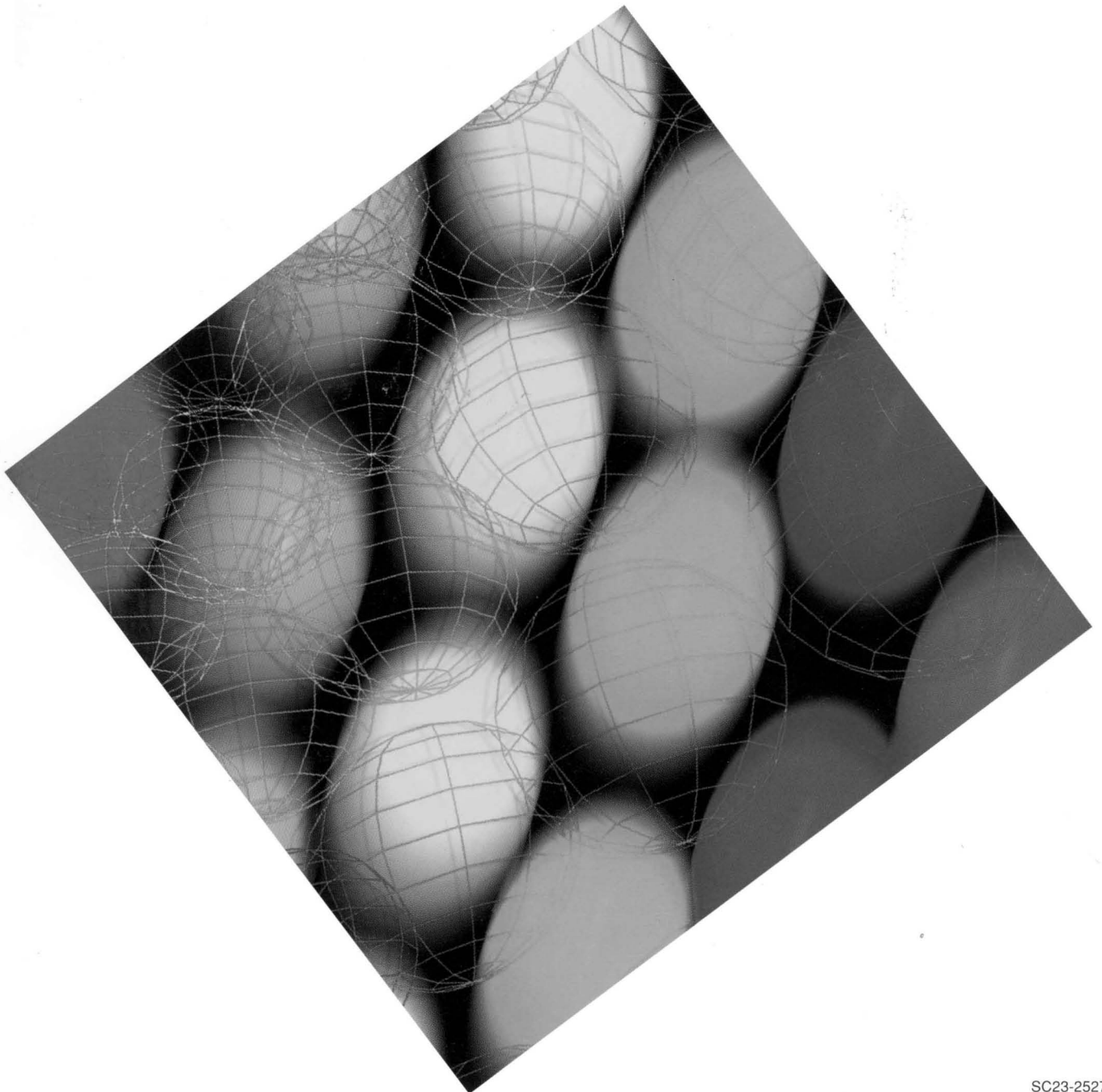


AIX

Getting Started

Version 4



AIX

Getting Started

Version 4

Fourth Edition (April 1996)

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About This Book

This book contains information for first-time users who have little or no experience with the AIX operating system. Topics covered include basic system commands for tasks such as starting and stopping the system; using a keyboard or mouse; logging in and out; identifying and using the various user interfaces (AIX Common Desktop Environment, AIXwindows, command line, shell); and running basic file commands. In addition, it covers different strategies for obtaining online help, in particular, using InfoExplorer documentation in its ASCII and AIXwindows interfaces.

Users interested in learning more about AIX base commands should read the *AIX Version 4 System User's Guide: Operating System and Devices*, SC23-2544. Users in a networked environment who are interested in learning more about AIX communications commands should read the *AIX Version 4 System User's Guide: Communications and Networks*, SC23-2545.

Note: The information in this book can also be found in the *Hypertext Information Base Library Version 1 for AIX*. This online documentation is designed for use with the InfoExplorer hypertext retrieval system.

Who Should Use This Book

This book is intended for all system users.

How to Use This Book

The following information is an overview of the book's contents and an explanation of the highlighting conventions used to identify certain types of items.

Overview of Contents

This book contains the following chapters:

- Chapter 1, "Computer Systems Fundamentals," provides an overview on the different system setups, hardware components (specifically terminals, keyboards, and mouse) and software components. This chapter also introduces the various user interfaces.
- Chapter 2, "System Startup, Logging In, Shutting Down, and Rebooting," contains procedures for starting the system, logging in and out of the system, running a few simple commands, as well as stopping and rebooting your system.
- Chapter 3, "Using the AIX Common Desktop Environment," introduces the AIX Common Desktop Environment, a graphical user interface.
- Chapter 4, "Using the AIXwindows Interface," describes how to open and handle windows with AIXwindows Window Manager and how to get help from windows.
- Chapter 5, "Using the Command line Interface," describes the command line (shell) interface. An overview and examples are provided on entering commands, performing basic command line tasks, and accessing help from the command line.
- Chapter 6, "Visual System Management Applications," introduces VSM, a graphical interface that enables users to perform system management tasks through direct manipulation of objects (icons).
- Chapter 7, "Accessing Information with InfoExplorer," introduces first-time users to the basics of using InfoExplorer with both a graphical interface and an ASCII interface.

- Chapter 8, “System Problems and Error Messages,” provides an overview of how to respond to system problems and error messages.
- Chapter 9, “Available Hardcopy Documentation,” provides a list of other available documentation, with order numbers.

Highlighting

The following highlighting conventions are used in this book:

Bold	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Also identifies graphical objects such as buttons, labels, and icons that the user selects.
<i>Italics</i>	Identifies parameters whose actual names or values are to be supplied by the user.
Monospace	Identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or information you should actually type.

ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.

Related Publications

See “Available Hardcopy Documentation” on page 9-1 for information about other available books related to using AIX products.

Ordering Publications

You can order publications from your sales representative or from your point of sale.

If you received a printed copy of *Documentation Overview* with your system, use that book for information on related publications and for instructions on ordering them.

To order additional copies of this book, use order number SC23-2527.

Chapter 1. Computer Systems Fundamentals

How your system is set up and which hardware and software components are available determine the tasks you can do and the way you perform those tasks. This section provides you with the background you need to understand and recognize the components and the setup of your AIX system.

The AIX system is a powerful and flexible system made up of hardware and software components. Hardware components, also known as *devices*, are the physical parts of the computer system. Software components, which are the instructions that the computer follows, are the *programs* available on the computer system. As the computer follows the instructions, we say that it *runs* the program.

Hardware and software are complementary. They work together to make the computer system perform the tasks you want. Computer hardware and software require a specific program to administer all their components. The AIX *operating system* performs this task.

Of all the characteristics of the AIX operating system, the most valuable are that it is *multitasking* and *multiuser*. Multitasking lets AIX run more than one independent program on the system at the same time. The advantage of a multiprocessing system is that it can perform processing tasks while you simultaneously run other programs. This is known as *background processing*. Without it you would have to wait for a program to complete before going on to any other task. Multiuser means AIX can have more than one person working on the system at a time. The advantage of a multiuser system is that many users can share system hardware and programs. The disadvantage is that the system slows down as more and more users log in.

Your system may be set up so that you share your system with others, or it may be set up to be used just by yourself. A shared or multiuser system is also known as a *time-sharing* system. A single-user system (not on a network or used as a host) is known as a *standalone* system. A computer system (on a network or not) that operates all by itself, because it has its own CPU, is known as a *workstation*.

This section discusses the following:

- System Setup on page 1-1.
- System Hardware Components on page 1-4.
- System Software Components on page 1-12.
- User Interfaces on page 1-13.

System Setup

An important factor in your system setup is whether your system is a *standalone system* or a multiuser system that is connected to a *host* or to a *network* and is dependent on them.

In a network with many users, one person is usually assigned the responsibility of managing the operation of the computers. This individual, called the *system administrator*, takes care of starting up and shutting down the computer; connecting terminals, printers, disks, tapes, and modems; backing up files; getting new users started; protecting the system from unauthorized entry; and so on. On a large system, this is often a full-time job in itself, requiring a qualified professional. In general, a UNIX system needs more system administration than a DOS system because of its complexity.

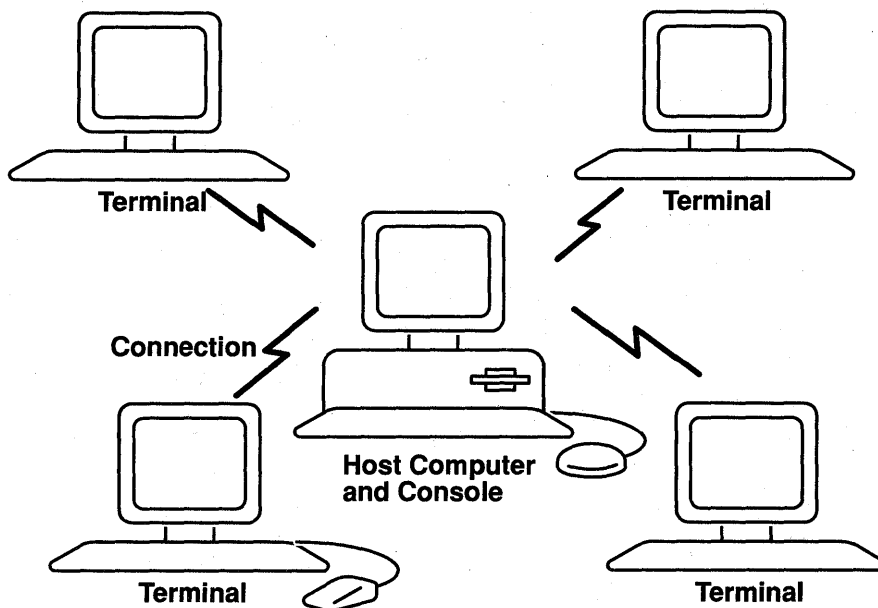
You have a standalone system if it can perform tasks without being connected to a server or host system and if you do not share your system with other users. On a standalone system, you may have to become your own system administrator. If you do, then you must do more than log in and log off when you use your system. Refer to the *AIX Version 4 System Management Guide: Operating System and Devices* for more information.

You have a dependent system if it must be connected to a host or a server to perform any tasks. This kind of system is typically found in a multiuser or network environment. In this environment, if the server or host stops functioning, your system also stops functioning.

Host Connection

In a multiuser system, there is one main computer, the *host*, which is shared by everyone. A host computer is the primary or controlling computer that serves the terminals that are connected to it. To use your system, you need to start a *session* on the host computer. To start a session, you *log in*.

The main terminal connected to the host is known as the *console*. The system administrator uses the console to manage the system. The following illustration shows a host system.



Terminals Connected to a Host System

Network Connection

A *network* is a system with computers connected to other computers. Within a network, every computer is called a *node*. Every node in a system has its own address. In a network, computers play one of two roles: *server* or *client*. In some instances, a computer can act as a client to one computer and as a server to another.

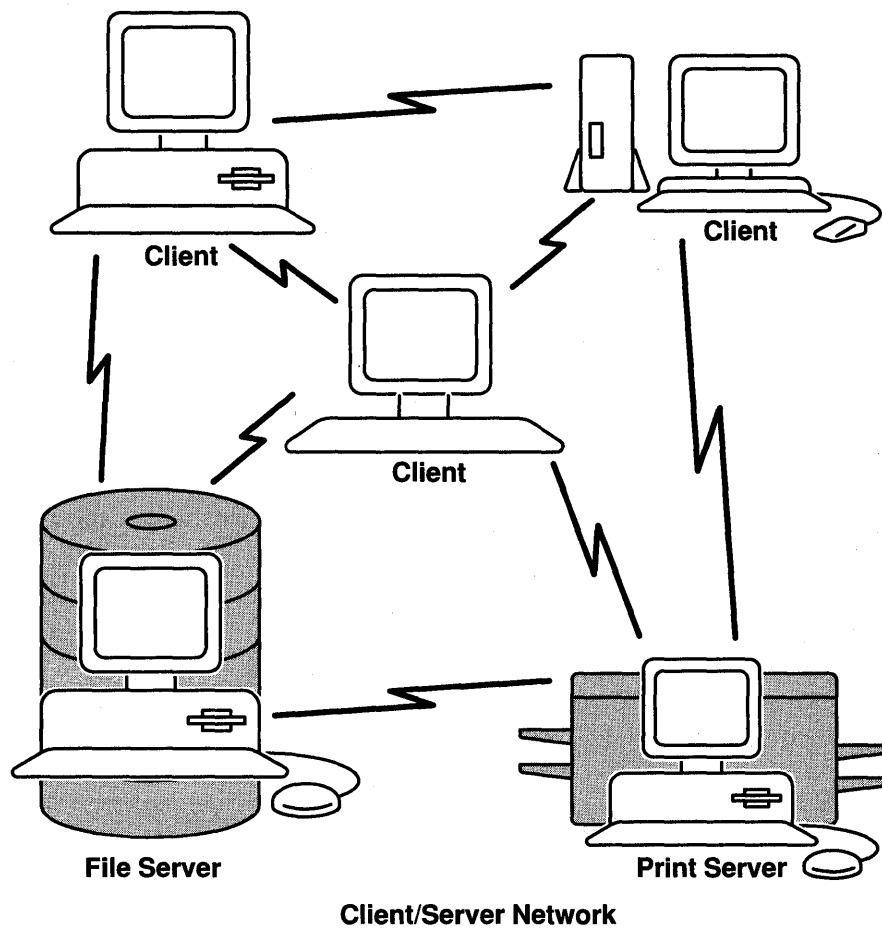
Server

A computer on a network that shares its resources or provides a service throughout the network is known as a *server*. The following are types of servers:

- file server** Provides file storage to the other computers on the network.
- print server** Provides printer facilities to the other computers on the network.
- communications server** Provides access to and from computers outside the network.

Client

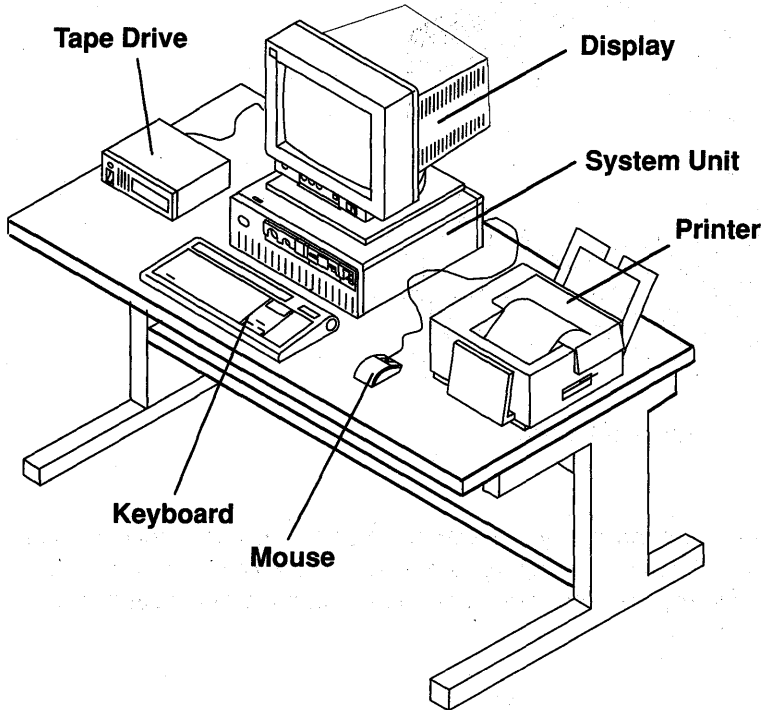
A computer that uses shared resources is known as a *client*. For example, you may have a UNIX system with its own disk storage where you save some of your files. You, the client, use the file server, which has greater storage capacity, to store other files. If someone on another computer needs to use the files on your computer, they are the client and your system is the server. This is a typical client/server relationship. The following illustration shows a typical client/server network.



System Hardware Components

Your system can have a display, keyboard, and mouse attached to it, in addition to a wide range of other available options. Examples of these options are tape drives, printers, terminals, and plotters. The operating system controls the devices attached to your system.

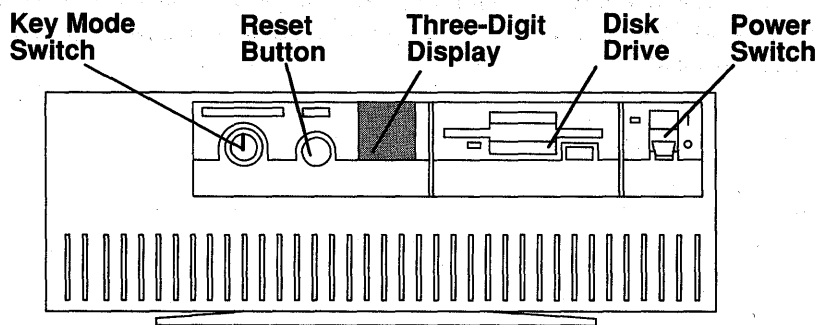
The following illustration shows one possible office arrangement.



Typical Computer System Arrangement

Note: Your system may not look exactly like any of the illustrations given in this guide.

The following illustration shows some system features.

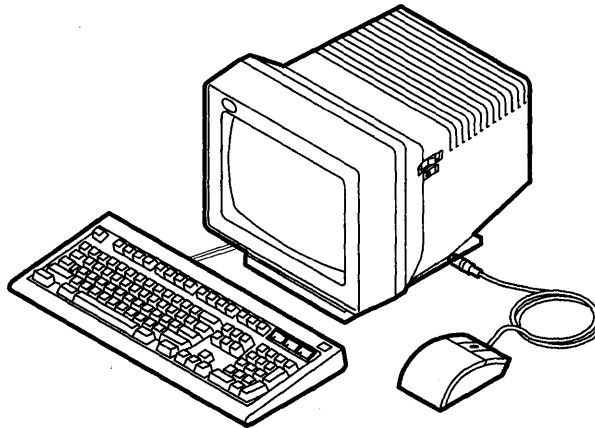


System Unit Features

If you are on a network, you may not have a system unit on your desk. In this case, you probably have a terminal that only has a power switch.

Terminals

The terminal is the device you use to interact with your computer system. It is composed of a display (or monitor), a keyboard, and sometimes a mouse. There are several types of terminals: dumb terminals, smart terminals, and graphics terminals. The following illustration shows a typical terminal setup.



Terminal Setup

Dumb Terminal

A dumb terminal (or *nonprogrammable terminal*) cannot do any processing on its own. This means the terminal itself cannot run programs but has another computer do its processing while it displays the results. This type of terminal is common in multiuser or networked systems.

Smart Terminal

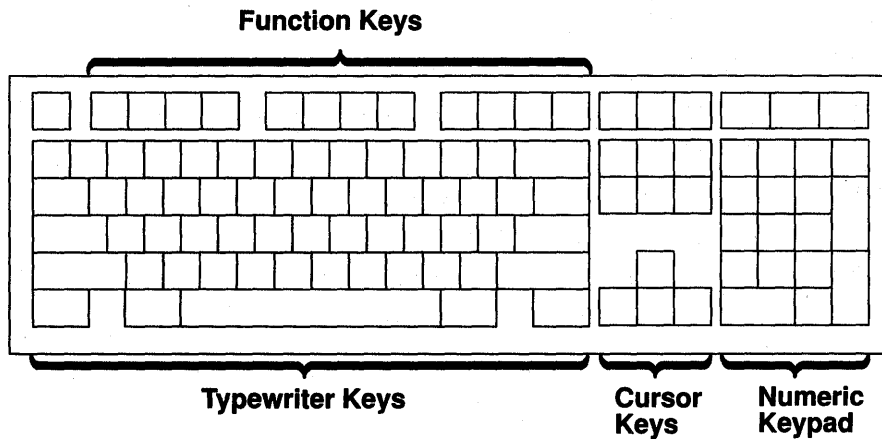
A smart terminal (or *programmable terminal*) does some processing on its own and sometimes has a device (a disk drive, for example) for reading and writing files. This type of terminal is also common in multiuser or networked systems.

Graphics Terminal

A graphics terminal is a smart terminal with special hardware that allows it to display pictures. If you work in a windows interface, you need a special type of graphics terminal known as an X terminal.

Keyboards

The various keys on the keyboard allow you to enter data and control the cursor location. Keyboards for different countries can have their keys engraved with their particular language. Japanese keyboards also have more keys. There are several kinds of keyboard designs. This section explains how keyboards work in general, and discusses the various keys and their use. The following illustration shows a possible keyboard layout.



