installed program. You cannot reject updates that you have already committed. A pop-up appears that contains the **By User** field. Specify in the pop-up the name that you want to appear in the history file.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for more details of the prompts.

3.58 USEDSPACE--Determining the Amount of Used Space

USEDSPACE tells you how much space (in 512-byte blocks) is used by files or directories. With **USEDSPACE**, you can find out the amount of space used by:

Any file you nam

Any directory you nam

All the files you nam

All the directories you name

You can display the amounts, print them, or store them in a file.

Determining the Amount of Used Space

1. Display a TOOLS window.
2. Select **STATUS**. Then select **OPEN**.
3. Select **USEDSPACE**. Then select **RUN**.
4. Make the choices and press **Do** in each pop-up to run the command.
5. Follow the prompts on the display screen.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.

   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **STATUS**. The command bar changes.

   b. Select **OPEN** from the command bar. The Status Tools Group appears on the screen.

3. From the Status Tools Group:

   a. Select **USEDSPACE**. The command bar changes.

b. Select **RUN** from the command bar. A pop-up containing the choices for **USEDSPACE** appears.

4. Make the choices and press **Do** in each pop-up. Pressing **Do** in the last remaining pop-up on the screen runs the command with your choices. Pressing **Quit** cancels a pop-up without saving your choices.

When you run **USEDSPACE**, the pop-ups give you the following choices:

Files or Directories are the names of the files or directories for which you want a report. By default, this field contains the current directory name. You can use the pattern-matching characters *****, **?**, **[ ]**, and **!** in this field to specify multiple names. See "Pattern-Matching Characters" in topic 2.5 for more information.

Report Usage For lets you create either a report on each file or directory or a complete report on all named files and directories. The default for this field is **Grand Total**.

Report Error Messages lets you decide if you want a message to appear each time **USEDSPACE** cannot open a file you've named. By default, error messages are displayed.

Direct Output To lets you decide whether you want to display, print, or store the results in a file. By default, output is displayed. If you select **File**, a pop-up asks you to type in the name of the file. If you select **Printer**, output is sent to the printer.

Direct Messages To lets you decide if you want to display error messages, print them, or store them in a file. By default, messages are sent to the screen. If you select **File**, a pop-up asks you to type in the name of the file. If you select **Printer**, output is sent to the printer.

5. Follow the prompts on the display screen. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for details of the prompts.

The following is an example of the output of the **USEDSPACE** command:

```
+-------------------------------------------------------------------------+
|                                                                         |
|                                                                         |
|     USEDSPACE is running, using the AIX command,                        |
|         du -s -r.                                                       |
|     If you want to try to cancel this command, press the Break key.     |
|                                                                         |
|      1185        ./bin                                                  |
|      3           ./dev                                                  |
|      237         ./etc                                                  |
|      1           ./lost+found                                           |
|      1           ./mnt                                                  |
|      583         ./priv                                                 |
|                                                                         |
|     USEDSPACE completed.                                                |
|     To return to the TOOLS window, press the ENTER key.                 |
```

Subtopics
3.58.1 Output of USEDSPACE

3.58.1 Output of USEDSPACE

The first column of output shows the number of 512-byte blocks used

The second column contains the name of the directory using the space

3.59 USERS--Showing, Adding, Changing, Deleting Users and Groups

With **USERS**, you can show, add, change, or delete profiles of AIX/386 Operating System users. If you are not a member of the system group, you must supply the superuser password in order to run this command. When you run **USERS**, an AIX window appears so that you can complete the command. The steps in the following box show you how to begin running the **USERS** command.

For instructions on how to complete the command, see *Managing the AIX PS/2 Operating System*.

Running USERS

1. Display a TOOLS window.
2. Select **CUSTOMIZATION**. Then select **OPEN**.
3. Select **USERS**. Then select **RUN**.
4. Follow the prompts on the display screen.
5. Type in **q** to exit from **USERS**.
6. Press **Enter** to return to the Customization Tools Group.

More Detailed Information

1. To display a TOOLS window:

   If the window is already open, press the **Next Window** key until the window appears.

   or

   Open a window:

   a. Select **TOOLS** from the Window Types pane of the WINDOWS window. The command bar changes to show you the commands that are available with the selected window.
   b. Select **OPEN** from the command bar. A TOOLS window appears on the screen.

2. From the TOOLS window:

   a. Select **CUSTOMIZATION**. The command bar changes.
   b. Select **OPEN** from the command bar. The Customization Tools Group appears.

3. From the Customization Tools Group:

   a. Select **USERS**. The command bar changes.
   b. Select **RUN** from the command bar. An AIX window appears. For instructions on completing the command, type in **h** (for Help) or see *Managing the AIX PS/2 Operating System*.

4. Follow the prompts on the display screen, including the prompt that asks for the superuser password. See "Running a Command in a FILES, TOOLS, or APPLICATIONS Window" in topic 2.3 for other details of the prompts.

5. Type in **q** to exit from **USERS**.

6. Press **Enter** to return to the Customization Tools Group.

A.0 Appendix A. Advanced Topics

This appendix discusses the internal structure of Tools Groups and explains the procedure for adding new commands and applications to a particular Tools Group in a TOOLS window.

In addition, a table shows the default characteristics of the file types that are shipped with the AIX PS/2 Operating System. This information is useful if you accidentally change or delete any of these file types. Another table shows the Usability Services primary file types that map to AIX file types.

Finally, a discussion of the use of the **actmngr** command and a description of an alternate method for selection appears.