Typical Keyboard

The keyboard has four sections:

- function keys** The operating system controls these multipurpose keys.
- typewriter keys** The software, usually a keyboard driver, controls these keys which are similar to those on a standard typewriter.
- cursor keys** These keys move the cursor on the screen and do programmed control functions. The application program that you use controls their movement and functions.
- numeric keypad** Similar to a calculator, the keypad is used to enter numbers.

The functions of each keyboard depend on the software you use.

Special Keys

Certain keys or combinations of keys make working in a command line interface easier.

Key	Function
Enter key	Use the Enter key to tell the system that you have finished entering text and that it can start running the command. You can correct the command line anytime before you press the Enter key.
Spacebar	Use the Spacebar to add spaces to the command line when needed.
Tab key	Use the Tab key to insert up to eight spaces until the next tab stop.
Backspace key	Use the Backspace key to erase the character preceding the cursor on the command line.

Control Key

The control (Ctrl) key is used in combination with other keys to make control characters. You press and hold the Ctrl key, and then quickly press another key. Some control keys appear on the display; others are invisible.

The following is a list of useful key sequences and their functions:

Key	Function
Ctrl-C	Interrupts most programs. You will see ^C on the screen.
Ctrl-Z	Suspends most programs. You will see ^Z on the screen.
Ctrl-D	End-of-file character used for logging out and for terminating file input. You will see ^D on the screen.
Ctrl-\	Quits program and creates a file named core that is used for debugging. You will see ^\ on the screen.
Ctrl-W	Erases the word preceding the cursor.
Ctrl-U	Erases the entire command line.
Ctrl-S	Stops the output of a program from running off the bottom of the screen.
Ctrl-Q	Resumes the output of a program stopped by Ctrl-S.

Escape Key

Though rarely used, in some instances the escape (Esc) key is also used in combination with other keys to make control characters. You press and release the Esc key, and then press another key.

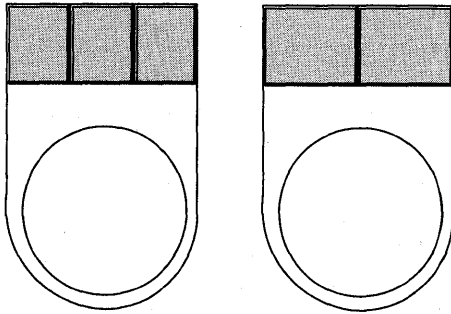
Key Nicknames

Some characters on your keyboard are referred to with more than one name. The following is a listing of some key names with their nicknames:

Key	Names
!	Exclamation mark, bang
#	Pound sign, crosshatch
*	Asterisk, star, splat
-	Hyphen, minus, minus sign
.	Period, dot
/	Slash, forward slash
\	Backslash
<	Less-than sign, left angled bracket
>	Greater-than sign, right angled bracket
_	Underscore, underline
	Vertical bar, vertical line, pipe
?	Question mark, hook
'	Single quote, tick
`	Backquote, back tick
~	Tilde, accent

Mouse

The mouse allows you to move the pointer quickly to all areas of your screen. You use the mouse to tell the AIX Common Desktop Environment or AIXwindows what you want to do. The mouse allows you to manipulate icons, menus, and windows. The following illustration shows a three-button and a two-button mouse.



Three-Button and Two-Button Mouse

Mouse Buttons

The mouse most commonly used with AIX has three buttons. Each button provides a different function. If you have a two-button mouse, pressing both buttons at the same time is equivalent to pressing the middle button on a three-button mouse.

Button	Function
left	Use the left mouse button for selecting and activating default actions and copying and pasting text.
middle	Use the middle mouse button for customized application programs.
right	Use the right mouse button for customized application programs.

Mouse-Button Actions

The following describes what you can do with the mouse.

Note: The specific mouse button to use depends on the application in which it is used.

Point

To point to an object, move the mouse until the tip of the mouse pointer is on the object (icon, menu, window, or window selection). When you perform a command with the mouse, first point and then do one of the following: press and hold, click, double-click, drag, drag and drop, or rubber-band with the mouse buttons.

Press-and-Hold

To press and hold, point to the object (icon, menu, or window), and then hold down the mouse button without moving the mouse.

Click

To click, point to the object (icon, menu, window, or window selection), and then press and quickly release the mouse button without moving the mouse.

Double-Click

To double-click, point to the object (icon), and then quickly press the mouse button twice without moving the mouse.

Drag

Drag usually refers to moving windows and selecting menu options.

To drag a menu selection, point to the menu you want to display, and press and hold the mouse button. Slide (drag) the pointer to highlight the desired menu option, and release the button.

Drag-and-Drop

Drag-and-drop usually refers to icons. This action only functions in some applications.

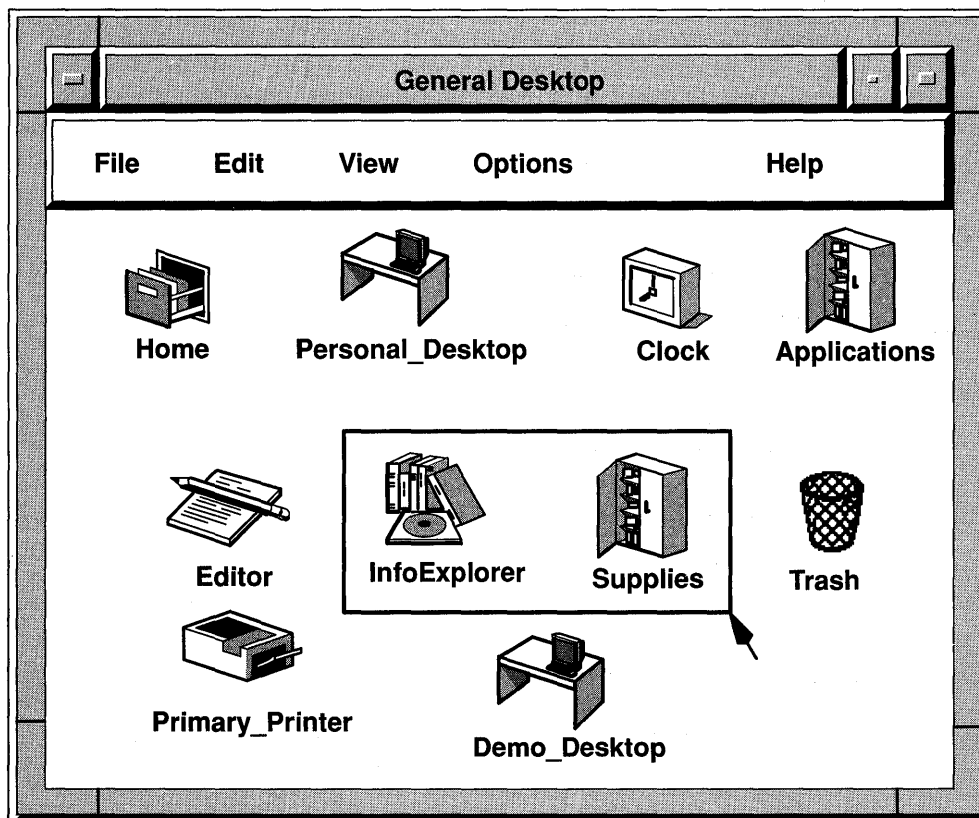
To drag and drop, point to the icon, hold down the mouse button, and move (drag) the pointer (while still holding down the mouse button) in the direction you want to move the object. When the object is where you want it, release (drop) the mouse button.

Rubber-Band

Rubber-banding usually refers to *toggling* (also referred to as *selecting* and *deselecting*) an icon's selection state and is used for manipulating a group of icons. Toggling refers to selecting an icon if it is currently unselected or deselecting an icon if it is currently selected. This action only functions in some applications.

To rubber-band, point to a position near the icon or icons to toggle (not touching any part of the icon or its title). Press and hold the mouse button, and drag the pointer. A rubber-band box is displayed, which you "stretch" to enclose the icons you want. When you release the mouse button, all icons inside or touching the rubber-band are toggled.

The following illustration shows rubber-banding.



Example of Rubber-Banding

Mouse Pointer Shapes

When AIXwindows starts, an X-shaped pointer appears at the center of the screen. As you move the mouse on your desktop, the pointer on the screen moves correspondingly.

The pointer shape changes according to its location. For example, when the pointer is directly over the root window (the backdrop behind all windows), the pointer has an X shape. When the mouse points inside a terminal window, the pointer changes to an I shape. A description and illustration of pointer shapes follows.

Arrow Pointer



An arrow pointing to the upper-left corner is the general-purpose pointer used in most window areas for single-object selection and activation.



An arrow pointing to the upper-right corner indicates a pending menu action. This shape indicates that a menu is popped up or pulled down and waiting for a menu item to be activated or the menu to be removed.

Caution Pointer



The *caution pointer* indicates action is expected in another area before input can be given to the current area and that the pointer has no effect in the area where the caution pointer appears. While the caution pointer is active, all mouse button and keyboard events are ignored in the current area.

Four-Directional Arrow Pointer



The *four-directional arrow pointer* indicates a move operation is in progress. During a move operation, the object, or an outline of the object, should move to track the location of the pointer.

Hourglass Pointer



The *hourglass pointer*, a working pointer, indicates that an action is in progress in the area and that the pointer has no effect in that area. While the hourglass pointer is active, all mouse-button and keyboard events are ignored in the area. The hourglass pointer can be used interchangeably with the watch pointer.

I-beam Pointer



The *I-beam pointer* performs actions on the text and changes the location of the text-insertion cursor.

Resize Pointer



The *resize pointer* indicates a resizing position. The direction of the arrow in the pointer indicates the direction of increasing size. The horizontal and vertical pointers indicate that the window is changed in either the horizontal or vertical direction. The diagonal pointers indicate that the window is changed in both the horizontal and vertical directions simultaneously. The pointer that appears depends on the resize operation you do.

Sighting Pointer



The *sighting pointer* is used to make precise position selections. For example, in a drawing program, it may be used to indicate a pixel to fill or the connecting points of lines.

Watch Pointer



The *watch pointer*, also called a working pointer, indicates that an action is in progress in the area and that the pointer has no effect in that area. While the watch pointer is active, all mouse-button and keyboard events are ignored in the area. The watch pointer can be used interchangeably with the hourglass pointer.

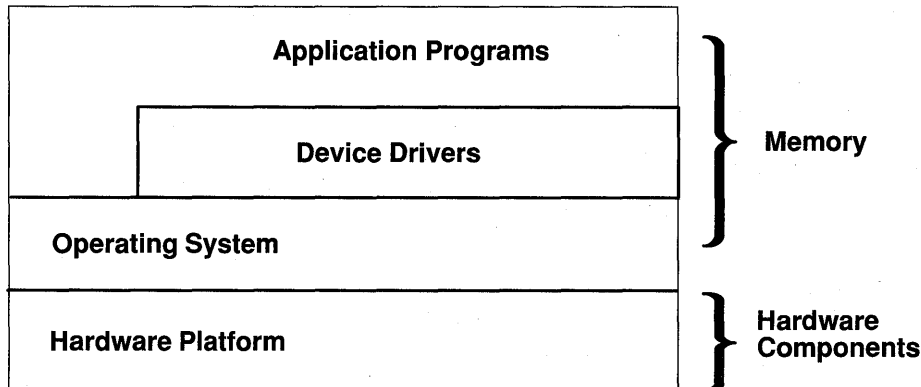
X pointer



The *X pointer* indicates when the pointer is outside any application area.

System Software Components

Your system has three basic types of software: application programs, device drivers, and operating systems. Each type of software performs a completely different job, but all three work closely together to perform useful work. While some special-purpose programs do not fit neatly into any of these classes, most software does. Programs run in the memory portion of the system. While running, programs are known as *processes* or *jobs*. The following illustration shows the relationship between the different software programs and the hardware.



Computer System Software Relationship

Application Programs

Application programs are the top software layer. You can perform specific tasks with these programs, such as using a word processor for writing, a spreadsheet for accounting, or a computer-aided design program for drawing. The other two layers, device drivers and the operating system, play important support roles. Your system might run one application program at a time, or it might run many simultaneously.

Device Drivers

Device drivers are a set of highly specialized programs. Device drivers help application programs and the operating system do their tasks. Device drivers, in particular, adapters, do not interact with you. They interact directly with computer hardware elements and shield the application programs from the hardware specifics of computers.

Operating System

An *operating system* is a collection of programs that controls the running of programs and organizes the resources of a computer system. These resources are the hardware components of the system, such as keyboards, printers, monitors, and disk drives. Your AIX operating system comes with programs, called *commands* or *utilities*, that maintain your files, send and receive messages, provide miscellaneous information about your system, and so on.

An application program relies on the operating system to perform many detailed tasks associated with the internal workings of the computer. The operating system also accepts commands directly from you to manage files and security. There are many extensions to the AIX operating system that allow you to customize your environment.

Root-User Processes

Root-user processes are programs that can be run only by a user with *root authority*. A system administrator has root authority for all processes.

Root-user processes include:

- Read or write any object
- Call any system function
- Perform certain subsystem-control operations

When you are not allowed to run a command, the system displays a message saying you do not have the correct permissions or you are not allowed to run that command. The system administrator may be the only person who can log in as root on your system. The system administrator can also set you up to use particular commands, giving you some control over processes.

Note: This guide assumes that the system is already set up and that you are ready to begin using it but without root-user authority. Speak with your system administrator for more information.

User Interfaces

How you interact with the operating system depends on the *user interface* you use. Your keyboard and monitor form an interface between you and your systems hardware. The user interface is between you and the programs you use. An application's user interface determines its appearance and behavior. There are two types of user interfaces: graphical user interface and command line interface.

Graphical User Interfaces

When a user interface has graphical objects, such as windows and menus, it is called a graphical user interface (GUI). AIX Common Desktop Environment and AIXwindows provide interfaces between you and your computer.

The graphical *window system*, which is part of the graphical user interface, organizes graphics output on the display and does basic text and graphics drawing functions.

AIX Common Desktop Environment is a graphical user interface that allows you to access networked devices and tools without having to be aware of their location. You can exchange data across applications simply by dragging and dropping objects.

AIXwindows is a *window manager*, another part of the graphical user interface, that lets you move windows around and resize them. It is also responsible for the appearance of the windows because it adds a frame to the windows.

X Window System

The X Window System, also known as X, provides a way to create a hierarchy of windows and a way to draw in windows. It also determines if a key or a mouse button is pressed. X is not a graphical user interface. It is a network window system. The actual means of user interaction is left to the graphical user interface which is based on the X Window System and managed by AIXwindows.

Advantages of X Window System

- You can run multiple processes.
- Each process has its own window.
- All windows can be visible at the same time.
- Size and placement of windows can be used to show importance.
- A window can run on a remote system.

X operates using the client/server model. This means that the server controls the actual hardware used for input and output, and the clients make requests of the server. This allows client programs to be independent of the hardware.

In X terminology, the display server is either called the server or the display. The actual hardware is called the screen.

Clients are the application programs that make requests of the display server. AIXwindows Window Manager is an example of a client.

Command Line Interface

The command line interface is also known as the *shell*. This interface is character-based. The screen displays a system prompt, and the commands you type from the keyboard appear next to the prompt.

Determining Your User Interface

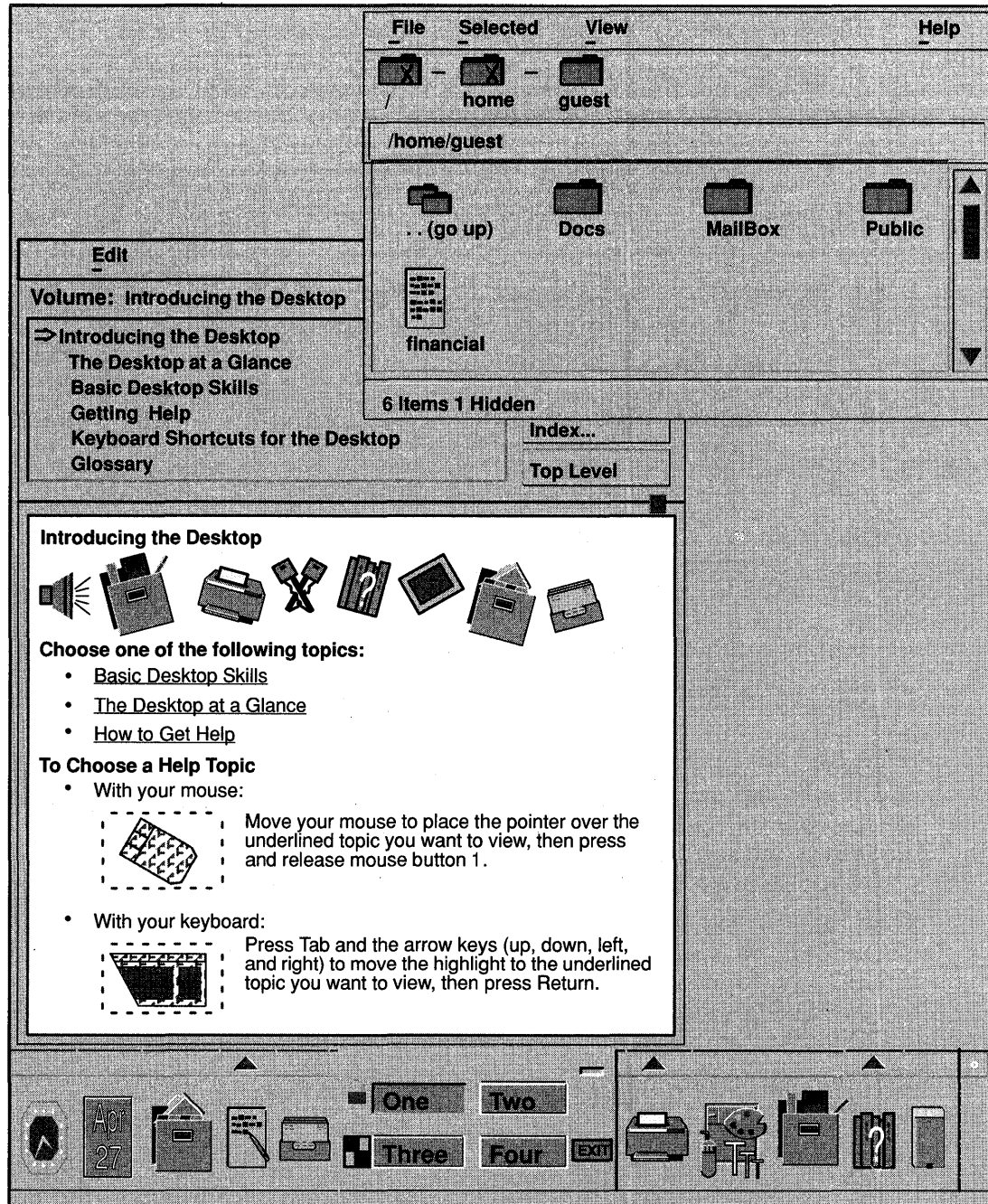
The way you work with the system depends on your user interface. Logging in displays one of the following:

- AIX Common Desktop Environment
- AIXwindows
- Command line (shell)

The appearance of each interface is distinct. The interface that appears when you log in does not imply that you do not have access to the other interfaces. The AIX Common Desktop Environment interface is the default interface found on many AIX systems.

AIX Common Desktop Environment

If your screen looks like the following illustration, you are in the AIX Common Desktop Environment graphical interface.



The AIX Common Desktop Environment Startup

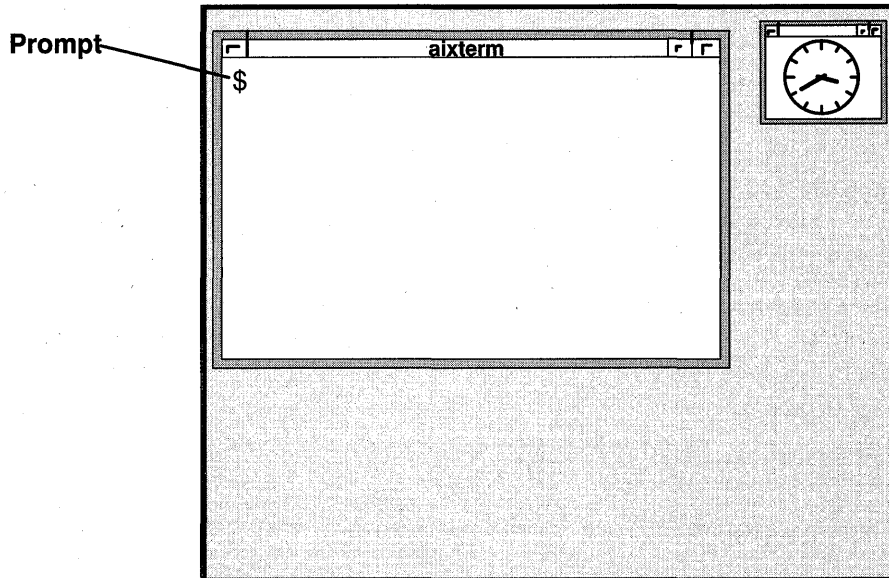
The AIX Common Desktop Environment also depends on AIXwindows. AIX Common Desktop Environment provides a graphical user interface that makes your screen seem like an electronic desktop. The AIX Common Desktop Environment displays icons that represent various functions such as files, directories, and programs. You control these icons with a mouse. By opening windows on the desktop, you can simultaneously view and easily move among several activities. Whether you are a beginner or an experienced user, the AIX

Common Desktop Environment helps you manage your work and use the operating system to perform various tasks.