Subtopics

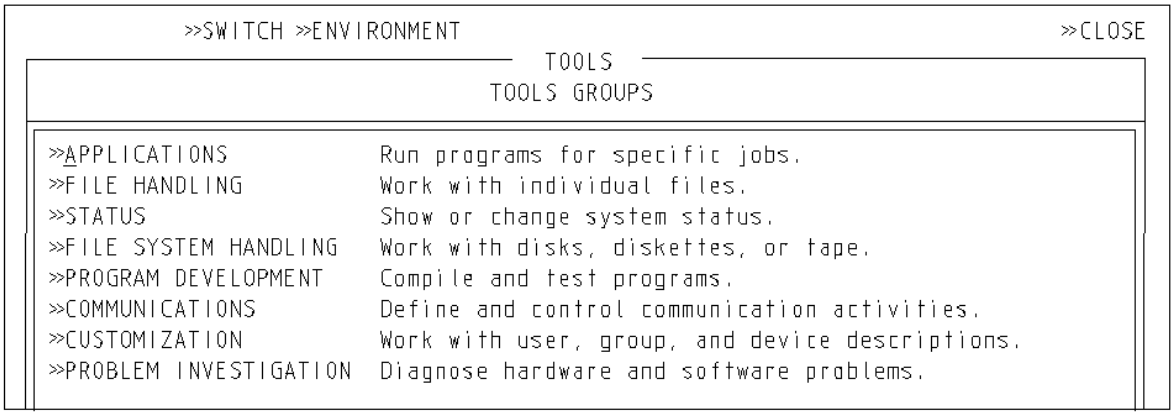
A.1 Adding New Functions to the TOOLS Window
A.2 File Type Default Characteristics
A.3 Primary File Types
A.4 Running the AIX Command actmngr
A.5 Alternate Selection Method
A.6 Using a Mouse
A.7 AIX Commands

A.1 Adding New Functions to the TOOLS Window

Usability Services provides you with a facility to add your own commands and shell procedures to the list of commands included in the TOOLS window. You may want to write programs that start other application programs for you or programs that perform tasks other than those included with your system. This section describes the structure of the AIX files that enable you to install new commands in Tools Groups, as well as to update existing commands.

See "TOOLSUPDATE--Showing, Adding, Updating, or Deleting Tools Groups or Commands" in topic 3.54 for information on a command interface that allows you to update your TOOLS window. In order to run this command, you must be a member of the system group or have write access permissions to the **/usr/lib/screen** directory. However, if you don't have such access permissions and want to personalize only your own system, you can copy the appropriate **.txt** files from **/usr/lib/screen** to a directory to which you have write access and then edit them. In addition, you must insert the line **PANELS=***directory name* in your **.profile** file (where *directory name* is the directory to which you copied the **/usr/lib/screen** files), and include **PANELS** in the **export** line in the same file. Then proceed with the **TOOLSUPDATE** command.

Eight Tools Groups are shipped with Usability Services. Each of them contains commands that perform a particular kind of function. For example, the Status Tools Group contains commands that show or change system status. The eight Tools Groups display as follows:



Subtopics
A.1.1 The Tools Group File
A.1.2 The Tools Command File

A.1.1 The Tools Group File

The eight Tools Groups are defined in the Tools Group file **tolgroup.txt**, which is a text file in the **/usr/lib/screen** directory. It contains several one-line entries, one for each Tools Group installed in the TOOLS window.

Each entry in **tolgroup.txt** is divided into four fields, each of which is separated by the symbol **or**.

The command list path name **tolfile.txt**, in the case of the File Handling Tools Group) is the first field of a Tools Group file entry. It is the name of the file that contains the list of commands in a particular Tools Group. As there are eight Tools Groups, there are eight command list files. The name is either a full path name or a relative path name. This field must be no more than 256 characters long. This is a required field.

The help index (location of the help text for the Tools Group) fiel contains two portions, each of which must be shorter than three bytes. The first portion, which is optional, is composed of either letters or numbers that identify the component from which the help text is extracted. The second portion, which must be numeric, indicates the location of the help data for the entry. See "FILETYPES--Adding, Changing, and Deleting File Type Descriptions" in topic 3.22 for more information. The numeric data is assigned automatically by the **puttext** facility when the entry is created. This is an optional field.

The group name field contains the title of the Tools Group. A example of a Tools Group title is **FILE HANDLING**. The group name displays on the Tools Group list and the TOOLS window name pane when the contents of that group are displayed. The length of this field should not exceed 22 characters. Any excess length is ignored. This is a required field.

The group description is a short explanation of the function of th particular Tools Group. For example, the group description of the File Handling Tools Group is **Work with individual files**. The content of this field displays in the Tools Group list following the group name. The length of this field should not exceed 51 characters. Any excess length is ignored. This is an optional field.

The group names, the command list path names, and the help indexes for the eight Tools Groups are listed below. Refer to the illustration of the Tools Groups list on A.1 for the text of each group description.

Group Name	**Command List Path Name**	**Help Index**
APPLICATIONS	tolappl.txt	9
FILE HANDLING	tolfile.txt	10
STATUS	tolstat.txt	11
FILE SYSTEM HANDLING	tolfsys.txt	12

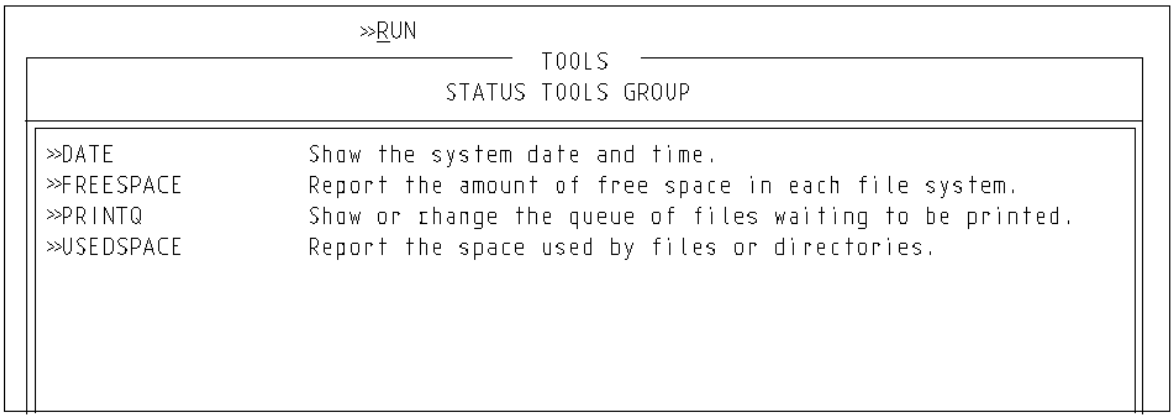
PROGRAM DEVELOPMENT	tolprog.txt	13
COMMUNICATIONS	tolcommo.txt	14
CUSTOMIZATION	tolcust.txt	15
PROBLEM INVESTIGATION	tolprob.txt	16