See "Using AIX Common Desktop Environment" on page 3-1 for more information on working in this interface. *Common Desktop Environment 1.0: User's Guide* provides detailed information about using the AIX Common Desktop Environment interface.

AIXwindows

If your screen looks like the following illustration, you are in the AIXwindows graphical interface:



Windows Graphical Interface

The AIXwindows graphical interface allows applications to run separately and appear simultaneously in different windows on the same screen. Graphical interfaces divide your physical display screen into regions called *windows*, where the output of these different applications appears. Multiple displays seem to be working at the same time.

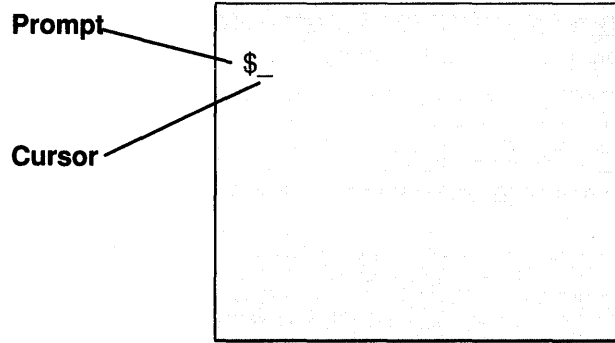
AIXwindows, a window manager, controls interactions among windows from various clients on the display. You need a window manager to control the placement and size of each window. If there is no window manager, there is no way to change a window's location or alter its size. Many applications available for your computer make use of AIXwindows. The skills you develop by using AIXwindows help you work with various applications.

You enter commands at the command line prompt in the *aixterm* window.

See "Using the AIXwindows Interface" on page 4-1 for more information on working in this interface.

Command Line

If your screen looks like the following illustration, you are in a command line interface.



Command Line Screen

Most people are familiar with the command line interface, also known as a shell interface. It is a blank screen with a system prompt. Commands you type from the keyboard appear next to the prompt.

The system prompt informs you that the system is ready and waiting for you to enter commands. The common system prompts used are \$ and %. Your system prompt may be different because your system administrator may have set up a word, such as your name, as the prompt rather than one character.

The cursor is a visible mark used to indicate where entered text will appear. It may be an underscore symbol (_) or a block symbol (■).

See "Using the Command Line Interface" on page 5-1 for more information on working in this interface.

Chapter 2. System Startup, Logging In, Shutting Down, and Rebooting

This section introduces you to the AIX operating system. You should be able to start up your system and log in after reading this section. You should also be able to shut down and reboot your system.

Notes:

1. This section assumes an installed operating system and that you already have a user ID and password.
2. The illustrations used in this section may not be identical to your system, since machine types vary in their physical characteristics.

This section discusses:

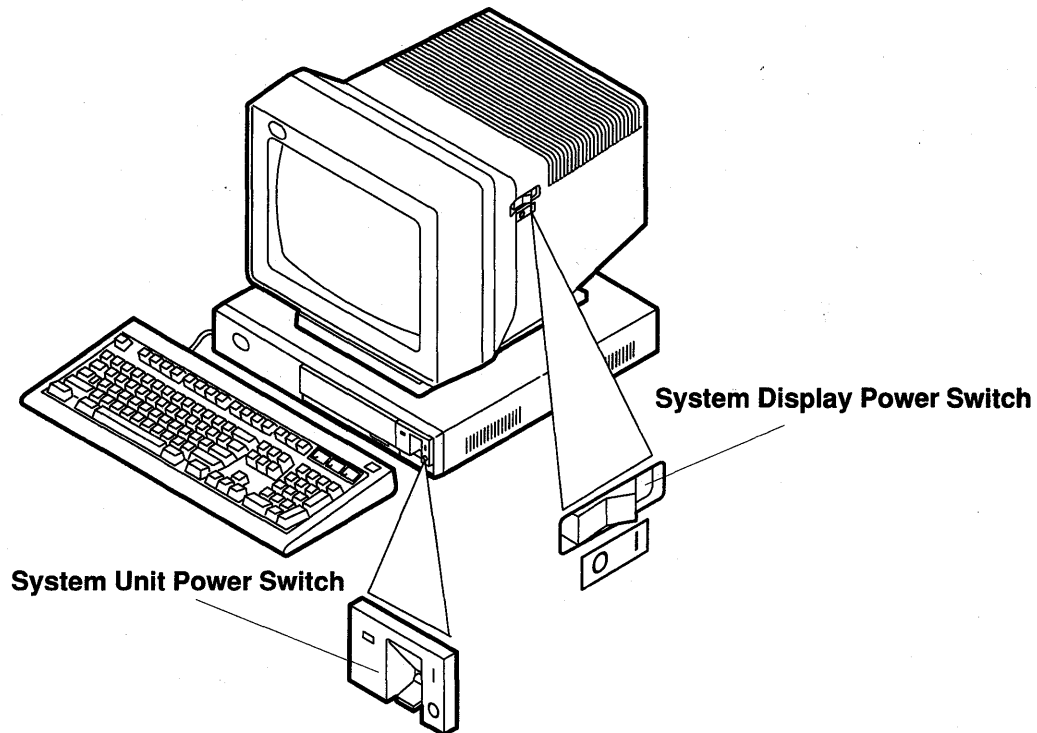
- Starting the System on page 2-2
- Logging In to Your System on page 2-5
- Shutting Down Your System on page 2-7
- Rebooting Your System on page 2-8

Starting the System

Starting a session on your system is the first step in doing work on your system. After your system is turned on, just log in to the system to begin a session. To end your session, just log off the system. Logging-off procedures are detailed in the specific interface sections.

Determining If the System Is On

The system is on if the power-on light is glowing and the power switch is set to On (I). The following illustration shows some possible locations of the power switches.



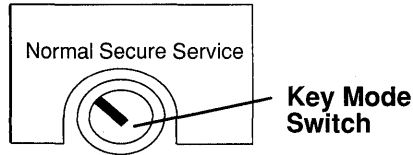
System and Display Power Switches

If the system unit's power-on light is on, proceed to "Checking the Display Screen" on page 2-4.

Starting Your System

The following describes how to start or “power-on” a workstation. If you work at a terminal, the only feature you probably have is the power-on switch.

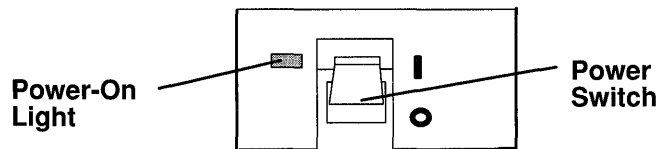
1. Set the power switches of each attached device (except for the system unit) to On.
2. Set the key mode switch (if your system has one) on the system unit to Normal as shown in the following illustration:



The key mode switch (if your system has one) controls the type of initial program started. Setting the mode to Normal permits the operating system to load. To learn more about the key mode switch, refer to the operator’s guide for your system unit.

Attention: Pressing the Reset button when the key mode switch is in the Normal or Service position can cause data damage or loss. For additional information on Reset button operation, refer to the *AIX Version 4 Problem Solving Guide and Reference*.

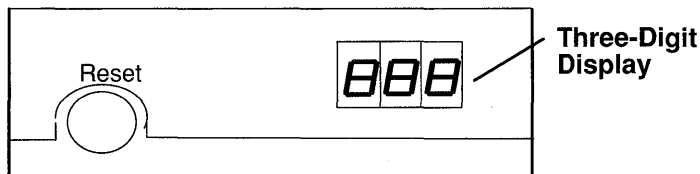
3. Start the system unit by setting the power switch to On (I).



When you set the power switch to On, the power-on light comes on, and the system starts an internal power-on self-test (POST).

If the power-on light does not come on, check the power cord located at the back of the system unit. It may not be plugged into a working electrical outlet. If this does not solve the problem, refer to the *AIX Version 4 Problem Solving Guide and Reference*.

4. Look at the three-digit display as shown in the following illustration.



The three-digit display on the operator panel has various uses:

- Tracks the progress of the system unit self-tests and configuration program.
- Displays codes when the operating system comes to an abnormal end.
- Displays diagnostic program messages when the display console is not working correctly.

During the POST, the code displayed shows the progress of the testing. When the self-tests complete without error, the three-digit display is blank.

If an error that requires attention occurs, a three-digit code remains, and the system unit stops. Consult your system administrator or refer to the *AIX Version 4 Problem Solving Guide and Reference* for more information about error codes and recovery.

Note: In some systems, if you start with the key mode switch in the Secure position, the power-on light does not come on, and the three-digit display remains blank. If this happens to you, just move the key to the Normal position and press the Reset button.

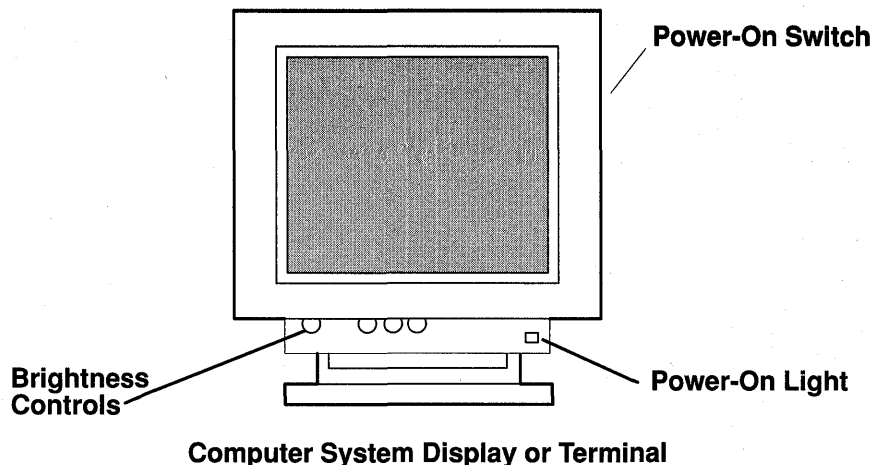
The following list explains the uses of the key mode switch positions. Your system unit may not have a key mode switch.

- Normal** Use this position for attended operation. It is the usual or normal placement of the key mode switch when an operator is present and in control of operation at the system unit.
- Secure** Use this position for unattended operation in an open environment. This prevents a passerby from accidentally pressing the Reset button and causing a loss of data. In the Secure position, the Reset button is not active.
- Service** Use this position for attended operation when hardware or software service is conducted. The Service position starts operating system keyboard sequences that support error determination and storage printout.

If there is a problem with the system unit, refer to the *AIX Version 4 Problem Solving Guide and Reference* before setting the mode switch in the Service position or pressing the Reset button.

Checking the Display Screen

The display or monitor is on if its power-on light is glowing. If the display is on and its screen is dark, adjust the brightness control. If you have a screen saver program running, just press any key or move your mouse. Usually, you can locate the power switches and controls below or to the side of the screen. The following illustration shows the switches on a display. Your display may not necessarily look like this one.



Display Powered On

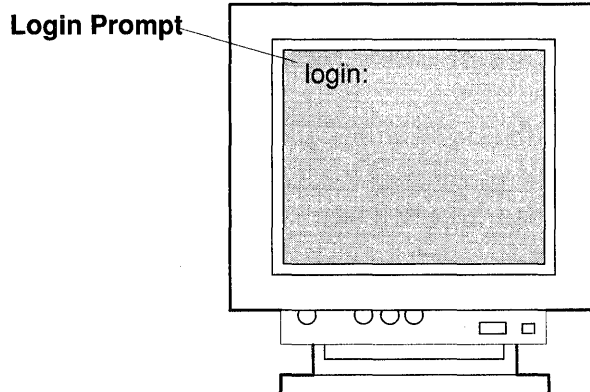
If your display is off, power on the display, and adjust the controls if necessary.

Your display may have a tilt feature that lets you position the screen at a comfortable viewing angle. While working at your display, adjust the controls so that the screen image is easily viewable. For more information, see the display's operator guide.

Logging In to Your System

After you have powered on your display, a login prompt similar to the following appears on your screen:

```
login:
```



Computer System Display with Login Prompt

Note: It may take a few minutes for your login prompt to appear. Do not press any keys while you are waiting as this may cause unexpected results.

If the login prompt does not display, see your system manager or go to the steps in “Problem Determination” in the *AIX Version 4 Problem Solving Guide and Reference*.

Note: If you receive an error message on your display screen, refer to “Responding to Error Messages” on page 8-3.

To Log In

To use the system, you must identify yourself to the system as an authorized user by logging in with your login name. A login name is actually a name identifying you to the system. Your login name, as well as the system groups to which your system manager has assigned you, controls your access to system functions.

Your system may be set up so that you can only log in during certain hours of the day and on certain days of the week. If you attempt to log in at a time other than the time allowed, your access will be denied. Your system administrator can verify what your login times are.

1. Type your login name following the `login:` prompt, and press the Enter key.

```
login: LoginName
```

For example, if your login name is denise:

```
login: denise
```

2. If the `password:` prompt appears, type your password, and press Enter. (The screen does not display your password as you type it.)

```
password: YourPassword
```

If the password prompt does not appear, you have no password defined and you can begin working on the operating system.

If you don't know your login name or the password assigned to you, see your system administrator.

If the system displays:

login incorrect

Log in again, and enter the correct login name and password. If you still have problems, see your system administrator.

If the system displays:

YOU LOGGED IN USING ALL UPPERCASE CHARACTERS.
IF YOUR WORKSTATION ALSO SUPPORTS LOWERCASE
CHARACTERS, LOG OFF, THEN LOG IN AGAIN USING
LOWERCASE CHARACTERS.

Repeat steps 1 and 2 again, making sure the Caps Lock key is off.

After you have logged in and depending on how your system is set up, your system will start up in a graphical interface (AIX Common Desktop Environment or AIXwindows), or in a command line interface (the shell).

Shutting Down Your System

A system *shutdown* is a shell script that properly prepares a system with multiple users to be turned off or rebooted. An improper shutdown can have undesirable results on the file system. On a single-user system, shut down when your system needs servicing, when you are going to move your computer, or when you cannot reboot.

From the user's viewpoint, stopping (shutting down) a system is simple, but from the system's viewpoint, the shutdown process actually involves a series of events designed to preserve file integrity.

There are several controlled situations when you may want to shut down your system:

- After you install new software or change the configuration for existing software.
- When a hardware problem exists.
- When your system is irrevocably frozen.
- When you notice that system performance is becoming degraded.
- When you notice signs of possible file system corruption.

The **shutdown** command is the safest and most thorough way to halt the operating system. When you designate the appropriate flags, this command notifies users that the system is about to stop operations, terminates all existing processes, unmounts file systems, and shuts down the system.

The steps that take place during a system shutdown depend on how the system was customized. The shutdown described in this section may not appear exactly the same on your system.

Note: You must have root user authority to shut down the system.

To Shut Down and Turn Off the System

1. At the prompt, enter:

```
shutdown
```

The system shuts down; the system waits one minute before stopping the user processes and the **init** process. You will see the following message:

```
shutdown completed...
```

2. Turn off the system and the peripherals connected to it.

To Shut Down and Reboot the System

When the **-r** flag is specified with the **shutdown** command, the system reboots after it completes the shutdown.

At the prompt, enter:

```
shutdown -r
```

The system shuts down and reboots.

To Shut Down to Single-User Mode

In some cases, you may need to shut down the system and enter single-user mode (also referred to as maintenance or standalone mode) to perform software maintenance and diagnostics.

1. To change to the root directory, at the prompt, enter:

```
cd /
```

You must be in the root directory to shut down the system to single-user mode to ensure that file systems are unmounted cleanly.

2. At the prompt, enter:

```
shutdown -m
```

The system shuts down to single-user mode. A system prompt displays, and you can perform maintenance activities.

To Shut Down in an Emergency

You can also use the **shutdown** command to shut down the system under emergency conditions. Use this procedure to stop the system quickly without notifying other users.

At the prompt, enter:

```
shutdown -F
```

The **-F** flag instructs the **shutdown** command to bypass sending messages to other users and shut down the system as quickly as possible.

Rebooting Your System

A system *reboot* is a shell script that recopies the operating system from disk to memory and starts it without turning the system completely off. Reboot is also known as a system reset. It reinitializes the operating system by repeating the initial program load (IPL) operation. When the system is first turned on, the operating system is usually booted automatically.

The **reboot** command is used if no other users are logged into the system. Reboot to cause the system to recognize newly installed software, to reset peripheral devices, to perform routine maintenance tasks like checking file systems, or to recover from a frozen system or a system crash. The **shutdown** command is used instead of the **reboot** command when the system is running and multiple users are logged into the system.

Use the **reboot** command to reboot the operating system when it is accessed by only one user. The **reboot** command synchronizes the hard disks and performs some other shutdown activities without halting the system.

The steps that take place during a system reboot depend on how the system was customized. The reboot process described in this section may not be exactly the same on your system.

Note: You must have root user authority to reboot the system.

At the prompt, enter:

```
reboot
```

The system reboots.

Chapter 3. Using AIX Common Desktop Environment

The AIX Common Desktop Environment, available with the AIX operating system, is based on Common Desktop Environment (CDE) 1.0 technology.

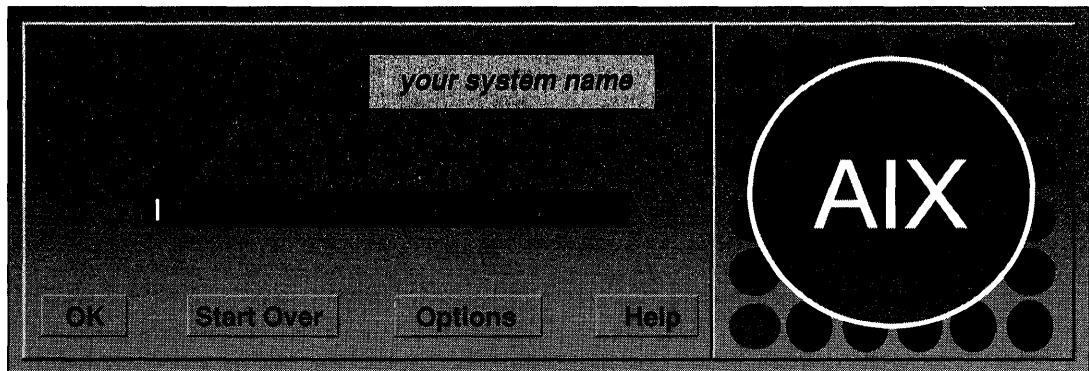
Help volumes, InfoExplorer information, and hardcopy manuals may refer to the desktop as AIX Common Desktop Environment, Common Desktop Environment desktop, the CDE desktop—or simply, the desktop.

With the AIX Common Desktop Environment, you can access networked devices and tools without having to be aware of their location. You can exchange data across applications by simply using your mouse to drag and drop objects.

For information about how to use a mouse in AIX Common Desktop Environment (for example, to click on or drag and drop an icon), see “Mouse” on page 1-8.

You will find that the AIX Common Desktop Environment is easy to use, and you’ll be able to perform basic tasks right away. For more detailed information on working in this interface, see *Common Desktop Environment 1.0: User’s Guide*.

You’ll know that the AIX Common Desktop Environment is set up to start automatically on your system if you see the login screen in the following illustration when you turn on your display device.



AIX Common Desktop Environment Login Screen

Before You Start Using AIX Common Desktop Environment

If AIX Common Desktop Environment is not set up to start automatically on your system, you can use the following command to start the desktop from an AIX command line:

```
xinit /usr/dt/bin/xsession
```

Using the **xinit** command starts the desktop without bringing up the whole desktop environment. You will bypass the login screen when you start the desktop and when you exit, you will return to a command line rather than an AIX Common Desktop Environment login screen. You will, however, use the same desktop applications you would use had you started the desktop from the welcome screen.

Your system administrator can assist you with setting up your system so that AIX Common Desktop Environment starts automatically when the system is started.

Special Circumstances

If you are working in an environment where from your workstation you need to start applications on another workstation that is also running the desktop, you may need to do some configuration on both workstations.

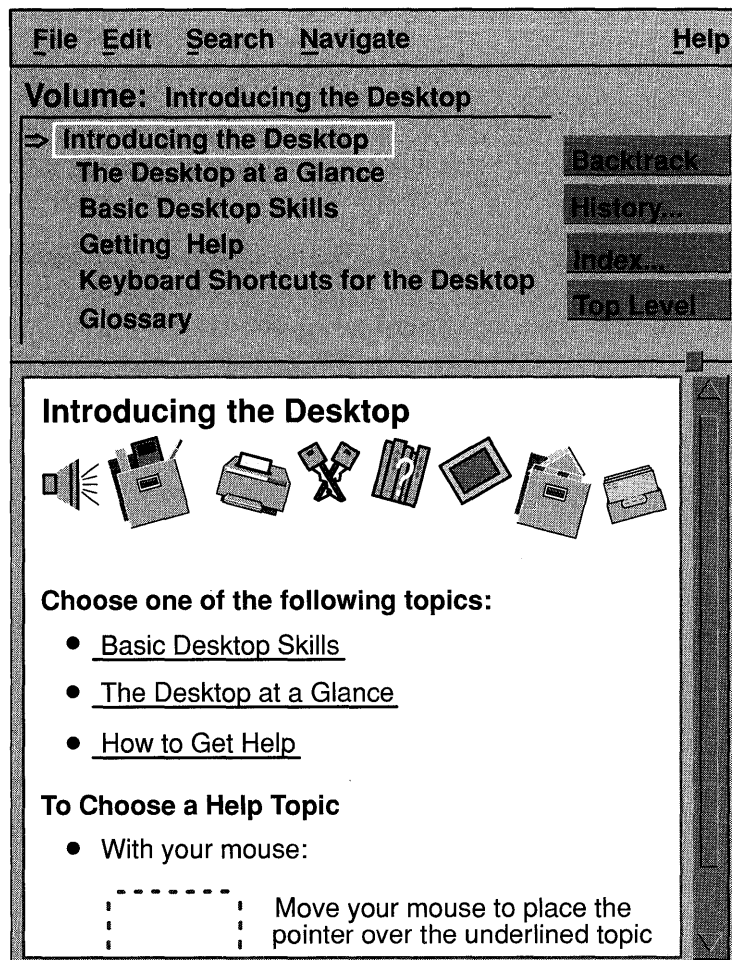
Also, if your desktop has one of the following special configurations, you may need to change certain Login Manager files before starting the desktop:

- Your system console is an ASCII terminal.
- Your system is an X terminal or a host for X terminals.
- Your system has more than one display.