A.1.2 The Tools Command File

Each Tools Group has a group of commands associated with it. A tools command file contains information on the commands in a Tools Group. The first field of the Tools Group file specifies the name of its command file.

Each entry in the command file is divided into seven fields, each of which is separated by the symbol **or**.

When a Tools Group is opened, the system reads the command file specified for that group (for example, the command file for the Status Tools Group is called **tolstat.txt**). Some of the information in this file appears in the particular Tools Group display, as shown in the illustration of the Status Tools Group on the following page.



The tools command file has seven fields:

The command dialog path name is the first field in a particular Tool Group command file entry. This field contains either the full or relative path name for a command and has a maximum length of 256 characters. If no command dialog path name is specified, the values in the Usability Services dialog file **actwind.d** are used by default. This is an optional field and is not necessary if you simply want to add an application to one of the Tools Groups.

The command dialog object name is the second field in the entry. I has a maximum length of 14 characters. This is an optional field.

The command setup routine path name specifies the path name of command setup routine. The command setup routine contains steps that must be completed before you can open and display the command dialog file. You specify this path name either as a full path name or as a relative path name. This is an optional field.

The help index (location of the help text for the command) fiel contains two portions, each of which must be shorter than three bytes. The first portion, which is optional, is composed of either letters or numbers that identify the component from which the help text is extracted. The second portion, which must be numeric, indicates the location of the help data for the entry. See "FILETYPES--Adding, Changing, and Deleting File Type Descriptions" in topic 3.22 for more

information. The numeric data is assigned automatically by the **puttext** facility when the entry is created. This is an optional field.

The exec program is the name of the program that runs when the comman is selected. This field has a maximum length of 256 characters. This is a required field.

The command name (for example, **DATE**) is the title of a command. It appears in the list of available commands for a particular Tools Group and identifies the command. The maximum length of this field is 14 characters. This is a required field.

The command description (for example, **Show the system date and time**). is the short explanation of a command that accompanies the command title in a particular Tools Group. The maximum length of this field is 59 characters. This is an optional field.

The command names, the command setup routine path names, and the help indexes for the commands of the Status Tools Group appear in the table below. Refer to the illustration on page A.1.2 for the list of command descriptions of the Status Tools Group.

Command Name	**Command Setup Routine Path Name**	**Help Index**
DATE	toldatp	46
FREESPACE		81
PRINTQ	tolptqd	125
USEDSPACE	tolussp	162

If you have written a program for a new command and want to add the command to a particular Tools Group, copy the appropriate tools command file from **/usr/lib/screen** to your own directory. With a text editor, insert a new entry in the file and enter the information for the new command, using **or** to separate fields. The next time you select that Tools Group, the new command will appear in the list of commands.

A.2 File Type Default Characteristics

The following table lists the default characteristics of the file types that are shipped with the AIX/386 Operating System and with some licensed programs. Use this table to re-create file types with the **FILETYPES** command if the default values are accidentally changed or the file type is deleted. In addition to the values listed below, no default value exists for **Interpreter** for all file types listed (except for the Basic Src file type, which defaults to **basic**).

Base Types	**Suffix**	**Permissions**	**Editor**	**Compiler**
Archive Lib	.a	rw-r--r--	-	-
DOS BAT Proc	.bat	rw-r--r--	ed	-
C Src	.c	rw-r--r--	ed	cc
Dialog File	.d	rw-r--r--	-	-
C Include	.h	rw-r--r--	ed	-
Object File	.o	rw-r--r--	-	cc
Run File	.out	rw-r--r--	-	-
Assembler Src	.s	rw-r--r--	ed	-
Text Doc	.txt	rw-r--r--	ed	-
Directory	-	rwxr-xr-x	-	-
Shell Proc	-	rwxr-xr-x	ed	-
I/O device	-	rw-r--r--	-	-
Untyped	-	rw-r--r--	ed	-
LEX	.l	rw-r--r--	ed	-
YACC-C	.y	rw-r--r--	ed	-
YACC-Ratfor	-	rw-r--r--	ed	-
YACC-Efl	.ye	rw-r--r--	ed	-
Msg/Help File	.m	rw-r--r--	-	-
Listing File	.lst	rw-r--r--	ed	-

A.3 Primary File Types

This table lists the AIX primary file types and their Usability Services equivalents. Refer here when an AIX message provides the primary file type and you need to know what Usability Services file types it stands for.

Primary File Type	**Includes these Usability Services File Types**
Ordinary	DOS BAT Proc, C Src, Dialog File, C Include, LEX, Msg/Help File, Object File, Run File, Assembler Src, Text Doc, YACC YACC-Ratfor, YACC-Efl, Shell Proc, Listing File
Directory	Directory
Block Special	I/O Device
Character Special	I/O Device

A.4 Running the AIX Command actmngr

If Usability Services is installed on your PS/2 system but does not start automatically when you log in, use the following procedure to start Usability Services:

Next to the AIX prompt **$**, type in the AIX command **actmngr**. The WINDOWS window appears.

You cannot run **actmngr** more than once in the same login session. If you attempt to run **actmngr** again by entering **actmngr** or by entering **su** to another user who has his user profile set up to invoke Usability Services (Program = **/usr/bin/actmngr**), the system responds that the command has completed, but you will get no results.

A.5 Alternate Selection Method

In Chapter 1 of *Usability Services Guide*, we discussed a method for selecting buttons from the command bar to run a command. For example, to select **CREATE** from the command bar of a FILES window, you follow these steps:

1. Press the Command Bar key to move the cursor to the command bar.

2. Press the Tab key three times to move the cursor to **CREATE**.

3. Press the Select key to select **CREATE**.

Another method is available for selecting buttons from the command bar or from the TOOLS pop-up. To use the alternate selection method, complete these steps:

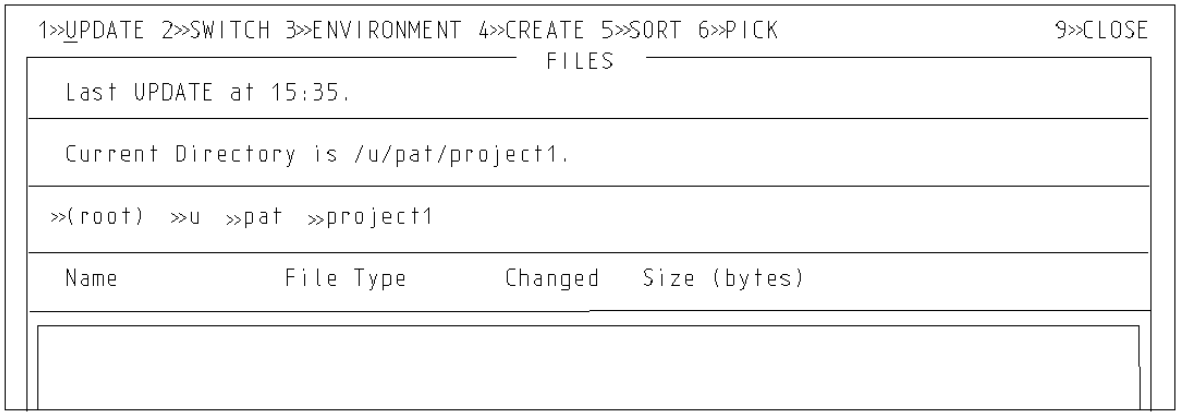
1. Add the following line to your **.profile** file:

   ```
   ALTNUM=YES; export ALTNUM
   ```

2. Log off

3. Log in

Numbers appear before the buttons in the command bar and in the TOOLS pop-up. An example of a FILES window with this alternate method for selection in effect appears below:



The details of this alternate method appear below:

> To select an item from the command bar or from the TOOLS bucket, pres **Alt** (or **Ctrl-A** on some keyboards) plus the number key (from the number row of the keyboard, not the key pad) that corresponds to the number just ahead of the selectable symbol for that button. For example, to select **CREATE** on the command bar of the window above, simply press **Alt-4** (or **Ctrl-A**, then **4** on some keyboards; refer to *Usability Services Keyboard Reference Chart* for the proper key sequence on your keyboard).

This selection method is available in addition to the usual method of selection. In other words, when you add the alternate selection method,

you can use either selection method at any time.

To use this alternate selection method, edit your **.profile** file as described on the previous page and run **SHOW** again. The steps for the alternate method of running **SHOW** appear in the box below:

Showing the File letter1.txt

1. While a FILES window is displayed, select **letter1.txt**.

2. Press **Alt-2** (or **Ctrl-A**, then **2**, depending on your keyboard) to select **SHOW**.

3. Follow the prompts on the display screen. See "SHOW--Showing a File" in topic 3.48 for more detailed information on the output of **SHOW**.

To turn off the alternate selection method, simply change the line you added in the **.profile** file to

```
ALTNUM=NO
```

The usual selection method is still available when you turn off the alternate selection method.

In addition to the selection methods described above, the following method is always available, regardless of the setting of **ALTNUM**.

You can select a button by placing the text cursor on the button an pressing **Alt-S** (or **Ctrl-A**, then **S**, depending on your keyboard).

An alternative to pressing the **Do** and **Quit** keys is also always available.

To save your choices in a pop-up and remove the pop-up (the **Do** function), press **Alt-D** (or **Ctrl-A**, then **D**, depending on your keyboard).

To remove a pop-up without saving your choices (the **Quit** function), press **Alt-Q** (or **Ctrl-A**, then **Q**, depending on your keyboard).

A.6 Using a Mouse

If your system has a mouse, you can use it either to move the pointing cursor from pane to pane or from button to button in a window or pop-up. The ***pointing cursor*** resembles a highlighted box the size of a character and is controlled by a mouse. The pointing cursor appears on the screen only if you plug in the mouse before the system is turned on.

The following table describes the procedure for selecting buttons and scrolling text with a mouse:

Operation	**Mouse**
Select	Press left button
Scroll	Press right button and hold
Go to WINDOWS Window	Press left and right buttons at the same time
Emulate Enter key (on **Command is running** screen)	Press left button

For more information on using the mouse, see Chapter 1 of *Usability Services Guide*.

A.7 AIX Commands

The **describe** command and **filetypes** command are AIX commands available to you if Usability Services has been installed. These commands are explained more fully on the following pages.

Subtopics
A.7.1 describe
A.7.2 filetypes

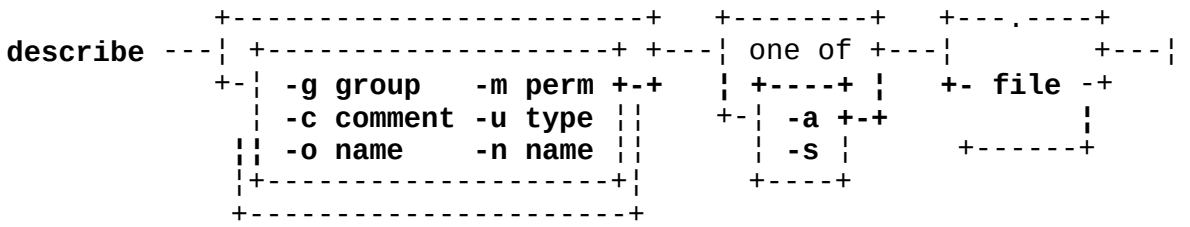
A.7.1 describe

Subtopics
A.7.1.1 Purpose
A.7.1.2 Syntax
A.7.1.3 Description
A.7.1.4 Parameters

A.7.1.1 Purpose

Displays or changes the characteristics of a file.