For information about setting up your system under these circumstances, see your system administrator.

Using Help to Get Familiar with AIX Common Desktop Environment

The first time you log in to AIX Common Desktop Environment, a help window introducing the desktop is displayed (see illustration). This introduction is a good starting place for new AIX Common Desktop Environment users, and it provides quick access to helpful topics including The Desktop at a Glance, Basic Desktop Skills, and Getting Help.



AIX Common Desktop Environment Help Window

Place your cursor over the topic **Basic Desktop Skills**, and press your left mouse button. This gives you easy access to information about using desktop menus and controls and other introductory topics to help you get started using AIX Common Desktop Environment.

Click on the topic **The Desktop at a Glance** for an introductory review of the types of applications available in the AIX Common Desktop Environment.

Click on the topic **Getting Help** for details about accessing and using the AIX Common Desktop Environment help system.

Accessing AIX Common Desktop Environment Help Topics

There are a number of ways to access the AIX Common Desktop Environment online help topics:

Help Key

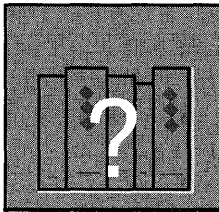
The quickest and easiest way to get help is to press F1, usually known as the help key. When you press F1, the application you are using responds by displaying the help topic most closely related to your current activity. Some computers have a dedicated Help button on the keyboard which may take the place of the F1 key.

Application Help Menus

Most applications have a Help menu that contains additional commands for requesting specific kinds of help, such as Introduction, Tasks, and Reference. To learn more about using help windows, click on **Using Help** from the Help menu in any application. Or, you can press F1 while you are in a help window.

Help Manager Icon

To access the extensive AIX Common Desktop Environment volumes of help, click on the Help Manager icon located on the Front Panel.



Displays the help manager, which is a hypertext linked list of all of the help volumes that support the desktop. Clicking on the pointer above the icon displays the top level of the hierarchy of help information.

Help Manager

Clicking on the Help Manager icon opens the AIX Common Desktop Environment help manager (see illustration).

File Edit Search Navigate Help

Volume: Help – Top Level

⇒ **Welcome to Help Manager** **Backtrack**

Common Desktop Environment **History . . .**

Overview and Basic Desktop Skills **Index . . .**


Top Level

Welcome to Help Manager


Each of the titles listed below represents a *product family* that has installed and registered its online help. Each title (and icon) is a hyperlink that lists the help within the family.

- To display a list of the help available for a product family, choose its title (underlined text) or icon.
- Within a product family, find the help you want to view, then choose its title.
- If you need help while using help windows, press F1.

Common Desktop Environment

 Overview and Basic Desktop Skills * Using Help * File Manager * Front Panel * Application Manager * Print Manager * Style Manager * Mailer * Text Editor * Calendar Manager * Icon Editor * Terminal Emulator * Create Action * Login Manager and Environment Variables Help * Migration Tool Help Enhancements to AIX CDE * Welcome to CDE

Overview and Basic Desktop Skills

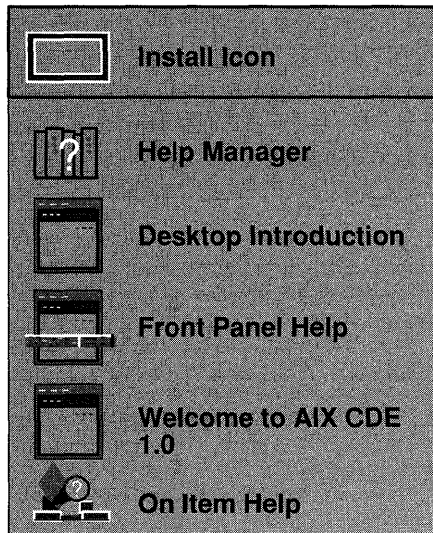
 Overview and Basic Desktop Skills for the Common Desktop Environment.

AIX Common Desktop Environment Help Manager

Click on **Common Desktop Environment** to display the list of help volumes that have been installed on your desktop. Browse the list of titles. To open a volume, choose its title.

Using the Pointer Above Help Manager Icon

To view the Help Subpanel options available, click on the arrow pointer above the Help Manager icon.



Help Subpanel Pop-up

The Help Subpanel provides the following:

Install Icon Drop an object on the control to install it into the subpanel. You can install icons representing applications (actions), files, and directories

Help Manager Displays the help browser help volume which gives you access to the installed desktop help volumes on the system.

Desktop Introduction Displays the help volume entitled **Introducing the Desktop**, which contains topics covering basic desktop concepts and skills. This help volume displays automatically the first time a user logs in to the desktop.

Front Panel Help Displays the help volume for the Front Panel, which contains topics covering how to use and customize the Front Panel.

Welcome to AIX CDE 1.0 Displays the help volume to assist you in migrating from an earlier version of CDE, or from the AIXwindows Desktop, to the AIX Common Desktop Environment.

On Item Help Changes the mouse to a question mark that you can drag and drop on desktop objects for specific information.

Chapter 4. Using the AIXwindows Interface

The AIXwindows interface provides features to help you manage the windows on your display screen. For example, you can run several programs at the same time on a single display screen, create multiple windows to meet your specific needs, and personalize your AIXwindows environment to suit your preferences. The AIXwindows interface provides functions for opening, closing, moving, and resizing windows.

AIXwindows runs a terminal emulator called *aixterm* in a *terminal window*. The **aixterm** command provides this terminal emulator for programs that cannot use windows. It emulates either a high-function terminal or VT102 terminal. The **aixterm** command features the capability to cut and paste text between aixterm windows and includes an option, mode, and scrollbar menu that allows you to control various terminal functions.

You can move between windows by pointing to them with your mouse. For example, while you type notes within a text editor in a window, you can also copy text from a different window and paste it into another window on the screen.

You can also represent programs on the screen by icons. When a program is represented by an icon, you cannot enter information into it directly or read from it, but the program can continue processing. You can convert most windows into icons and then back into windows.

The following sections describe the AIXwindows interface, including menus and icons, and various features often found on AIXwindows applications.

- Starting AIXwindows on page 4-2.
- AIXwindows Components on page 4-2.
- Basic AIXwindows Tasks on page 4-4.
- Basic aixterm Tasks on page 4-12.

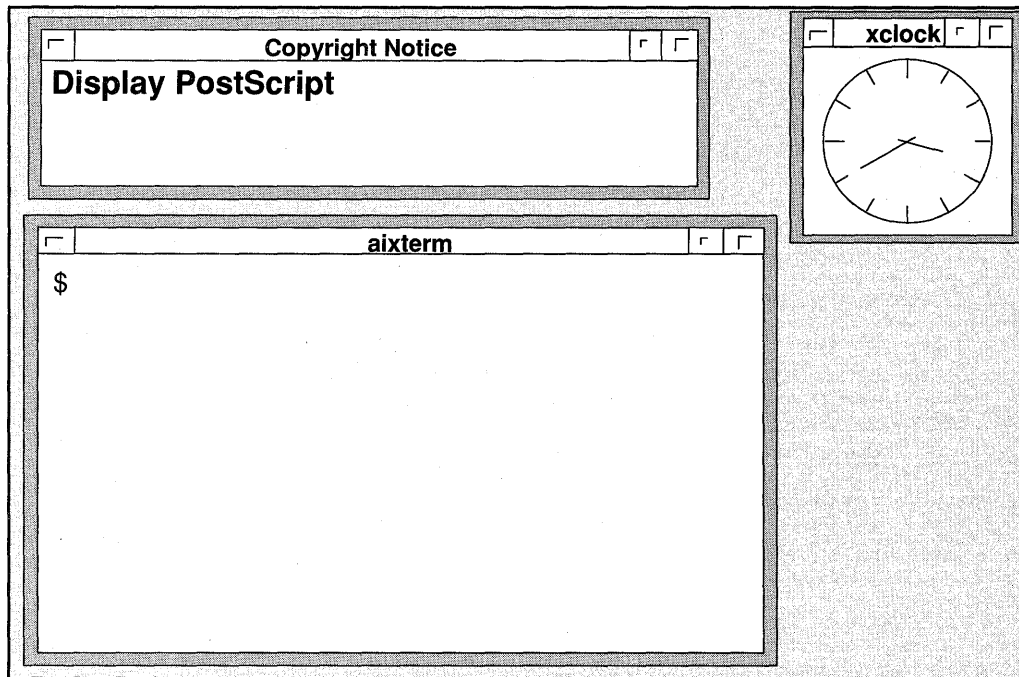
Starting AIXwindows

When you log in to your system, you start in either the command line interface, AIXwindows, or AIX Common Desktop Environment, depending on how your system is set up. If you start up in the command line interface, this does not necessarily mean you do not have AIXwindows. Try to start AIXwindows to see if it comes up. If you do not have AIXwindows, an error message displays.

To try starting AIXwindows, at the prompt, enter:

```
xinit
```

If AIXwindows comes up, your display will look like the following illustration:



Default Windows Environment

AIXwindows Components

On window management screens, programs and messages appear within rectangular areas known as windows. Many windows can appear on the same screen, beside other windows, or overlapping or hiding other windows.

Client Area

The center of each window contains the *client area*, in which the input and output of the program take place. If the window is running the **aixterm** command, then the area is known as the *terminal window*.

Root Window

The background area of the screen is known as the *root window*. Other windows are placed on top of the root window and can overlap each other. By pressing the left mouse button on the root window, you can reveal the *root menu*. With the options in this menu, you can position windows above and below each other, open new terminal windows, refresh the window, and restart the Window Manager.

Resize Handles

Resize handles surround the edges of most windows. You can change the size of the windows by moving the mouse pointer to an appropriate border, pressing the left mouse button, and dragging the border to the appropriate size. For example, to make the window taller or shorter, you can drag the top resize handle up or down.

Title Bar

The top of most windows, just below the resize borders, contains the *title bar*. The center of the title bar usually displays the title of the program. (The program can also set the title bar to display other information. If the title bar is not given title information, it displays a series of asterisks where the title would be.)

Window Menu Button

The *window menu button* appears at the left of the title bar. If you click on the window menu button with the left mouse button, the window displays a menu, with which you can move the window, resize it, move it in front of other windows or behind them, or end the program that is running within the window. (If you press the Esc key or click the left mouse button outside the menu while the menu is visible, the menu closes.)

Minimize Button

The *minimize* button appears to the right of the title. If you click on this button, the window is converted into an icon. You can restore the window by clicking on the window's icon.

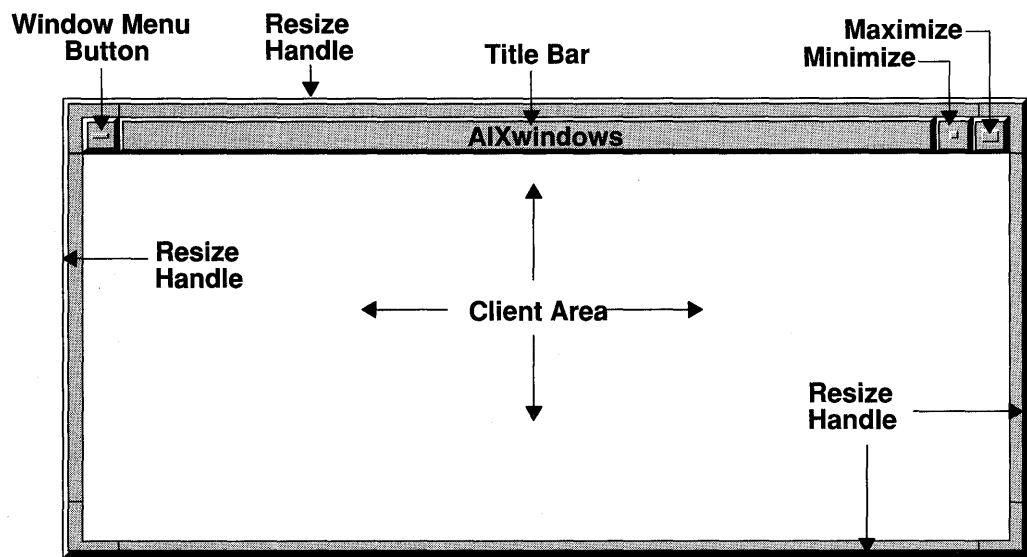
Maximize Button

The *maximize* button appears at the extreme right of the title bar. When you click on the maximize button with the left mouse button, the window expands to its maximum size (often the full screen), or, if the window is already at maximum size, contracts to its previous size.

Window Selection

Before a window can receive input, it must be active. To activate or select a window, point to any part of the window, and click the left mouse button. When a window is active, the window frame changes color. Also, characters that you type appear on the command line in the active window. If no window is active, everything you type is lost or ignored.

The following illustration points out the parts of a window.



A Typical Window Layout

Basic AIXwindows Tasks

A procedure is presented for each of the following tasks:

- Displaying the Window Manager Menu on page 4-4.
- Selecting a Menu Item on page 4-5.
- Displaying an AIXwindows Application's Menu on page 4-6.
- Displaying the Root Menu on page 4-6.
- Moving a Window on page 4-7.
- Opening a New Terminal Window on page 4-7.
- Bringing Forward or Moving Back a Window on page 4-7.
- Changing the Size of a Window on page 4-7.
- Closing a Window on page 4-8.
- Manipulating AIXwindows Icons on page 4-9.
- Getting Help in the AIXwindows Interface on page 4-10.
- Running an Application in the AIXwindows Interface on page 4-11.
- Exiting and Logging Off from AIXwindows on page 4-11.

Displaying the Window Manager Menu

Each window has a window menu. Click on the window menu button (to the left of the window title bar) with the left mouse button or press the Shift-Esc or Alt-Spacebar key combination.

The window menu contains the following choices:

Restore	Restores a window from an icon or to its previous size after it was maximized.
Move	Changes the location of the window.
Size	Changes the size of a window.
Minimize	Shrinks the window to its icon representation.
Maximize	Enlarges the window to cover the entire root window.
Lower	Sends a window to the back or bottom of the window stack, the position closest to the root window.
Close	Immediately stops the process running in the window and makes it disappear.

Selecting a Menu Item

After displaying a menu:

- Drag the pointer with the left mouse button down the menu until the item you want to select is highlighted. Release the mouse button.

OR

- Use the cursor keys to highlight different options. When the option you want to select is highlighted, press Enter.

To cancel the menu without choosing a selection, press Esc.

Note: When a menu option is inactive, its name is grayed out (color of the text is lighter) and you cannot select it.

Menu Selection Shortcuts

In addition to using a mouse to choose menu options, two additional features allow you to quickly select a menu option without using the mouse.

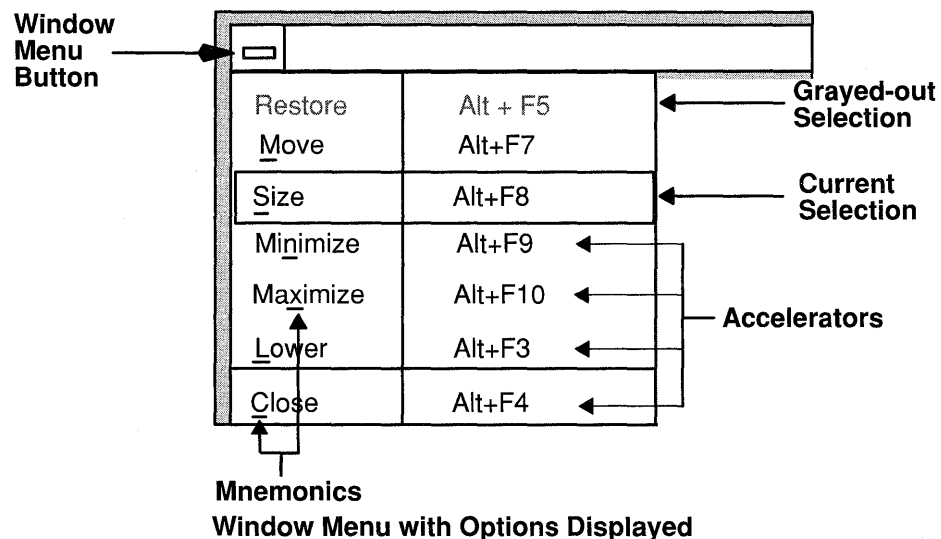
- Your keyboard has accelerator keys that directly execute an option in a menu. Accelerators are listed in the menu next to the option names.
- A mnemonic provides a similar capability by allowing you to select from a menu by typing significant letters within the menu. Mnemonics are indicated as underlined characters in the menu.

Remember that accelerator keys allow you to immediately execute an option without displaying the menu. Mnemonics, on the other hand, are simply a way to display menus and choose options without using the mouse.

To Select an Option Using Its Mnemonic

Once a menu is displayed, you can use a mnemonic to execute a function by typing the letter that is underlined in the function's name.

In the following illustration, for example, pressing the accelerator Alt-F9 or the mnemonic Alt-n minimizes the window.



Displaying an AIXwindows Application's Menu

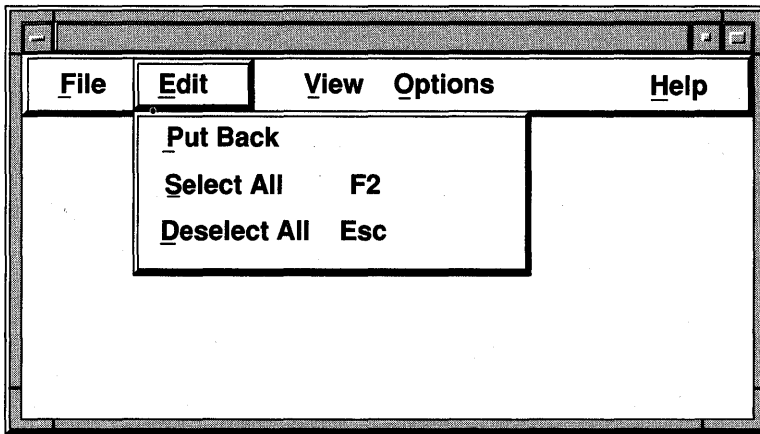
Applications inside AIXwindows have their own menus with unique names that appear under the AIXwindows title bar. To display the menu:

- Click on the application's menu title with the left mouse button.

OR

- Hold down the Alt key and then press the letter that is underlined in the menu's name.

In the following illustration, for example, pressing the mnemonic Alt-E displays the Edit menu of AIXwindows.

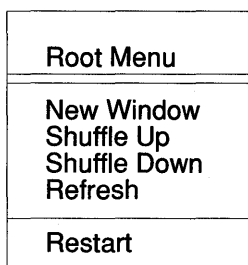


The Edit Menu and Its Options

Displaying the Root Menu

To display the root menu, point to the root window (the backdrop behind all other windows), then press and hold the left mouse button. As with pull-down menus, choose an option in the root menu by dragging the mouse pointer to the desired option, and releasing the mouse button.

The root menu is normally customized. The following is an illustration of the default root menu.



Default Root Menu

Moving a Window

You can move windows using the mouse or the **Move** option on the Window Manager menu.

- Move the mouse pointer to the title bar. When properly positioned, the mouse pointer has an arrowhead shape. Press the select mouse button and drag the mouse pointer in the appropriate direction. The outline of the window frame moves as you move the mouse.

OR

- Select the **Move** menu option and use the arrow keys to move the window.

A counter appears in the center of the screen, showing in pixels the coordinates of the window's upper-right corner, and the outline of a rectangle surrounds the window.

When the window reaches the new location, release the mouse button or press the Enter key or click any mouse button.

Note: To cancel the move, press the Esc key before you release the mouse button.

Opening a New Terminal Window

- To open a new terminal window, select the **New Window** menu option from the root menu.

OR

- At the system prompt in a window, enter `aixterm&`.

A new window is displayed, usually 80 characters wide and 25 lines long.

Bringing Forward or Moving Back a Window

The following describes three methods for moving a window forward and backward (in other words, on top of or beneath other windows):

- Move the mouse pointer to any visible portion of a window frame and click the left mouse button. If the window is behind other windows, it moves to the front; otherwise, it moves behind the other windows.
- Display the root menu and select the **Shuffle Up** menu option to move the window at the bottom of the window stack to the top, or select the **Shuffle Down** menu option to move the window at the top of the window stack to the bottom.
- Select the **Lower** menu option (or press the L key) from the window's menu, or press the Alt-F3 key combination. This moves the active window behind the other windows.

Changing the Size of a Window

You can change the size of a window using the mouse, the Window Manager menu, or a combination of the mouse and keyboard.