A.7.1.2 Syntax


describe
-g group
-c comment
-o name
-m perm
-u type
-n name
one of
-a
-s
file

A.7.1.3 Description

The **describe** command is a utility that displays a description of an AIX file or directory. You can also use it to change certain fields in the description, including, for uncataloged AIX files, the name, owner, group, and permission code.

The *filep* parameter specifies the file to be described. If you specify only a file name and no additional flags, **describe** displays the available information about the file. If you run **describe** without any flags or *file* parameters, it displays the available information about the current directory. If you run **describe** with flags, it alters the file description.

A.7.1.4 Parameters

-a Displays all known information about the file.

-c *comment* Changes the comment field of a file. If the file is not already cataloged, it is cataloged at this time. A *comment* longer than 44 characters is truncated.

-g *group* Changes the *group* of the file (see the **chgrp** command). *group* can be either a group name or group ID number.

-m *perm* Changes the permission code of the file (see the **chmod** command). *permissions* is a character string composed of **r** (read), **w** (write), **x** (execute), **s** (set owner or group ID), **0** (leave permission as is), and **-** (remove permission) to indicate the new permissions for the owner, group, and others. You must specify all 9 characters.

-n *name* Changes the name of the file. File names cannot be longer than 8 characters.

-o *name* Changes the owner of the file (see the **chown** command). *name* can be either a user name or user ID number.

-s Displays no information about the file. With this flag, **describe** makes changes silently and exits.

-u *type* Changes the user type of the file (see the **filetypes** command). If the file is not already cataloged, it is cataloged at this time. *type* is a 14 character field. For a discussion of its uses, see "FILETYPES--Adding, Changing, and Deleting File Type Descriptions" in topic 3.22.

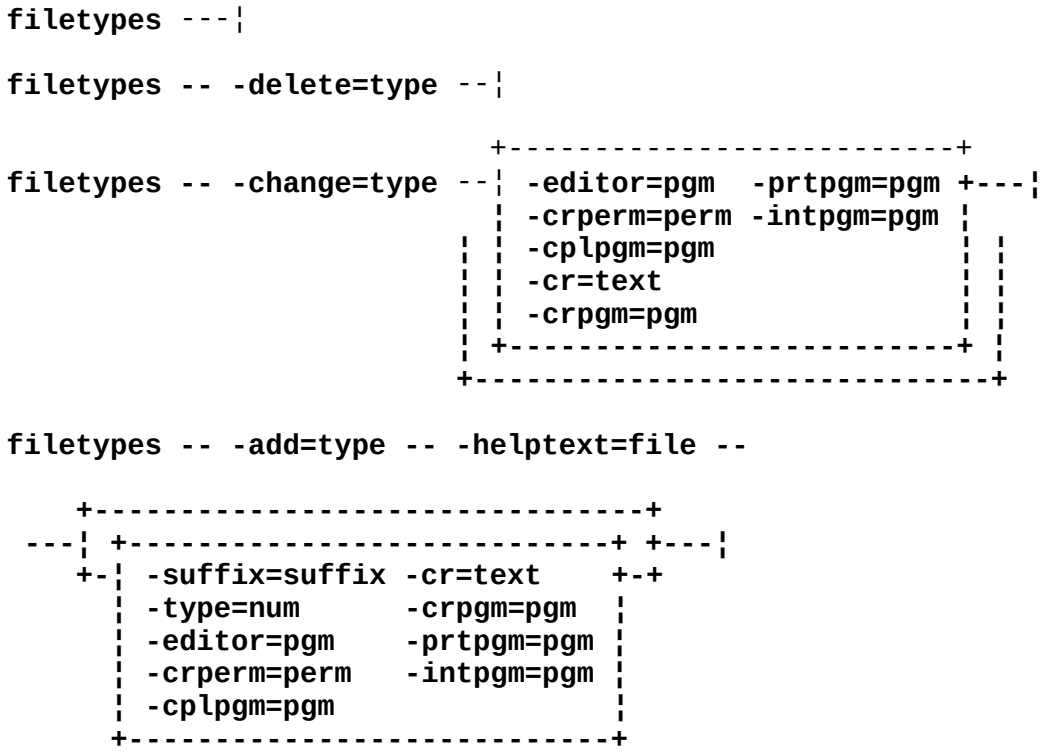
A.7.2 filetypes

Subtopics
A.7.2.1 Purpose
A.7.2.2 Syntax
A.7.2.3 Description
A.7.2.4 Parameters
A.7.2.5 Examples

A.7.2.1 Purpose

Defines new file types for files.

A.7.2.2 Syntax


filetypes
filetypes -- -delete=type
filetypes -- -change=type
-editor=pgm -prtpgm=pgm
-crperm=perm -intpgm=pgm
-cplpgm=pgm
-cr=text
-crpgm=pgm
filetypes -- -add=type -- -helptext=file --
-suffix=suffix -cr=text
-type=num -crpgm=pgm
-editor=pgm -prtpgm=pgm
-crperm=perm -intpgm=pgm
-cplpgm=pgm

A.7.2.3 Description

The **filetypes** command lets you define file types for use with the ***Directory Application*** part of AIX PS/2 Usability Services through which you access files in your current directory. This Directory Application uses a predefined ***file type*** for each AIX or IBM AIX DOS Merge conventional suffix, for example, **.c** for C Language source files. See "File Type Default Characteristics" in topic A.2 for the list of predefined file types and suffixes.)