- Move the mouse pointer to an edge or corner of the window frame, press the left mouse button and drag the mouse pointer in the direction you want the frame to move. Pull the frame outward to expand the window or pull the frame inward to make the window smaller. The outline of a rectangle stretches or contracts as you move the mouse, and a counter appears in the center of the screen, showing the size of the window as it changes.

OR

- Select the **Size** menu option (or press the I key) from the window menu, or press the Alt-F8 key combination.

A counter appears in the center of the screen, showing the size in characters of the window as it changes, and the outline of a rectangle surrounds the window. Use the arrow keys or the mouse to stretch or shrink the window.

- When the window has reached the desired size, release the mouse button, or press the Enter key, or click any mouse button.

Note: To cancel the resizing, press the Esc key before you release the mouse button.

Where you place the mouse pointer on the window frame determines how the window is resized. The following table contains the different places to grab the window frame.

To stretch or shrink the window		Point to
vertically...	from the top	top of the frame, above the title bar
	from the bottom	bottom of the frame
horizontally...	from the right	right side of the frame
	from the left	left side of the frame
diagonally...	from the bottom left	frame's lower-left corner
	from the top left	frame's upper-left corner
	from the top right	frame's upper-right corner
	from the bottom right	frame's lower-right corner

To Maximize a Window

Maximizing a window expands it to the full size of the screen.

- Click on the maximize button at the extreme right of the title bar with the left mouse button. If the window is already maximized, this action returns the window to its previous size.
- OR
- Select the **Maximize** window option (or press the X key) from the window menu, or press the Alt-F10 key combination.

To Return a Window to Its Previous Size

Select the **Restore** menu option (or press the R key) from the window menu, or press the Alt-F5 key combination.

Closing a Window

When you end the program that is running within a window, the window usually closes and disappears. However, if you must close a window yourself:

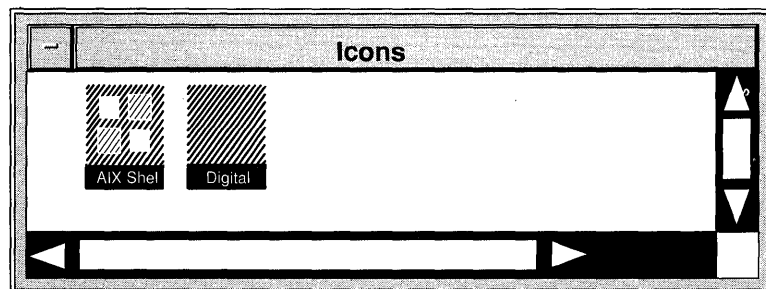
- Double-click on the window menu button.
- OR
- Select the **Close** menu option from the window menu (or press the S key), or press the Alt-F4 key combination.

Note: To cancel the close, press the Esc key.

Manipulating AIXwindows Icons

Icons are used to represent windows. This is especially helpful if your screen becomes cluttered with windows. Programs that are running continue either until they finish or until they halt because they require input from you.

Icons are placed in a window on the screen known as the icon box. Within the box, you can rearrange the icons and convert them back into windows. The following illustration shows an icon box window.



Icon Box

To Change Windows into Icons

Sometimes when you are working with multiple windows, it is convenient to change a window into an icon. This procedure is called minimizing a window. An icon is a small graphic image easily stored on the root window. A program running in a minimized window continues to run until it finishes or requires additional input.

- Click on the minimize button (on the right side of the title bar, but to the left of the maximize button).

OR

- Select the **Minimize** menu option from the window menu (or press the N key), or press the Alt-F9 key combination.

In either case, the window disappears, and the window's icon is filled in within the icon box.

To Restore a Window from an Icon

- Double-click on the icon in the icon box.

OR

- Select the **Restore** menu option from the icon's window menu, or press the Alt-F5 key combination.

The window reappears at its previous size and location, and the icon is displayed as a grayed-out silhouette.

To Move an Icon within the Icon Box

Press the left mouse button on the icon and drag the mouse pointer to the new location. The outline of the icon moves with the mouse. When you release the mouse button, the icon moves from its original location to the new location.

To Pack Icons

To pack icons is to rearrange the icons in the icon box into a neat grid.

Select the **Pack Icons** menu option (or press the P key) from the icon box's window menu, or press the Alt-F12 key combination.

Getting Help in the AIXwindows Interface

There are various tools available to help you when you need more information on commands and the operating system. These tools are:

- **InfoExplorer** program, which provides you with online documentation about the system.
- **help** command, which displays information about basic commands.
- **man** command, which displays information about all commands, subroutines, and files.

InfoExplorer Program

The InfoExplorer program is an online hypertext information base that puts system documentation at your finger tips.

To use the Windows version of InfoExplorer, at the prompt, enter:

```
info -g
```

The "Welcome to the InfoExplorer Window Interface" article is displayed in the reading screen. It explains how to do basic screen operations and how to access InfoExplorer help, copyrights, and trademarks.

To use the ASCII version of InfoExplorer, at the prompt, enter:

```
info -a
```

The "Welcome to the InfoExplorer ASCII Interface" article is displayed in the reading screen. It explains how to do basic screen operations and how to access InfoExplorer help, copyrights, and trademarks.

For detailed information on using the InfoExplorer program, see "Getting Started (InfoExplorer Windows)" on page 7-12.

help Command

The **help** command presents a one-page display of information for new users.

At the prompt in an AIX window, enter:

```
help
```

The system displays information similar to the following:

Use the InfoExplorer facility for aid. If available, you can refer to the "Using and Managing AIX" Information Topic for general assistance. Some basic Commands are:

```
man -k keyword - lists commands relevant to a keyword
man command   - prints out the manual pages for a command
cat           - concatenates files (and just prints them out)
vi           - text editor
finger       - user information lookup program
ls           - lists contents of directory
mail         - sends and receives mail
msgs        - system messages and junk mail
passwd       - changes login password
sccshelp     - views information on the Source Code Control System
tset         - sets terminal modes
who          - who is on the system
write        - writes to another user
```

To find programs about mail, use the command: `man -k mail`
and print out the man command documentation via: `man mail`
You can log out of the system by typing: `exit`

man Command

The **man** command displays information on various reference articles, such as commands, subroutines, and files.

To obtain information about a command, at the prompt in an AIX window, enter:

```
man CommandName
```

The information that the **man** command provides can also be obtained using the InfoExplorer program.

Running an Application in the AIXwindows Interface

Running applications in a window environment is the same as in the command line interface. You enter the application's name at the prompt and press enter.

To run an application, at the prompt, enter the application name:

```
ApplicationName
```

The application program then takes over the window in which you issued the command until you exit that program.

Exiting and Logging Off from AIXwindows

Before exiting AIXwindows, the recommended procedure is to exit any application programs and stop any commands that may be running in terminal windows. This avoids the possible loss of data due to improperly stopping a program.

When you exit a program, the command line prompt returns to the terminal window. However, if you started the program automatically or from a menu, exiting also removes the terminal window. Selecting **Close** from the window menu immediately stops any program running in the window. Interrupting a program like this may cause it to lose data. However, you can close the clock, or an idle terminal window (one showing a command line prompt) with no ill effect.

Press the Ctrl-Alt-Backspace key sequence to exit AIXwindows.

This ends the graphical interface and one of the following may occur:

- The system displays the `login:` prompt. In this case, you are done.

OR

- The system displays the command line prompt.

In this case, follow the procedure "Logging Off from the Command Line" on page 5-10.

Basic aixterm Tasks

A procedure is presented for each of the following tasks:

- Displaying the aixterm Menus on page 4-12.
- Copying Text between aixterm Windows on page 4-13.

Displaying the aixterm Menus

Each aixterm menu pops up when you press the correct combination of keys and buttons. Most menus are divided into two sections that are separated by a horizontal line. The top portion contains various modes that can be altered. A check mark is displayed next to a mode that is currently active. Selecting one of these modes reverses its state. The bottom portion of the menu provides the command entries; selecting one of these performs the indicated function.

To Display the aixterm Options Menu

The aixterm options menu allows you to set or reset the following options:

- Auto Raise
 - Visual Bell
 - Deiconify Warp
 - Logging
 - Full Cursor
1. With the mouse pointer anywhere inside the window, hold down the Ctrl key and then hold down the left mouse button. When the aixterm options menu appears, release the Ctrl key.
 2. While still holding down the left mouse button, drag the mouse pointer to the option you want to set or reset, and then release the mouse button.

To Display the aixterm Modes Menu

The aixterm modes menu allows you to set or reset the following options:

- Jump Scroll
 - Reverse Video
 - Auto Wraparound
 - Reverse Wraparound
 - Auto Linefeed
 - Scrollbar
 - Page Scroll
 - Status Line
 - Reverse Status Line
 - Enable 80 ↔ 132
 - Suppress
 - Curses Emulation
 - Margin Bell
 - Soft Reset
 - Full Reset
1. With the mouse pointer anywhere inside the window, hold down the Ctrl key and then hold down the right mouse button. When the aixterm modes menu appears, release the Ctrl key.
 2. While still holding down the right mouse button, drag the mouse pointer to the option you want to set or reset and then release the mouse button.

To Display the aixterm Scrollbar Menu

The aixterm scrollbar menu allows you to set or reset the following options:

- Scroll to Bottom on Key
 - Scroll to Top on Input
 - Lines Off Top Saved
 - Clear Lines Off Top
 - Hide Scrollbar
1. With the mouse pointer anywhere inside the scrollbar, hold down the Ctrl key and then hold down the middle mouse button. When the aixterm scrollbar menu appears, release the Ctrl key.
 2. While still holding down the middle mouse button, drag the mouse pointer to the option you want to set or reset, and then release the mouse button.

Copying Text between aixterm Windows

When you create a terminal window, the **aixterm** command allows you to select text and copy it within the same window or other windows by using copy-and-paste button functions. The selected text is highlighted while the button is pressed.

Note: Applications that run in AIXwindows do not always support this copy feature in their windows.

Using the mouse, you can copy text from one window into another window.

1. Have both windows open on your desktop, the window you want to copy from and the window you plan to copy into.
2. Move the mouse pointer to the beginning of the text you want to copy. Click and hold the left mouse button.
3. Drag the mouse across the text you want to copy and release the mouse button at the end of the text you want to copy. While the mouse button is held down, the text to be copied appears in reverse video.
4. Move the mouse pointer to the other window where you want the copied text to be inserted. Press the middle mouse button. (Or, on a two-button mouse, press both mouse buttons.) The copied text is inserted at the cursor's position.

Chapter 5. Using the Command Line Interface

In the command line interface, AIX commands are entered one line after another and are run in the order entered. The operating system does not distinguish a command from a program. Both are run after you type their names and press the Enter key. Pressing the Enter key tells the system that you have finished entering text and that it can start running the command. You can correct the command line any time before you press the Enter key.

This section discusses:

- Entering Commands on page 5-2.
- Common Problems When Entering Commands on page 5-2.
- Basic Command Line Tasks on page 5-4.

Entering Commands

In the command line interface, you must enter commands to tell the operating system which task you want to perform. When commands are entered, they are read by a command interpreter (also known as a shell) and then processed. You can use three different shells: Korn (also known as the POSIX shell), Bourne, and C.

The *login shell* refers to the shell that is loaded when you log in to the computer system. Initially, the Korn shell is set up as the login shell.

Although some commands can be entered by simply typing one word, other commands use flags and parameters. Each command has a syntax that designates the required and optional flags, files, and parameters.

To enter a command, type in the command name or program name at the prompt:

```
$ CommandName
$ ProgramName
```

Some general rules about commands are:

- Spaces between commands, options, and file names are important.
- Options modify the way the command runs. Options are often single letters preceded by a – (minus) sign and are set off by spaces or tabs.
- Two commands can be entered on the same line by separating the commands with a ; (semicolon). For example:

```
$ CommandOne; CommandTwo
```

The operating system runs the commands sequentially.

- Commands are case-sensitive. The shell distinguishes between uppercase and lowercase letters. To the shell, `print` is not the same as `PRINT` or `Print`.
- A very long command can be entered on more than one line by using the \ (backslash) character at the end of the line and pressing Enter. The > (continuation prompt) appears on the next line to indicate that the system is waiting for more input. A backslash signifies line continuation to the shell. The following example is one command that spans two lines.

```
$ ls Mail info temp \  
> diary
```

Common Problems When Entering Commands

When entering commands, you are likely to encounter one of the following problems: a misspelled command, an incomplete command, or a case-sensitive command.

Misspelled Command

When you enter a misspelled command, the shell may return an error message. For example, if you entered `whiami` instead of `whoami`, the system displays the following on your screen:

```
$ whiami
/bin/ksh: whiami: not found.
$
```

You might get an error message even if it appears that you typed the command correctly. Invisible control characters typed in by mistake usually cause this. Just retype the command when the prompt appears.

Incomplete Command

If an incomplete command is entered, the system waits for the command to be completed and may appear to be frozen (not doing anything). For example, the **cat** command is always used with a file name. If the command you had intended to enter was `cat testfile`, but instead you entered `cat`, the screen appears as follows:

```
$ cat
```

—

If you enter the file name now, the screen appears as in the following illustration. The file name is repeated (echoed), but the system is still not doing anything.

```
$ cat  
testfile  
testfile
```

—

To restore operation, press Ctrl-C. This causes the system prompt to return. Your screen appears as in the following illustration.

```
$ cat  
testfile  
testfile  
^C$
```

Case-Sensitive Command

If you enter a command using the wrong case, the shell may display an error message. For example, if you entered `Ls` instead of `ls` the system displays the following on your screen:

```
$ Ls  
/bin/ksh: Ls: not found.  
$
```

Basic Command Line Tasks

A procedure is presented for each of the following tasks:

- Displaying Your User ID on page 5-4.
- Changing or Creating Your Password on page 5-4.
- Listing Files on page 5-5.
- Displaying Your Current Directory Path Name on page 5-8.
- Changing to Another Directory on page 5-8.
- Running an Application in the Command Line Interface on page 5-8.
- Getting Help in the Command Line Interface on page 5-9.
- Logging Off from the Command Line on page 5-10.

Displaying Your User ID

The **whoami** command displays your user ID (login name).

For example, at the system prompt, enter:

```
whoami
```

The system displays your user ID on the next line, and the system prompt returns:

```
denise  
$
```

Changing or Creating Your Password

In addition to your user ID, it is also recommended that you have a password. A password verifies your identity to the system and protects your data from unauthorized access. You can set or change a password using the **passwd** command. Your password does not appear on the screen when you enter it.

1. At the system prompt, enter:

```
passwd
```

If you do not have a password, skip step 2.

2. The following prompt appears:

```
Changing password for userID  
userID's Old password:
```

This request keeps an unauthorized user from changing your password while you are away from your system. Enter your current password.

3. The following prompt appears:

```
userID's New password:
```

Enter the new password you want.

4. The following prompt appears, asking for you to reenter your new password:

```
Enter the new password again:
```

This request protects you from setting your password to a mistyped string that you cannot recreate.

Examples

1. To change the password of the user denise, enter:

```
passwd
```

The system displays information similar to the following:

```
Changing password for "denise"  
denise's Old password:  
denise's New password:  
Enter the new password again:  
$
```

2. The following example shows what occurs when you enter the current password incorrectly:

```
$ passwd  
Changing password for "denise"  
denise's Old password:  
Your entry does not match the old password.  
You are not authorized to change "denise's" password.  
$
```

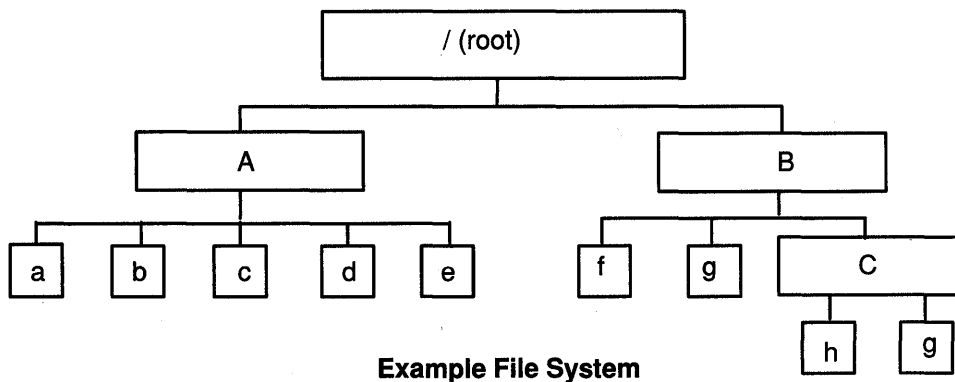
3. The following example shows what occurs when you reenter the new password incorrectly:

```
$ passwd  
Changing password for "denise"  
denise's Old password:  
denise's New password:  
Enter the new password again:  
The password entry does not match, please try again.  
denise's New password:  
Enter the new password again:  
$
```

Listing Files

You can display the contents of directories to which you have access with the `ll` or `ls` commands. The `ll` command displays your files and directories in alphabetical order in four columns. The `ls` command also displays your files and directories in alphabetical order but adjusts the number of columns according to the width of your terminal or window.

A *file system* consists of groups of directories and the files within the directories. The following is an illustration of an example of a file system.



A file system is commonly represented as an inverted tree. The root directory, symbolized by a / (slash) symbol, defines a file system and appears at the top of a file-system-tree diagram. Directories branch downward from the root directory in the tree diagram and contain files and subdirectories. Branching creates unique paths through the directory structure to every object in the file system.

Files are typically grouped in a special type of file called a *directory*. Grouping information improves organization, access time, and flexibility. Directories contain files, subdirectories, or a combination of both.

A *file* is a collection of data in a format that can be read from or written to. Files contain either ASCII information that users can read or binary information that the system interprets. Executable programs, simple text, software applications, printer definitions, and commands are all stored in files and treated in a uniform fashion by the operating system.

Each directory, except for root, has one *parent directory* and may have one or more child directories. In the illustration, "Example File System," directory **B** is parent to directory **C** and directory **B** is child to Root.

The *path name* for each file and directory in the file system consists of the names of every directory that precedes it in the tree structure.

Since all paths in a file system originate from the root directory, each file in the file system has a unique relationship to the root directory known as the *absolute path name*. Absolute path names begin with the / (slash) symbol. The absolute path name of file **h** within the example file system is **/B/c/h**. Notice that there are two files named **g**. Because the absolute paths to these files are different, **/B/g** and **/B/c/g**, each file named **g** has a unique name within the system. Every component of a path name is a directory except the final component. The final component of a path name can be a file name.

Another way of writing the path name of a file is the *relative path name*. The relative path name describes a file relative to your current directory. If your current directory is **/B**, to get to file **h** the relative path is **C/h**. Relative path names do not begin with the / (slash) symbol.

Displaying the Files in Your Current Directory

When you log in, the system puts you in a directory called your *home directory*. Your home directory is where you keep your personal files. The directory you are currently working in is called your *current* or *working* directory.

To display the files in your current directory, at the prompt, enter:

```
ls
```

The system displays information similar to the following:

```
letter.041393
mail
swprint
testfile
```

If the directory listing is very long, the top portion scrolls off the screen. To prevent this from happening, use the **ls** command piped to the **pg** command. At the prompt, enter:

```
ls | pg
```

This command prints the contents of the directory one screen at a time. Each screen is followed by a prompt (:). If you press the Enter key, another page is displayed.

To display the contents of the current directory and distinguishing program files and directories, use the **ls** command with the **-F** flag. The **-F** flag puts a / (slash) after the name if it is a directory and a * (star) after the name if its a program. At the prompt, enter:

```
ls -F
```

The system displays information similar to the following:

```
letter.041393
mail/
swprint*
testfile
```

In the previous example, *mail* is a directory, *swprint* is a program, *letter.041393* and *testfile* are other data or text files.

Displaying Hidden Files

Hidden files are files with names that begin with a . (dot). These files are normally used for initialization or control files and they are not listed when using the **ls** command. To list all the files in a directory, use the **ls** command with the **-a** flag.

At the prompt, enter:

```
ls -a
```

The system displays information similar to the following:

```
.profile
.xinitrc
barchart.ps
letter.041393
swprint
testfile
```

In the previous example, the files *.profile* and *.xinitrc* are hidden files.

Displaying the Contents of a File

The **pg** command prints the contents of text files one screen at a time. Each screen is followed by a prompt (:). If you press the Enter key, another page is displayed.

To display the contents of a short file named *TimeLog*, at the prompt, enter:

```
pg TimeLog
```

The system displays information similar to the following:

```
Start-up --> Mon Jun 7 08:16:20 CDT 1993
Logout    --> Mon Jun 7 18:25:55 CDT 1993

Start-up --> Tue Jun 8 07:05:46 CDT 1993
Logout    --> Tue Jun 8 15:57:05 CDT 1993

Start-up --> Wed Jun 9 08:06:15 CDT 1993
Logout    --> Wed Jun 9 18:27:16 CDT 1993
$
```

Displaying Your Current Directory Path Name

The **pwd** (present current directory) command prints your current directory path name.

At the prompt, enter:

```
pwd
```

The system displays information similar to the following:

```
/u/denise  
$
```

In the previous example, `/u/denise` is the current directory.

Changing to Another Directory

The **cd** (change directory) command changes your location in the file system from one directory to another. If you have the proper permissions, you can access any directory in the file system. The format of the **cd** command is:

```
cd PathName
```

The following example uses the **cd** command to change to the directory `/usr/bin` followed by the **pwd** command to verify the current directory.

```
$cd /usr/bin  
$pwd  
/usr/bin  
$
```

To go to your home directory from any directory, at the prompt, enter:

```
cd
```

The following example uses the **cd** command alone:

```
$ pwd  
/u/denise/work/93  
$ cd  
$ pwd  
/u/denise  
$
```

To go to the parent directory of your current directory, at the prompt, enter:

```
cd ..
```

The following example uses the **cd ..** command.

```
$ pwd  
/u/denise/work/93  
$ cd ..  
$ pwd  
/u/denise/work  
$
```

Running an Application in the Command Line Interface

Running an application in the command line interface is the same as entering a command.

To run an application, at the prompt, enter the application name:

```
ApplicationName
```

The application program then takes over until you exit the program.

Getting Help in the Command Line Interface

There are various tools available to help you when you need more information on commands and the operating system. These tools are:

- **InfoExplorer** program, which provides you with online documentation about the system.
- **help** command, which displays information about basic commands.
- **man** command, which displays information about all commands, subroutines, and files.

InfoExplorer Program

The InfoExplorer program is an online hypertext information base that puts system documentation at your finger tips.

To use the graphical interface version of InfoExplorer, at the prompt, enter:

```
info -g
```

The "Welcome to the InfoExplorer Window Interface" article is displayed in the reading screen. It explains how to do basic screen operations and how to access InfoExplorer help, copyrights, and trademarks.

To use the ASCII version of InfoExplorer, at the prompt, enter:

```
info -a
```

The "Welcome to the InfoExplorer ASCII Interface" article is displayed in the reading screen. It explains how to do basic screen operations and how to access InfoExplorer help, copyrights, and trademarks.

For detailed information on using the InfoExplorer program, see "Getting Started (InfoExplorer ASCII)" on page 7-29.

help Command

The **help** command presents a one-page display of information for new users.

At the prompt, enter:

```
help
```

The system displays information similar to the following:

Use the InfoExplorer facility for aid. If available, you can refer to the "Using and Managing AIX" Information Topic for general assistance. Some basic Commands are:

```
man -k keyword - lists commands relevant to a keyword
man command   - prints out the manual pages for a command
cat           - concatenates files (and just prints them out)
vi           - text editor
finger       - user information lookup program
ls           - lists contents of directory
mail         - sends and receives mail
msgs        - system messages and junk mail
passwd      - changes login password
scshelp     - views information on the Source Code Control System
tset        - sets terminal modes
who         - who is on the system
write       - writes to another user
```

```
To find programs about mail, use the command:  man -k mail
and print out the man command documentation via: man mail
You can log out of the system by typing:      exit
```

man Command

The **man** command displays information on various reference articles, such as commands, subroutines, and files.

To obtain information about a command, at the prompt, enter:

```
man CommandName
```

The information that the **man** command provides can also be obtained using the InfoExplorer program.

Logging Off from the Command Line

At the prompt, do one of the following:

- Press the end-of-file control-key sequence (Ctrl-D key).

OR

- Type `exit` and press Enter.

OR

- Type `logout` and press Enter.

After you log off, the system displays the `login:` prompt.

Attention: Do not power off the system. Turning off the system ends all processes running on the system. If other users are working on the system, or if jobs are running in the background, data may be lost. Perform proper shutdown procedures before you stop the system. For more information on shutting down or rebooting your system, see “System Startup, Logging In, Shutting Down and Rebooting” on page 2-1.

Chapter 6. Visual System Management Applications

Visual System Management (VSM) is a graphical interface that enables you to perform installation and system management tasks through direct manipulation of objects (icons). With VSM you no longer need to remember complex command syntax, or search through SMIT menus to complete a task. For instance, deleting a user is as simple as dragging and dropping the User object on the Trash Can. Everyone from the novice user to the technical expert can benefit from VSM. This easy-to-use interface openly displays system objects and actions (tasks). In addition to basic tasks, you can create new objects from system or user-defined templates, sort, filter, and find objects, and display the objects in a variety of views.

The following VSM applications are available:

Device Manager Device Manager is a highly flexible application that displays system objects and dialogs based on what is contained in your system's Device Configuration database. This enables you to manage some devices not covered by SMIT such as graphic adapters, graphic display subsystems, ports, buses, expansion drawers, non-SCSI adapters, standard adapters, and memory cards. Using the Show Tree View Control, you can view how the devices are interconnected.

Device Manager does not include the following SMIT functions:

- Trace devices
- Printer subsystem management (including virtual printers).
- Communication applications and services
- LFT devices: keyboard, displays, fonts, speakers
- Xstation configuration

Print Manager Print Manager enables you to perform basic SMIT tasks on printers and queues and is designed to make creating queues much simpler. In addition, it provides a graphical representation of queue and printer attachments as well as print jobs waiting in the queue.

Print Manager does not include the following SMIT functions:

- Start a print job
- Schedule jobs

Storage Manager Storage Manager enables you to manage physical volumes, volume groups, logical volumes, and file systems through direct manipulation. In addition, the VSM interface provides an easy way to view the contents of a logical volume—something that was previously only possible from the command line.

Users & Groups Manager

Users & Groups Manager makes it easy to add users by providing system-defined and user-customized templates. Simple drag-and-drop actions enable you to set user passwords, change a user's language, and allow or disallow a user to log in to a system (enable or disable).

Install Applications

The install applications, Easy Install, Install and Update Software Manager, and Maintain Installed Software, assist in the installation of optional software and service updates and enable you to perform installation maintenance functions. The install applications use several of the same VSM interface features as discussed in more detail in the

AIX Version 4.1 Installation Guide or in the AIX Version 4.2 Installation Guide.

Set Date and Time

Set Date and Time enables you to view or change your system date, time, or time zone. Much of the system processing depends on accurate date and time settings. For example, accuracy is important if you schedule jobs to run at a later time or if your system communicates with other systems.

Job Scheduling Applications

The job scheduling applications, Schedule a Job and Remove or View Scheduled Jobs, enable you to work with schedules for processing jobs. With Schedule a Job, you can set up operations for future processing. With Remove or View Scheduled Jobs, you can review or delete previously scheduled operations.

Maintain Installed Software

Maintain Installed Software is a graphical interface that enables you to perform installation maintenance tasks through direct manipulation of objects, freeing you from entering complex command syntax or from searching through menus.

Starting VSM Applications

To view a VSM application, you must be in AIXwindows or the AIX Common Desktop Environment. To learn more about the AIXwindows environment, see "Using the AIXwindows Interface" on page 4-1. To learn more about AIX Common Desktop Environment, see "Using AIX Common Desktop Environment" on page 3-1.

From the Command Line

Start the following VSM applications with the commands listed:

Application Name	Command
Device Manager	xdevicem
Print Manager	xprintm
Storage Manager	xlvm
Users & Groups Manager	xuserm
Easy Install	xinstallm -ez
Install and Update Software Manager	xinstallm
Set Date and Time	xdat
Schedule a Job	xdat -c "Operation"
Remove or View Scheduled Jobs	xdat -m
Maintain Installed Software	xmaintm

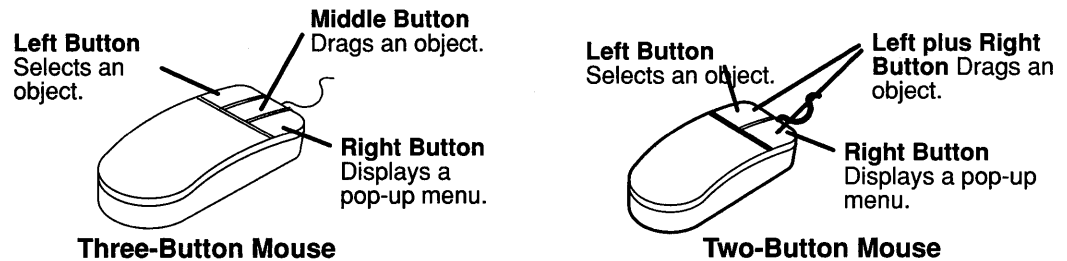
From AIX Common Desktop Environment

From the Front Panel, select the Application Manager. Within Application Manager, select the **System_Admin** directory. Within **System_Admin**, select the desired application icon.

Note: You can customize your desktop to make the application icons more accessible. For instance, create a workspace for just your managing applications and place all the icons in that workspace.

VSM Mouse Basics

Before using VSM, you should understand the default mouse mappings as shown in the illustration:



Note: The button mappings can be customized by the user.

The following terms are used throughout the online help information and are related to the mouse actions you can perform in VSM:


Point Slide the mouse to position the pointer (mouse cursor) on an object.

Click or Select Point to an object, and press and release the left mouse button without moving the pointer. A selected object is emphasized.

Double-Click Quickly click the left mouse button twice.

Drag and Drop Point to an object, press and hold the middle button (or on a two-button mouse, the left and right at the same time), then move the mouse to the target (location you want to drop the object) and release.

A target can be an object, an area label, an area title bar, or a blank space in an area.

 The cannot pointer appears if the object being dragged is over an invalid target.

Note: The application help usually refers to drag and drop for performing tasks; however, you can often select an object and then select the target. In addition, bidirectional dragging or selecting is often possible (target to object).

Multiselect Use this technique to select a group of icons. For instance, multiselect if you want to perform an action on a group of work area objects.

Point near the icons (not touching any part of the icon or its label). Press and hold the left button and drag the pointer “stretching” the rubber-band box to enclose the icons you want to select. Release to select the icons.

Note: Dragging one of the multiselect objects to a target is the same as dragging all the objects; however, dragging an object to a group of multiselect objects will only affect the target. Multiselect objects cannot act as one target.

Choose Point to an object or area, and press and hold the right mouse button to view a pop-up menu. To select a menu item, continue holding the right mouse button, point to the item and release.

Basic VSM Interface

The VSM applications have the same basic format as shown in the illustration. For more information about how to work in a VSM application, read the help text in the Information Area or select the Help button to start the Online Help System.

Note: The Install Applications do not have all the areas represented, but many of the features are similar.

Template Area

Contains type buttons and templates for creating new objects. Design your own templates or use the defaults.

Action Area

Contains objects representing the commands necessary to complete a task.

Work Area

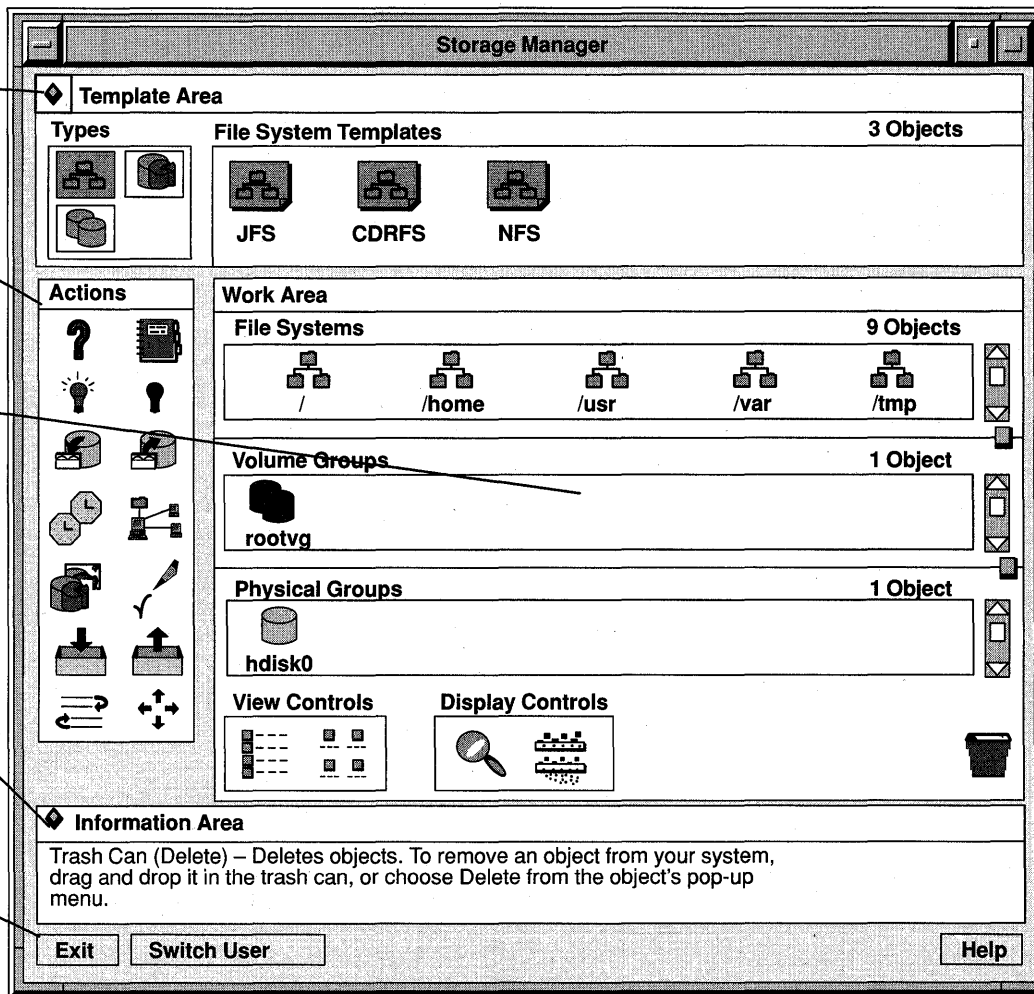
Contains system objects, view and display controls, and a trash can.

Information Area

Displays context-sensitive help based on the cursor position.

Buttons

Perform various application window functions.

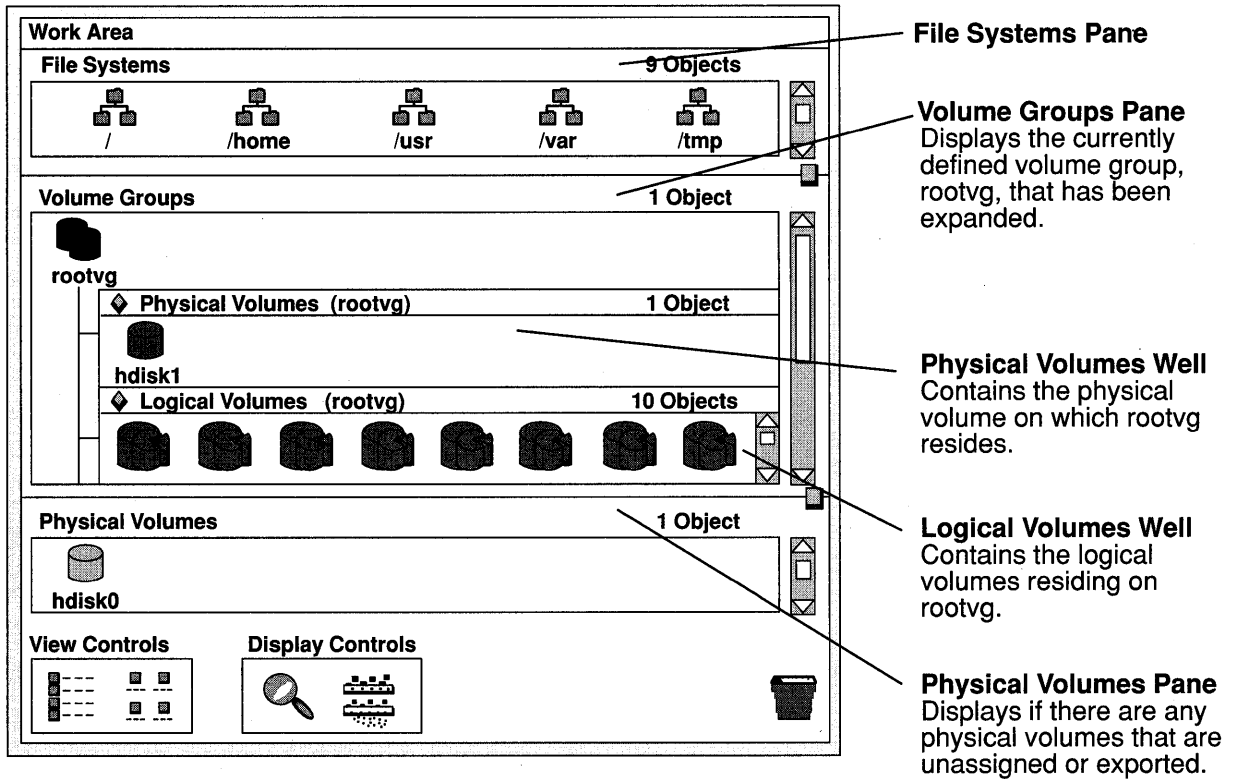


Primary Window for Storage Manager

Work Area Panes and Wells

The Work Area is organized into *panes* containing objects that represent system information. System objects that contain related objects can be expanded (double-clicking on the object) to display a *well* (or wells) containing the related objects. Double-clicking on an object that cannot be expanded brings up a *notebook* (dialog window) displaying the object's attributes. Refer to the help in the Information Area for how to work with the objects.

The following illustration represents the Work Area for Storage Manager after double-clicking on the rootvg object in the Volume Groups pane:

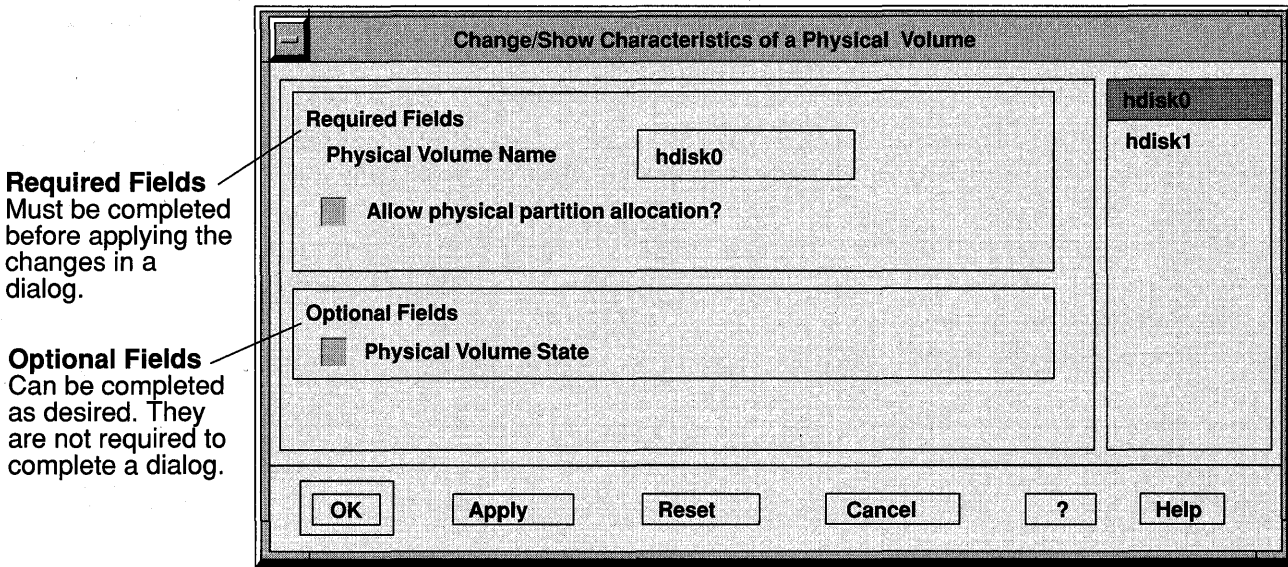


Work Area for Storage Manager

VSM Dialog Windows

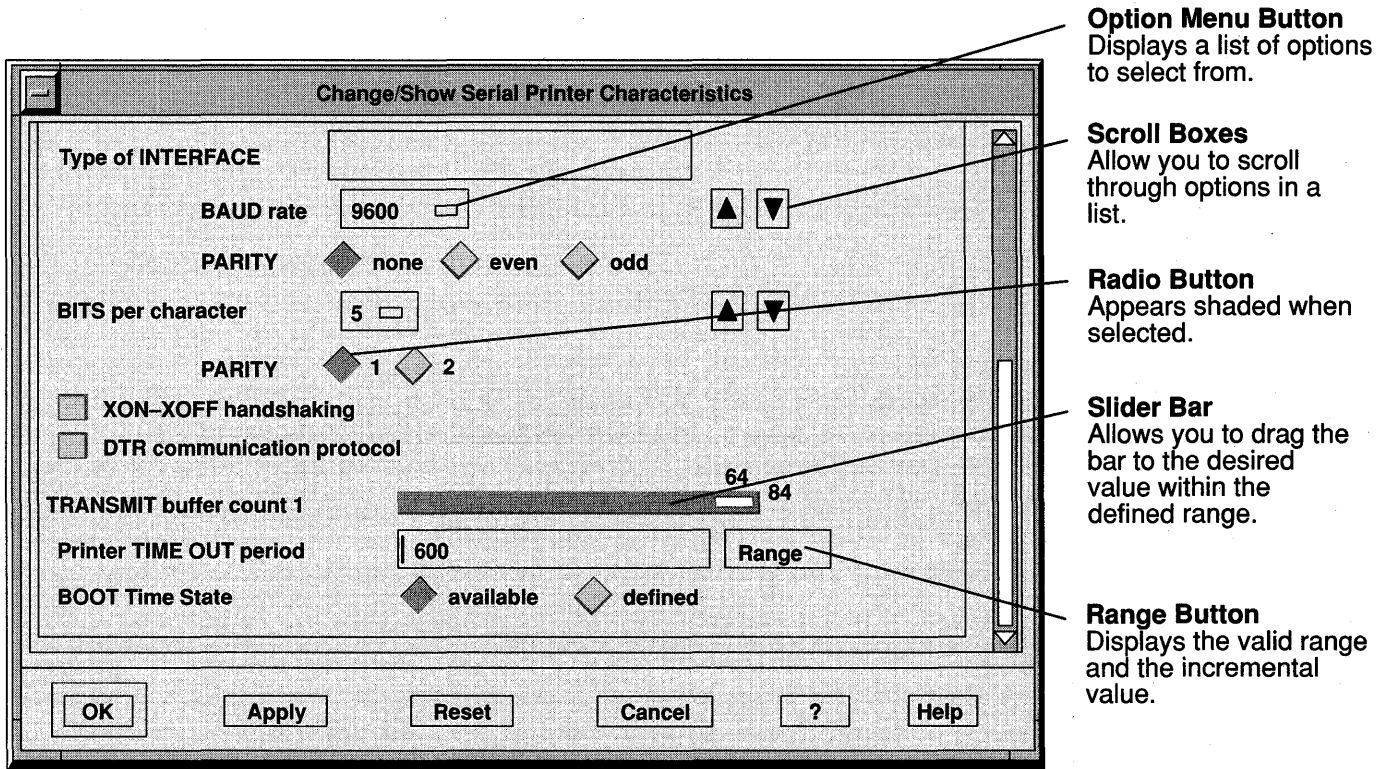
Dialog windows pop up if the system requires additional information for completing a task. For more information about dialogs, select the Help button in a dialog window. For information about the fields and buttons in a dialog, select the ? button at the bottom of the dialog window.