A.7.2.4 Parameters

If you run the **filetypes** command with no additional arguments, you enter the **filetypes** window, where you can define parameters interactively. Alternatively, you can specify the following parameters on the command line that runs the **filetypes** command:

-add=*type* Adds a file *type* to the system.

-change=*type*
Changes information about a file *type* already defined in the system.

-delete=*type*
Deletes file *type* from the system.

Note: If you have superuser authority, you can add, change, or delete any file type. Otherwise you can only add, change, or delete your own file types.

-suffix=*suffix*
Defines the *suffix* to be associated with a file type.

-type=# Indicates what the file type is when a suffix is not required. You should only use this parameter to add a file type for those types that have no known suffix. The following is a partial list of the numbers and the file types that can be added to the system that do not need a suffix.

1. Usability Services "**I/O device**"
2. Usability Services "**Directory**"
3. Usability Services "**Untyped**"
4. Usability Services "**Shell Proc**"

-editor=*pgm*
Specifies the name of the editor program used when the selected file is opened within Usability Services.

-cr=*text* Indicates whether the file type can be created (with a text editor). *text* can be either **yes** or **no**.

-crpgm=*pgm*
Names the program that creates the files for the defined file type. If the file type is creatable and you do not specify this parameter, the file is created as an AIX file.

-crperm=*perm*
Sets the permissions for the file. For creatable files, the permission code defaults to **rw-r--r--**. See the description of the **chmod** command for information on setting permissions.

-prtpgm=*pgm*
Names the print program used to print files for the defined file type.

-cplpgm=*pgm*
Names the compiler program used to compile files for the

defined file type.

-intpgm=*pgm*
Names the interpreter program used to interpret files for the defined file type.

-helptext=*file*
Names the file that contains the help text for the defined file type. The format of this file must be recognized by the **puttext** command. The index number is not required since it is returned by **puttext**.

This parameter is optional when you add a new file type. The **COMPONENT ID** that you specify in the source file for help text is **sysdir**.

The recommended naming convention for the file name of the help text is **suffix.msg**, if there is a suffix associated with the file type, and **filetype.msg**, if there is no suffix.

A.7.2.5 Examples

1. To add a file type:

```
filetypes -add=C Src -suffix=c -editor=ed -cr=yes
          -crperm=rw-r-----  \ -prtpgm=print
          -cplpgm=cc -helptext=chelp
```

   This adds the **C** file type to the system, associating the **c** suffix with it (**.c**). It also specifies the **ed** command as the editor for files of this type, the **print** command as the print program, the **ccompile** program as the compiler, and **chelp** as the help text file. Finally, it sets the permission code to read/write for owner, read for group, and no permissions for others.

2. To change a file type:

```
filetypes -change=C Src -editor=e
```

   This changes the editor program associated with the **C** file type to the **e** program.

3. To delete a file type:

```
filetypes -delete=C Src
```

   This deletes the **C** file type from the system.

BACK_1 Glossary

This section defines terms used in this reference. Some terms are not defined here, because they are defined in the text. If a term is not defined here, look in the index.

access permission. A group of designations that determine who can access a particular AIX file and how the user may access the file.

application. A particular task, such as inventory control or accounts receivable.

application program. A program used to perform an application or part of an application.

button. (1) A word or picture on the screen that can be selected. Once selected and activated, a button begins an action in the same manner that pressing a key on the keyboard may begin an action. (2) A key on the mouse that is used to select buttons on the display screen or to scroll the display image.

command. A request to perform an operation or run a program. When parameters, arguments, flags, or other operands are associated with a command, the resulting character string is a single command.

command bar. The horizontal area at the top of the screen that contains commands that you can use in the current window. This line appears when a WINDOWS, APPLICATIONS, FILES, or TOOLS window is active.

command pop-up. A pop-up in which you type in commands. The command pop-up appears at the bottom of the screen when you press the **Command** or **Previous Command** key.

compile. (1) To translate a program written in a high-level programming language into a machine-language program. (2) The computer actions required to transform a source file into an executable object file.

current directory. The currently active directory. When you specify a file name without specifying a directory, the system assumes that the file is in the current directory.

de-select. To cancel the selection of a button. With a mouse, you de-select a highlighted area with the Select (left) button. Otherwise, you can use the **Select** key on the keyboard. To de-select a default button, select an alternate button in the selection list.

directory. A type of file containing the names and controlling

information for other files or other directories.

diskette. A thin, flexible magnetic plate that is permanently sealed in a protective cover. It can be used to store information copies from the disk or another diskette.

diskette drive. The mechanism used to read and write information on diskettes.

editor. A program used to enter and modify programs, text, and other types of documents.

file system. The collection of files and file management structures on a physical or logical mass storage device, such as a diskette or minidisk.

FILES window. A window that contains a list of the contents of a directory (except when being used temporarily to display the output of a command).

fixed disk. A flat, circular, non-removeable plate with a magnetized surface layer on which data can be stored by magnetic recording.

full path name. The name of any directory or file expressed as a string of directories and files beginning with the root directory.

help pop-up. A pop-up produced by pointing to an object and pressing the **Help** key.

highlight. To emphasize an area on the display screen by any of several methods, such as brightening the area or reversing the color of characters within the area.

home directory. (1) A directory associated with an individual user. (2) Your current directory on login or after issuing the **cd** command with no argument.

input field. An area into which you can type in data.

message pop-up. A pop-up caused by an activity associated with another pane.

minidisk. A logical division of a fixed disk that may be further subdivided into one or more partitions.

pane. On a display screen, the inner portion of a window used to present information to the user. A window may consist of one or more panes.

parameter. Information that you supply to a command or function.

path name. A complete file name specifying all directories leading to that file.