The following dialog appears after dropping the notebook action on a physical volume:



Dialog Window for Viewing or Changing the Attributes of a Physical Volume

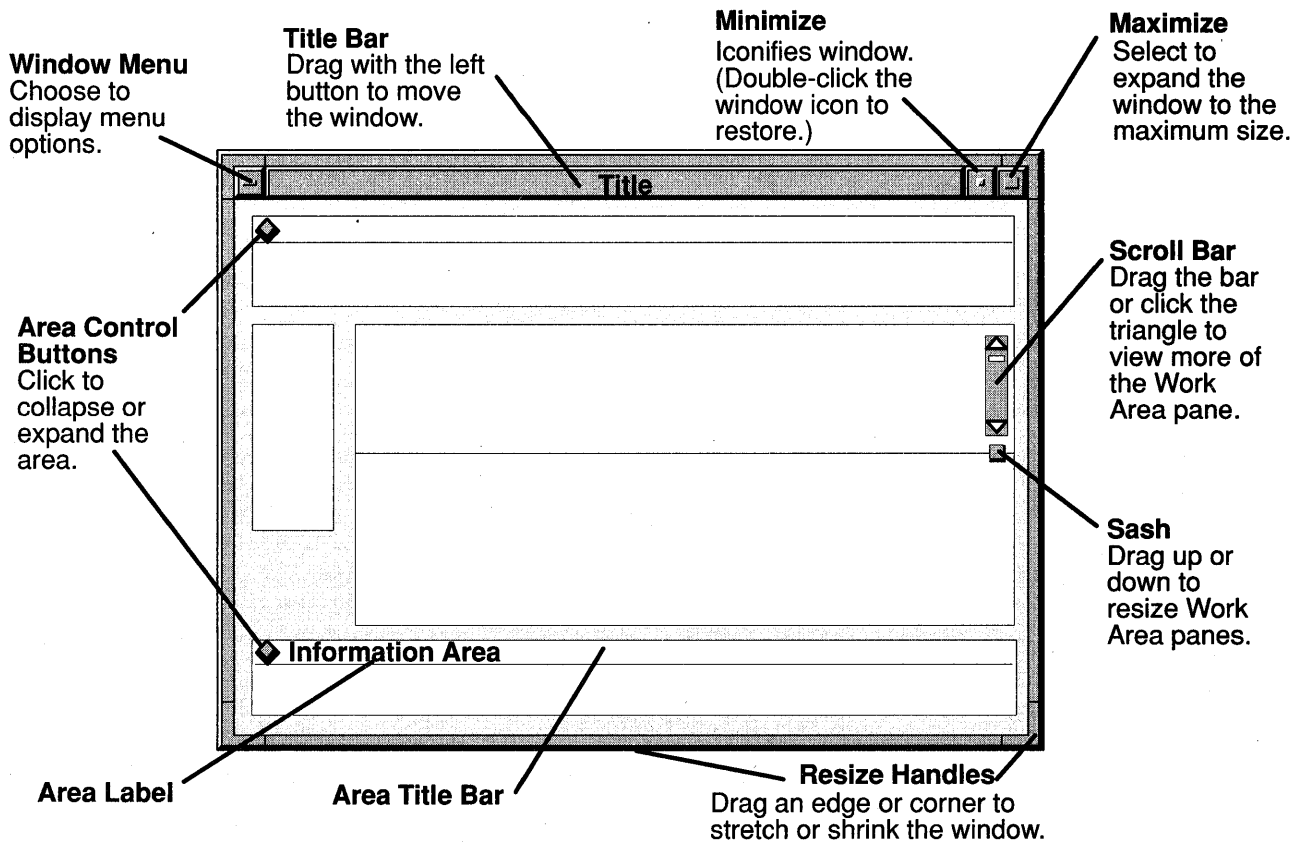
The following illustration represents several of the features in VSM dialog windows:



Dialog Window for Viewing or Changing the Attributes of a Printer

Managing the VSM Window

If you would like to see more of the Template, Work, or Information Area, you can resize the window and the panes, or collapse areas using the following features:



A Typical Window Layout

Accessing Help in VSM

All of the information about the application and how to use it is available online so that you won't have to stop and read a book. Use the following methods to access help in the interface.

Information Area

◆ Information Area

Small Icon Control – Displays templates and work area objects as smaller icons with their labels located to the right. To view an area in small icon view, drag and drop this control in the area.

One of the most useful forms of help, the Information Area provides context-sensitive help based on the position of the cursor. Move your cursor over a title, template, object, area, button, sash or scroll bar and a brief description appears, often accompanied by an explanation of the task you can perform. This is helpful for learning the application or for

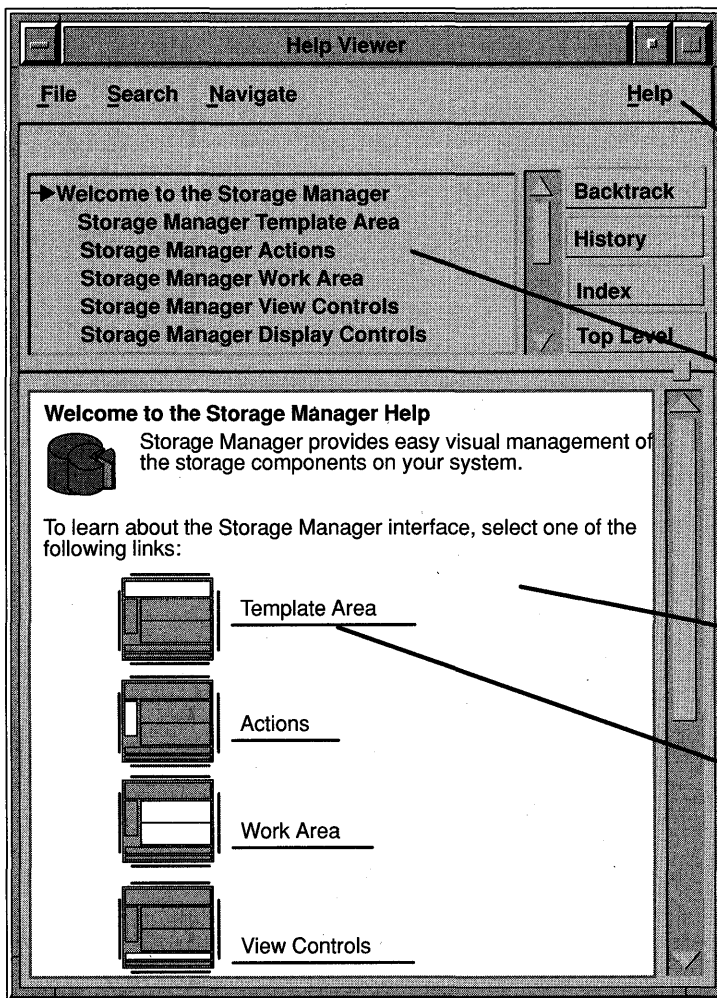
jogging your memory. Once you have mastered the interface, you can collapse the area by clicking the Area Control button.

Help Button in the Primary Window

Help

Selecting the Help button in the lower left corner of the primary window opens the application's Online Help System at the home topic (start of the topic hierarchy) as shown in the following illustration. The home topic provides link paths to all of the help for the application, explaining the various areas and objects, as well as how to complete a dialog, or use the mouse. Browse through the information by selecting links within the read window, selecting a topic from the topic hierarchy, or using the Navigate menu options.

Note: The Print option does not function in this release.



Help Menu

Provides help on using this help window. Select the Using Help option to learn more about the menu-bar items and the buttons.

Topic Hierarchy

Shows you where you are in the help information (similar to a Table of Contents). To go to another topic, select the title from the hierarchy list.

Read Window

Displays the help information.

Links

Text links appear underlined. Graphic links appear outlined. Select a link to go to a new topic.

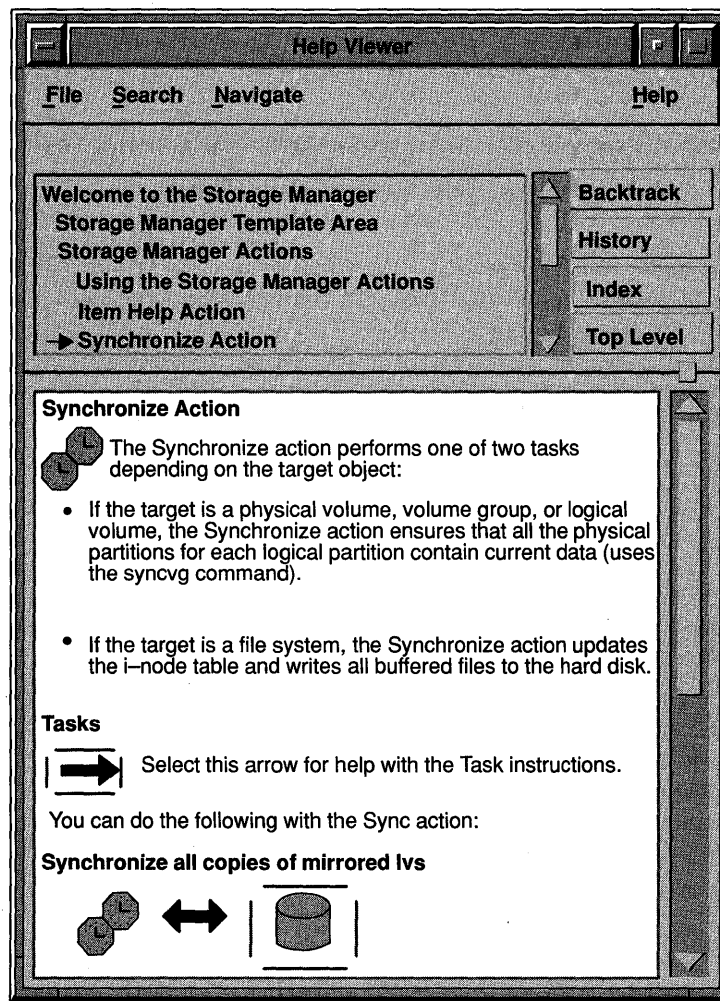
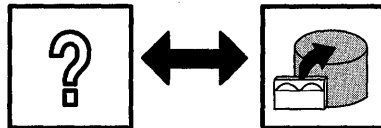
Online Help System Window

Item Help (?) Action



Dropping the Item Help (?) action on a target opens an Online Help System window, which takes you directly to the help for that target. Use the Item Help (?) action to learn more about a specific object or area. To learn about the system management tasks that you can perform in the application, refer to the graphical task instructions in the template, action, and object helps. For more detailed information about the concepts discussed in the online helps, see the *AIX Version 4 System Management Guide: Operating System and Devices*.

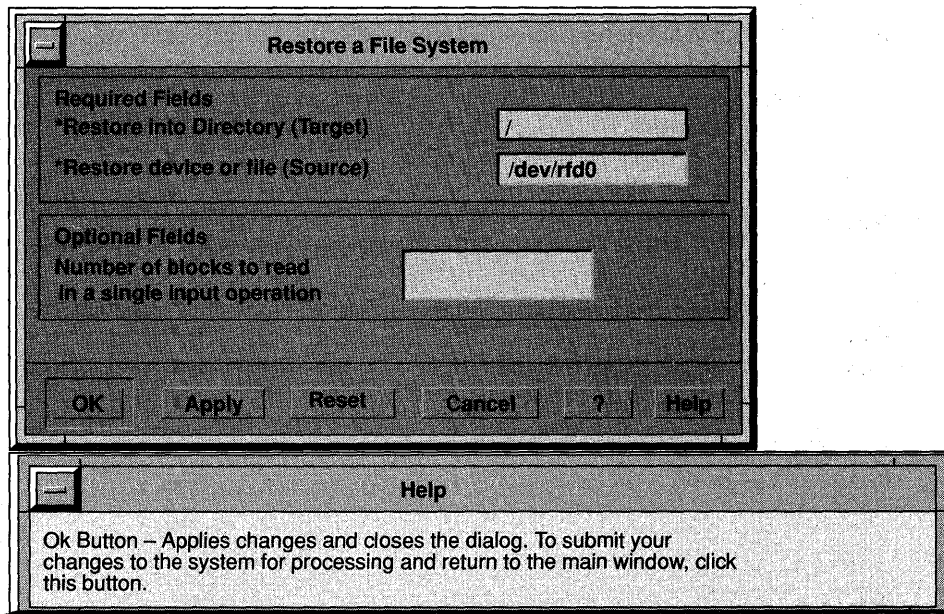
The following is an example of the help window that displays when the Item Help (?) action is dragged and dropped on to the Back Up action. The Tasks section identifies the tasks that can be performed using the Back Up action.



Help Window for Restore Action Topic

? and Help Buttons in a Dialog Window

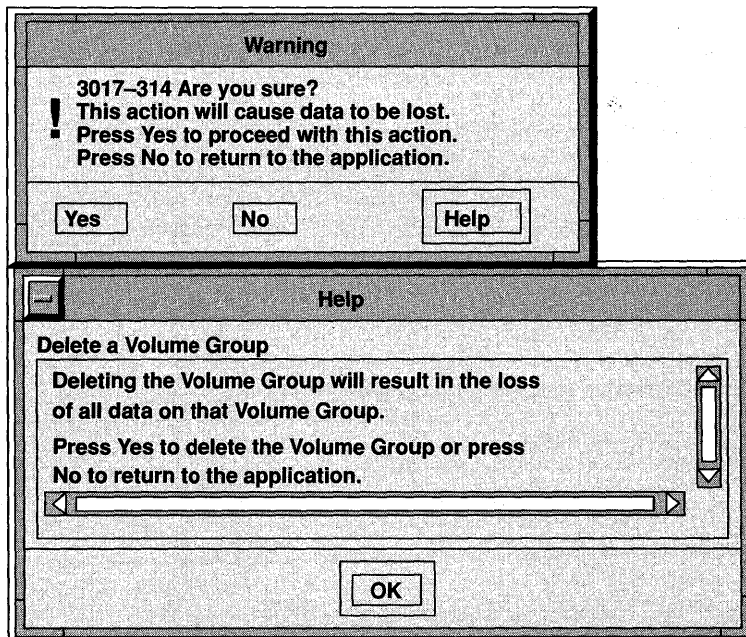
The ? button in a dialog opens a help window (see the following illustration) that provides context-sensitive help on dialog fields and the buttons at the bottom of the dialog window. The displayed help information is based on the cursor position. The Help button opens the Online Help System window displaying the help topic for dialog windows.



Context-Sensitive Help Window for a Dialog

Help Button in a Message Window

The Help button in a message window provides more information about the message in a manner similar to the following illustration:



Help Window for a Warning Message

VSM Keyboard Basics

You can perform many of the mouse actions by using various key sequences even though the helps always refer to mouse actions. When using a key sequence (key1-key2), press and hold key1, then press key2.

Note: The `keyboardFocusPolicy` resource in your `.Xdefaults` file must be set to `explicit` so that you can set the input focus using key sequences. When using the keyboard, the focus area is emphasized. Generally, a focus area can be selected or serve as a drop site.

The following explains how to use key sequences in place of a mouse:

- Point** Tab (forward) or Shift-Tab (backward) to move between areas. Use the arrow keys to move from object to object in an area. The focus area is emphasized.
- Click or Select** Press the Spacebar key. A selected object appears with a white background outlined in black.
- Double-Click** Quickly press the Spacebar key twice.
- Drag and Drop** If the phrase is “drag and drop on a target,” select an object, then tab to and select the target object. If the phrase is “drag and drop in an area,” select an object, then select the target area, and press the Insert key.
- Multiselect** To multiselect, select an object, then use the arrow keys to point to another object and press Shift-Spacebar. Continue until you have selected all the desired objects in the area. You can select all by selecting, Ctrl-/ and deselect by entering Ctrl-\.
- Choose** Point to an object or area, and press Shift-F10 to view a pop-up menu. Use the arrow keys to move from item to item. Press the Spacebar or Enter to select the item. Or, you can select an item by pressing its mnemonic (underlined character). Pressing the Esc key cancels the pop-up menu.

Default Key Mappings for Managing the VSM Interface	
Key	Function
Spacebar	Selects object
Shift-Spacebar	Multiselects objects
Ctrl-/	Selects all
Ctrl-\	Deselects all
Insert	Drops selected object in selected area
Tab	Moves the focus from area to area
Shift-Tab	Moves the focus backward from area to area
Arrow keys	Moves the focus from object to object in an area
F1	? Item Help Action on selected object
F2	Sort Display Control on selected area
F3	Find Display Control on selected area
F4	Filter Display Control on selected area
F5	Large Icon View Control on selected area

Default Key Mappings for Managing the VSM Interface	
F6	Small Icon View Control on selected area
Delete	Trash action on selected object
Ctrl-Backspace	Notebook Action on selected object

Default Key Mappings for Managing the Help Window	
Key	Function
F1	Provides help on using the help window.
F10	Moves the focus back and forth between the read window and the menu bar in the Online Help System window.
Ctrl-K	Opens a Keyword Search window displaying a help index.
Ctrl-B	Backtracks to the previous help topic.
Ctrl-U	Goes up one level in the topic hierarchy.
Ctrl-H	Returns to the home topic.

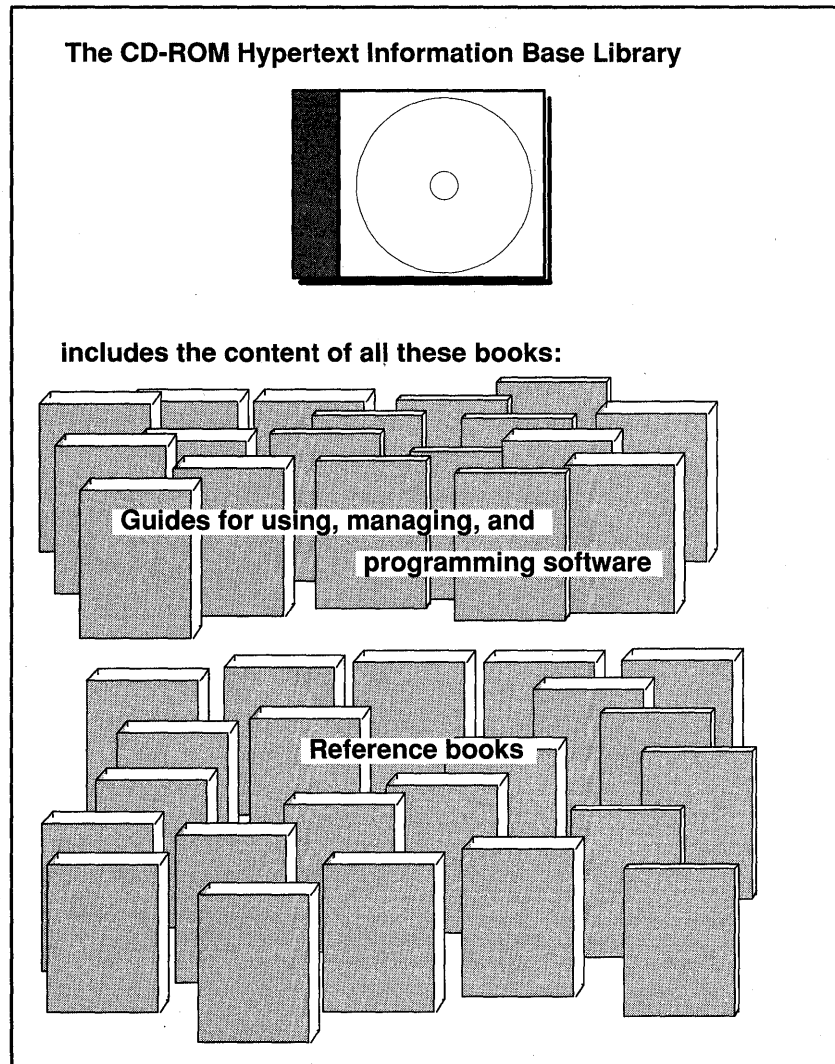
Default Key Mappings for Managing the Windows	
Key	Function
Alt-F3	Lower
Alt-F4	Close
Alt-F5	Restore
Alt-F6	Moves the input focus from window to window within the VSM application.
Alt-Shift-F6	Moves the input focus to the previous window within the VSM application.
Alt-F7	Move
Alt-F8	Size
Alt-F9	Minimize
Alt-F10	Maximize
Alt-Tab	Raises the next window in the stack and moves the input focus to that window.
Alt-Shift-Tab	Raises the previous window in the stack and moves the input focus to that window.
Alt-Esc	Raises the next window in the stack without changing the input focus.
Alt-Shift-Esc	Raises the previous window in the stack without changing the input focus.