path pane. The part of a FILES window that describes the current directory.

pattern-matching character. Special characters such as ***** or **?** that can be used in a file specification to match one or more characters. For example, placing an **?** in a file specification means any character can be in that position.

pop-up. A box on the display screen that displays information or asks you to make choices.

profile. (1) A file containing customized settings for a system or user. (2) Data describing the significant features of a user, program, or device.

queue. A line or list formed by items waiting to be processed.

relative path name. The name of a directory or file expressed as a sequence of directories followed by a file name, beginning from the current directory.

root directory. The directory that contains all other directories in the AIX file system.

scroll. To move information vertically or horizontally to bring into view information that is outside the display or pane boundaries.

select. To choose a button on the display screen. To select, place the cursor on an object (name or command) and press the Select (left) button on the mouse or the **Select** key on the keyboard.

suffix. A character string attached to the end of a file name that helps identify its file type.

superuser. The most privileged user of the system.

superuser authority. The unrestricted ability to access and modify any part of the Operating System. This authority is associated with the user who manages the system.

tape drive. A mechanism for moving magnetic tape and controlling its movement.

TOOLS window. A window that contains buttons for commands that run utility and system control programs.

window. A rectangular area of the screen in which the dialog between you and a given application is displayed.

WINDOWS window. A window that contains buttons for creating new windows and managing open windows.

A
access permissions
  directories 2.6
  files 2.6
ACTIVATE command 3.3
activating windows 3.3
activities, canceling 3.5
adding
  commands 3.54
  device descriptions 3.20
  file type descriptions 3.22
  minidisks 3.35
  tools groups 3.54
  users 3.59
alternate selection method A.5
ALTNUM variable A.5
application programs, running 3.47
archiving
  directories 1.3 3.4
  file systems 1.3 3.4
B
backing up
  directories 1.3 3.4
  file systems 1.3 3.4
BACKUP command 1.7 3.4
C
CANCEL command 3.5
canceling activities 3.5
CCOMPILE command 3.6
changing
  characteristics of windows 3.21
  device descriptions 3.20
  directories 1.6 3.53
  file type descriptions 3.22
  minidisks 3.35
  passwords 3.39
  print queue 3.42
  users 3.59
characters, pattern-matching 2.5
CHECK command 3.7
choosing directory entries 3.40
CLOSE command 3.8
closing windows 3.8
COMBINE command 3.9
combining files 3.9
command processing model 2.2
commands
  ACTIVATE 3.3
  adding 3.54
  BACKUP 1.7 3.4
  CANCEL 3.5
  CCOMPILE 3.6
  CHECK 3.7
  CLOSE 3.8
  COMBINE 3.9
  COMPARE 3.10
  COMPILE 3.11
  COPY 3.12
  CREATE 3.13 3.14
  CROSSREF 3.15

  DATE 3.16
  DELETE 3.17
  deleting 3.54
  DESCRIBE 3.18 3.19
  DEVICES 3.20
  ENVIRONMENT 3.21
  FILETYPES 3.22
  FIND 3.23
  FINDTEXT 3.24
  FORMAT 1.5 3.25
  FORMATERRORS 3.26
  FORMATTRACES 3.27
  FREESPACE 3.28
  HIDE 3.29
  INSTALL 3.30
  INTERPRET 3.31
  LINK 3.32
  LINKEDIT 3.33
  LOGOFF 3.34
  MINIDISKS 3.35
  MOUNT 1.6 3.36
  MOVE 3.37
  OPEN 3.38
  PASSWORD 3.39
  PICK 3.40
  PRINT 3.41
  PRINTQ 3.42
  REFORMAT 3.43
  RENAME 3.44
  RESTORE 1.7 3.45
  RETURN 3.46
  RUN 3.47
  SHOW 3.48
  showing 3.54
  SORT 3.49
  SORTMERGE 3.50
  STARTTRACE 3.51
  STOPTRACE 3.52
  SWITCH 1.6 3.53
  TOOLSUPDATE 3.54
  UNMOUNT 1.6 3.55
  UPDATE 3.56
  UPDATEP 3.57
  updating 3.54
  USEDSPACE 3.58
  USERS 3.59
COMPARE command 3.10
comparing files 3.10
COMPILE command 3.11
COPY command 3.12
copying files 3.12
CREATE command 3.13 3.14
creating
  directories 3.13
  files 3.14
cross-reference list, making 3.15
CROSSREF command 3.15
cursor, pointing A.6
D
DATE command 3.16

date, displaying 3.16 3.56
DELETE command 3.17
deleting
  commands 3.54
  device descriptions 3.20
  directories 3.17
  file type descriptions 3.22
  files 3.17
  minidisks 3.35
  tools groups 3.54
  users 3.59
DESCRIBE command 3.18 3.19 A.7.1
describing
  directories 3.18
  files 3.19
device names 2.4
DEVICES command
  adding 3.20
  changing 3.20
  deleting 3.20
  showing 3.20
directories
  archiving 1.3 1.7 3.4
  backing up 1.3 1.7 3.4
  changing 1.6 3.53
  creating 3.13
  deleting 3.17
  describing 3.18
  displaying amount of space used by 3.58
  finding 3.23
  finding path names of 3.23
  ownership of 2.6
  protecting 1.7 2.6
  renaming 3.44
  restoring 1.3 1.7 3.45
  retrieving 1.3 1.7 3.45
  switching 3.53
directory entries, choosing 3.40
disk
  fixed 1.3
  removable 1.3
diskette drive operation 1.4
diskettes
  definition 1.3
  erasing 1.5
  formatting 1.5 3.25
  handling 1.4
  mounting 1.6
  unmounting 1.6
displaying
  amount of free space 3.28
  amount of used space 3.58
  characteristics of windows 3.21
  date 3.56
  directories 3.38
  files 3.38
  help 2.7
  print queue 3.42
  system date and time 3.16
  time 3.56

window contents 3.56
windows 3.38
E
ending a session 3.34
ENVIRONMENT command
changing characteristics of window 3.21
displaying characteristics of window 3.21
error logs, formatting 3.26
F
field-level tables 3.14
file names, defining additional 3.32
file system
creation 1.5
displaying amount of free space in 3.28
mounting 3.36
unmounting 3.55
file systems
archiving 1.3 1.7 3.4
backing up 1.3 1.7 3.4
mounting 1.6
protecting 1.7
restoring 1.7 3.45
retrieving 1.7 3.45
unmounting 1.6
file type defaults A.2
file types
adding 3.22
changing 3.22
deleting 3.22
files
archiving 1.3
backing up 1.3
combining 3.9
comparing 3.10
copying 3.12
creating 3.14
deleting 3.17
describing 3.19
displaying amount of space used by 3.58
file contents 3.50
finding 3.23
finding path names of 3.23
finding text within 3.24
moving 3.37
opening 3.38
ownership of 2.6
printing 3.41
protecting 1.7 2.6
record-level 3.14
renaming 3.44
restoring 1.7 3.45
retrieving 1.7 3.45
showing 3.48
FILETYPES command A.7.2
adding descriptions 3.22
changing descriptions 3.22
deleting descriptions 3.22
FIND command 3.23
finding
directories 3.23

files 3.23
text within files 3.24
FINDTEXT command 3.24
fixed disk
archiving 1.3 1.7
backing up 1.3 1.7
definition 1.3
mounting 1.6
restoring 1.7
retrieving 1.7
unmounting 1.6
FORMAT command 1.5 3.25
FORMATERRORS command 3.26
formatting
diskettes 1.5 3.25
error logs 3.26
trace files 3.27
FORMATTRACES command 3.27
FREESPACE command 3.28
G
getting help 2.7
H
handling diskettes and tape 1.4
Help key 2.7
help pop-ups 2.7
HIDE command 3.29
hiding windows 3.29
I
INSTALL command 3.30
installing a licensed program 3.30
INTERPRET command 3.31
K
keys
Help 2.7
Quit 2.7
L
licensed programs
installing 3.30
updating 3.57
LINK command 3.32
link editing source files 3.6 3.11
LINKEDIT command 3.33
load module, linking object files into a 3.33
LOGOFF command 3.34
M
matching, characters for pattern 2.5
minidisks
mounting 1.6
unmounting 1.6
MINIDISKS command
adding 3.35
changing 3.35
deleting 3.35
MOUNT command 1.6 3.36
mounting
diskettes 1.6
file systems 1.6 3.36
minidisks 1.6
tapes 1.6
mouse, using A.6

MOVE command 3.37
moving files 3.37
O
object files, linking 3.33
OPEN command 3.38
opening
  files 3.38
  windows 3.38
operating diskette and tape drives 1.4
ownership
  directories 2.6
  files 2.6
P
PANELS variable A.1
PASSWORD command 3.39
passwords, changing 3.39
pattern-matching characters 2.5
PICK command 3.40
pointing cursor A.6
preparing diskettes 1.5
previous display, returning to 3.46
primary file types A.3
PRINT command 3.41
print queue
  changing 3.42
  displaying 3.42
printing files 3.41
PRINTQ command 3.42
programs, running 3.47
protection
  directories 1.7 2.6
  file systems 1.7
  files 1.3 1.7 2.6
R
readability, reformatting source files for 3.43
record-level files 3.14
REFORMAT command 3.43
removing help pop-ups 2.7
RENAME command 3.44
renaming
  directories 3.44
  files 3.44
RESTORE command 1.7 3.45
restoring
  damaged files 1.7
  directories 3.45
  file systems 3.45
  files 3.45
retrieving
  directories 3.45
  file systems 3.45
  files 3.45
RETURN command 3.46
RUN command 3.47
running
  applications 3.47
  commands 2.2 3.47
  programs 3.47
S
selecting

from command bar A.5
from TOOLS pop-up A.5
selection method, alternate A.5
session, ending a 3.34
SHOW command 3.48
showing
commands 3.54
device descriptions 3.20
files 3.48
tools groups 3.54
users 3.59
SORT command 3.49
sorting
directory contents 3.49
file contents 3.50
SORTMERGE command 3.50
source files
checking for syntax errors 3.7
compiling 3.6 3.11
interpreting 3.31
link editing 3.6 3.11
making a cross-reference list of 3.15
reformatting for readability 3.43
space used by files or directories 3.58
starting trace activity 3.51
STARTTRACE command 3.51
stopping trace activity 3.52
STOPTRACE command 3.52
storage 1.3
SWITCH command 1.6 3.53
switching directories 3.53
syntax errors, checking for 3.7
system date and time, displaying 3.16
T
tables, field-level 3.14
tape
definition 1.3
handling 1.4
tape drive operation 1.4
time, displaying 3.16 3.56
tools command file A.1.2
tools group file A.1.1
tools groups
adding 3.54
deleting 3.54
showing 3.54
updating 3.54
TOOLS window, adding new functions to A.1
TOOLSUPDATE command
adding tools groups 3.54
deleting tools groups 3.54
showing tools groups 3.54
updating tools groups 3.54
trace activity
starting 3.51
stopping 3.52
trace files, formatting 3.27
U
UNMOUNT command 1.6 3.55
unmounting

diskettes 1.6
file systems 1.6 3.55
minidisks 1.6
tapes 1.6
UPDATE command 3.56
UPDATEP command 3.57
updating
commands 3.54
tools groups 3.54
updating a licensed program 3.57
USEDSPACE command 3.58
USERS command
adding 3.59
changing 3.59
deleting 3.59
showing 3.59
W
windows
activating 3.3
changing characteristics of 3.21
closing 3.8
displaying characteristics of 3.21
displaying contents of 3.56
hiding 3.29
opening 3.38
TOOLS A.1