Chapter 7. Accessing Information with InfoExplorer

This chapter describes the different types of documentation available in the *Hypertext Information Base Library* and how you can use InfoExplorer to access information.

Using InfoExplorer

InfoExplorer puts information at your fingertips. As illustrated, you do not need a shelf full of books to use your system.



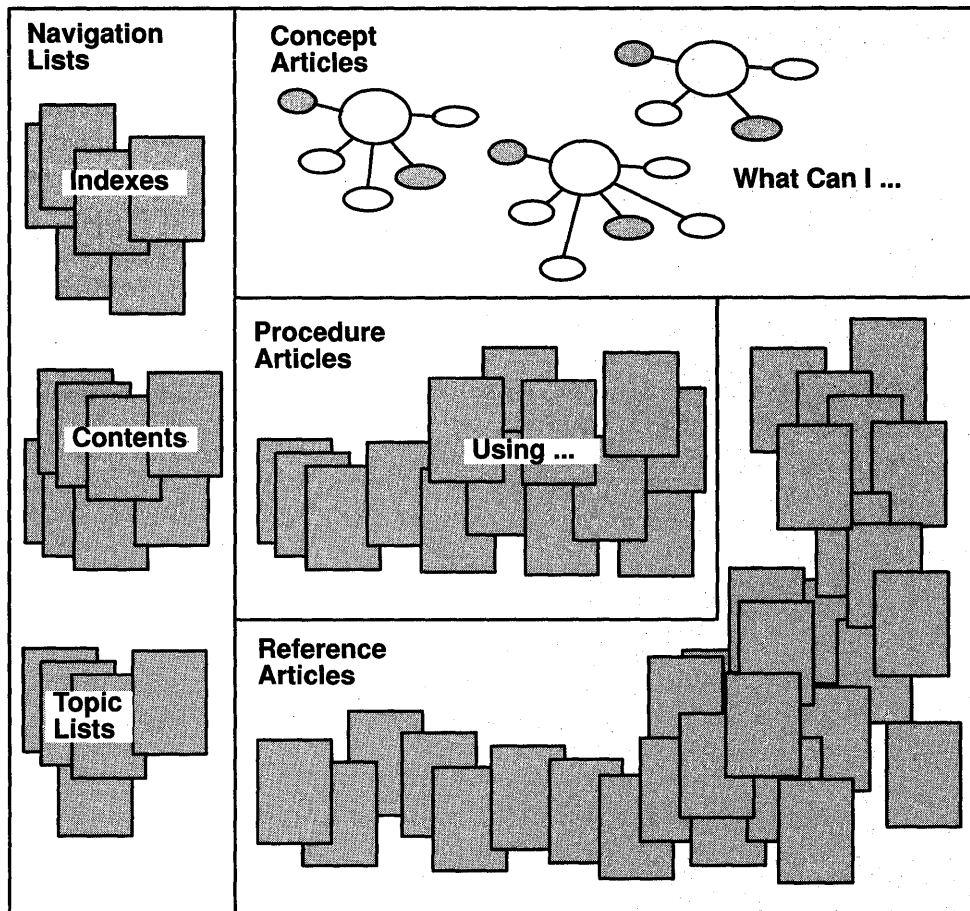
The *Hypertext Information Base Library* is available on CD-ROM or can be installed as a licensed program offering with the operating system. The library contains information on how to use, manage, and program the operating system and other programming language software. For details of what is included in the CD-ROM version and what is automatically shipped with the AIX operating system, see *Documentation Overview*.

How Hypertext Information Is Organized

The *Hypertext Information Base Library* contains multiple database libraries for use with the InfoExplorer Program. These database libraries are organized by topic and contain *articles* that provide a conceptual overview and step-by-step procedures for completing tasks related to the topic. When you set up the InfoExplorer Program, you select the database libraries containing the information you want to access. After the InfoExplorer Program is set up, you can define and select alternate database libraries. You can order the entire *Hypertext Information Base Library* on CD-ROM, or receive one or more of the databases with a licensed program offering. For more information about the databases, see the descriptions of the databases in "Hypertext Information Base Library Content" in *Documentation Overview* and the licensed programs with which the databases are shipped.

Types of Articles in the Hypertext Information Base Library

This figure illustrates the types of articles in *Hypertext Information Base Library*.



The different types of articles are described below:

Navigation Lists: Provide you with several different ways to access information: contents, topic lists, and indexes.

Concept Articles: Provide you the background information needed to understand and use procedures and reference articles. Conceptual articles are cross-referenced to other related concepts.

Procedure Articles: List the steps in accomplishing a task, and provide minimal background information on why things happen the way they do.

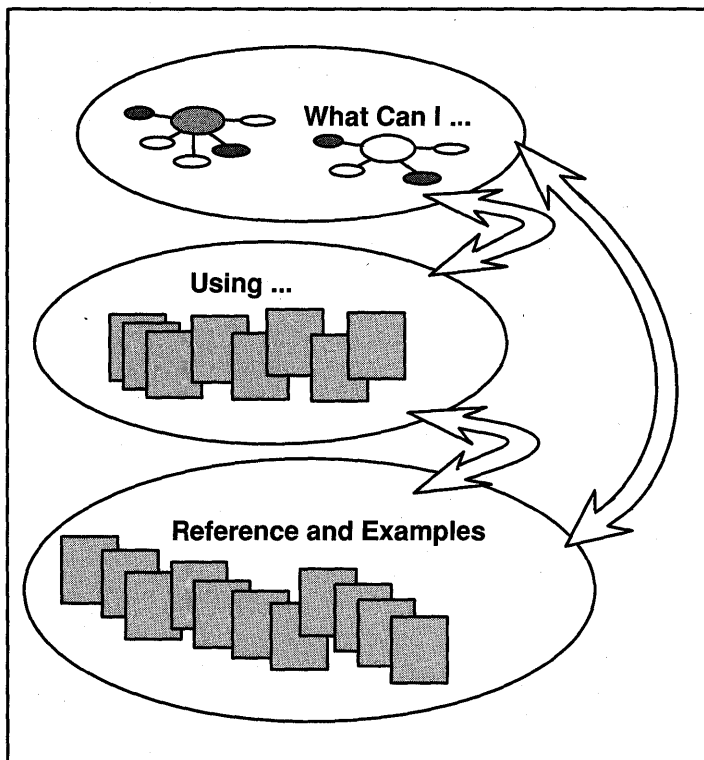
Reference Articles: Describe individual commands, calls, subroutines, file formats, functions, and so on. Many include examples to illustrate appropriate usage.

Some hypertext information is directed to the particular roles people perform. For example, some articles are specifically labeled for System Management or for Programming. These tasks are defined as follows:

System Management Includes installing, setting up, customizing, and maintaining the hardware or software. For example, configuring TCP/IP, setting up a printer, and removing out-of-date log files are all considered system management tasks. Normally, you must have root user authority or be a member of the system group to perform these tasks.

Programming Includes developing applications using tools that are discussed in the article. For example, developing programs that use the AIX Application Development Toolkit is considered a programming task. Programming tasks generally require knowledge of the C programming language or other programming languages such as FORTRAN, Pascal, or Assembler.

As shown in the illustration, hypertext links allow you to move readily from one type of information to another.



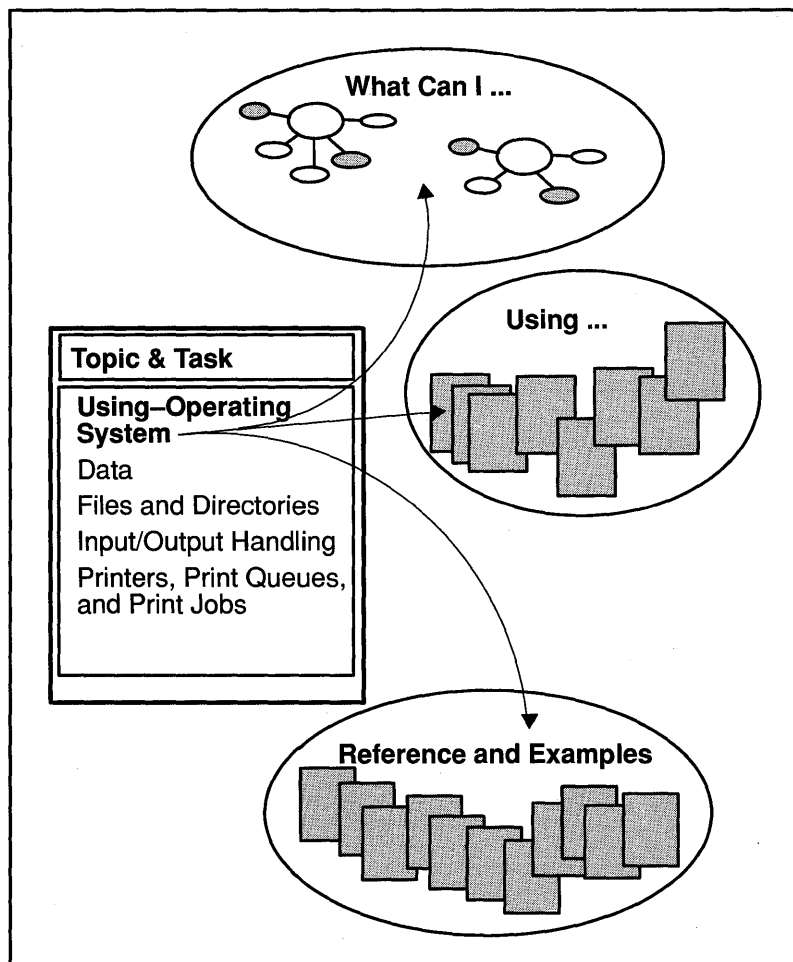
Choose the Way You Want to Retrieve Information

A variety of retrieval and navigation tools allow you to find information easily.

Task	Retrieval Method
You know what you want to do, but not how to do it.	Topic & Task Index
You want to read about the command you used; for example, for sending mail.	Commands
You want to read everything about using communications.	Books
You want to find all the information about a subject.	Search
You want to go back to information you just read.	History
You want to mark specific information for review.	List of Bookmarks
You want to see only the information you have updated.	List of Notes

Topic & Task Index

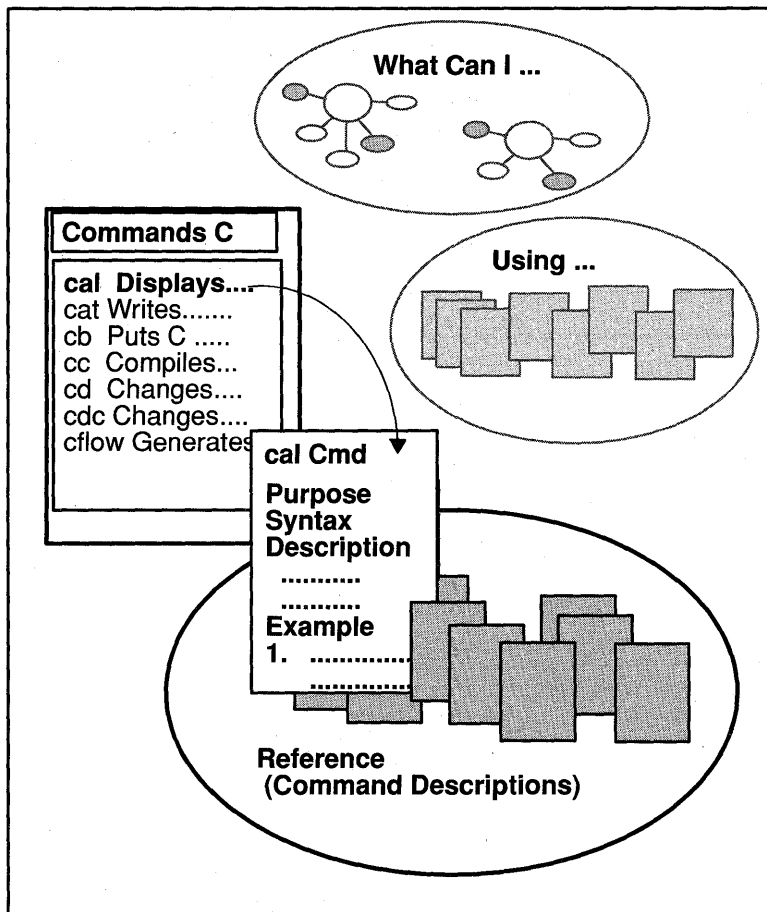
The Topic & Task Index is the primary navigational tool for finding information. As illustrated, it guides you to the appropriate example or procedure in the *Hypertext Information Base Library*.



Once you have an article displayed, you can follow hypertext links to other related articles.

Commands

The Commands index provides you access to system commands. It includes both an alphabetic list and functional groupings of commands. The illustration shows how the command index can get you to the correct command.



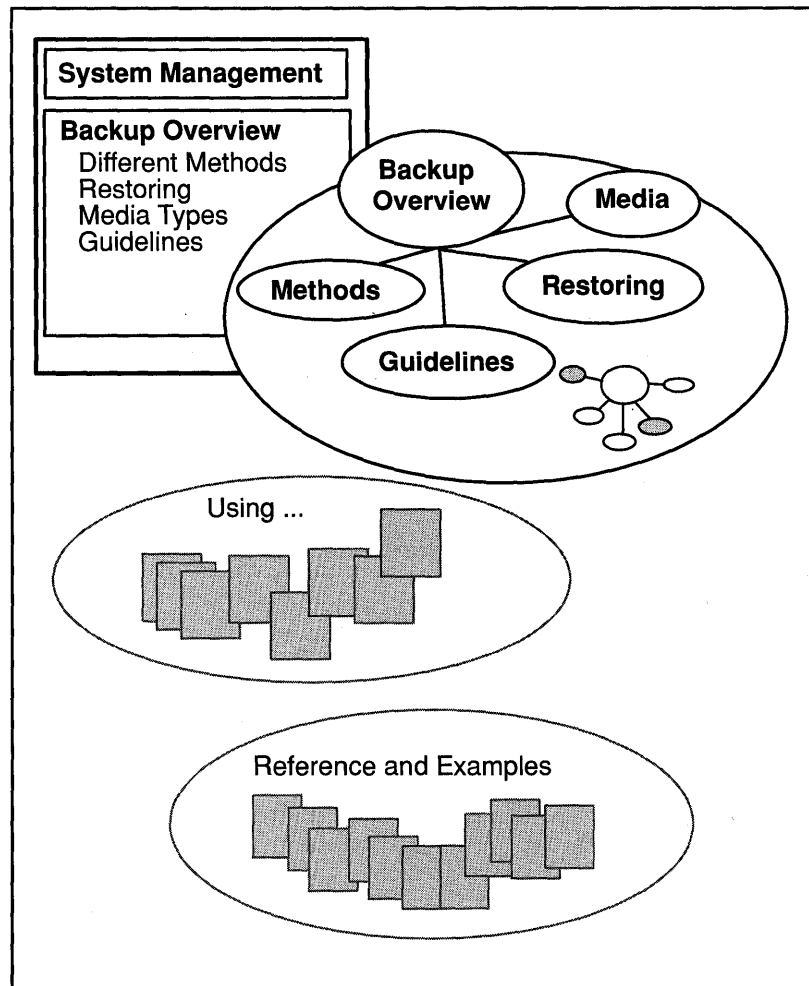
Word Search

You can search on any word to find the information you want in the database.

- Search the entire information base or a portion of it for elements such as:
 - Titles
 - Headings
 - All text in all articles
 - Examples
 - Glossary terms.
- Construct compound search queries with "and," "or," and "but not" qualifiers.
- Save compound search queries and results.
- Limit the search as desired. For example, you can limit the search to a history of the information you have already accessed, to the main navigation window, to the current article, or one or more databases.

Books

The Books list, as illustrated, allows you to find information using a Contents List as you would using the table of contents of a printed book.



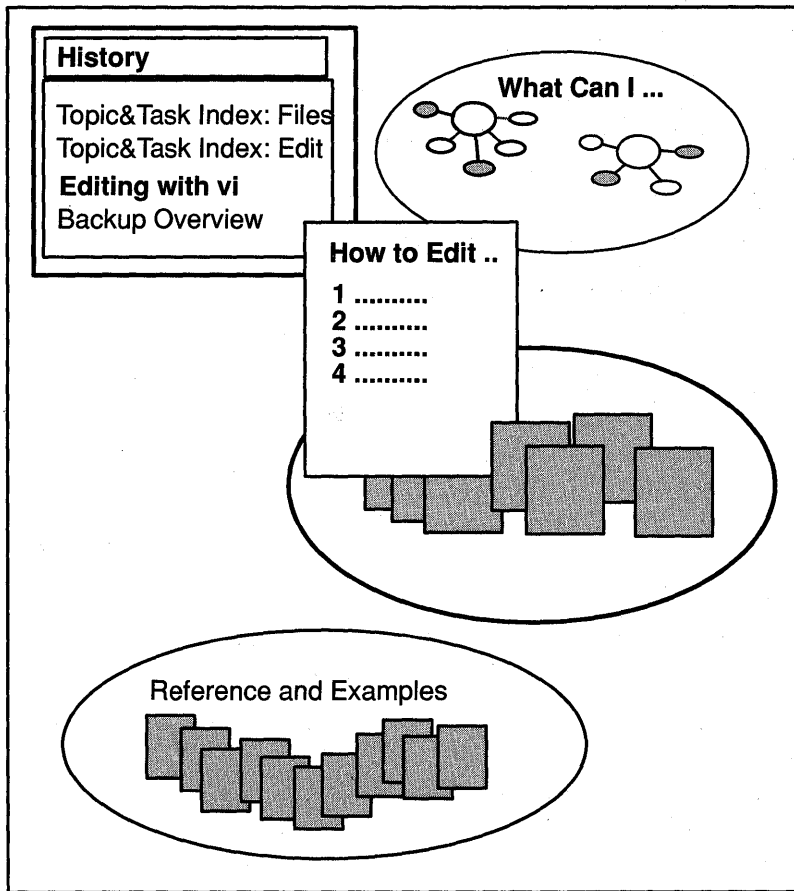
List of Bookmarks

You can create bookmarks for articles you consult frequently. When bookmarks are loaded, they can be used as a navigation tool.

- Bookmarks can serve as personal markers when reading has been interrupted.
- Bookmarks can be used in training programs to focus users on particular pieces of information that are relevant to local procedures.
- Bookmarks can be edited and saved.

History

InfoExplorer keeps track of the hypertext links you use and creates a History file. Each item in the History file is a hypertext link, as shown in the illustration. You can set the size of your History file.



Outlines, References, and Citations

The InfoExplorer program provides features that enable you to see the structure of information contained in a single article or view the relationship between the articles in a database library.

Outline Provides an outline of the major headings in the current article. These headings are displayed as hypertext links that can take you directly to those parts of the article.

Citation Provides a list of articles that contain links to the current article. Each article title in the list is a link that can take you to that article.

Reference Provides a list of articles to which the current article links. Each article title in the list is a link that can take you to that article.

Note: Reference and Citation lists do not include the current article.

The Outline, Reference, and Citation lists display in a utility window, allowing you to use the links without losing your current navigation document.

List of Notes

You can create “margin notes” in articles to emphasize local procedures or add extra information. When notes are loaded, they can be used as your personal navigation tool.

- Notes can be private, public, or system level.
- Notes can be used in training programs or to emphasize local procedures.
- Notes (except system notes) can be edited and saved.
- System notes are provided to update online documentation if necessary.

Using the info Command

You can start InfoExplorer with the **info** command using the following options:

- a** Starts InfoExplorer ASCII version.
- display** *host:number* Specifies the display host.
- f isofonts** Specifies for text to be displayed in ISO fonts.
- g** Forces window version of InfoExplorer to run on the default display or the display specified by the **-display** flag.
- h** *string* Specifies a term that is used to search for a command article or content list for a specified topic or task.
- help** Displays the usage message.
- hlc** *color* Specifies the color for hypertext links.
- iconic** Starts InfoExplorer with the navigation window icon on the desktop. After the icon is opened, all application windows open normally.
- l** *libname* Specifies which database library InfoExplorer opens.
- msh** *N* Specifies the maximum number for search hits.
- n** [*ti* | *bl* | *cl* | *pr* | [*1-8*]] Specifies the alphabetic abbreviation or the numeric value identifying which primary navigation article is displayed.
- q** Starts InfoExplorer quickly without displaying the Copyright Notice and the InfoExplorer Welcome article.
- s** *term* Specifies a term or phrase that is immediately used in a simple search.
- shc** *color* Specifies the color for search hits.
- t** *string* Specifies a term or phrase that is immediately used in a title search.
- tags** Sets the debug environment switch enabling the inclusion of the Tags menu option on the Preferences Window menu bar.
- txc** *color* Specifies the color for article text.

InfoExplorer Interfaces

InfoExplorer contains thousands of pages of information about software and hardware. This information can be viewed on an InfoExplorer Windows graphical interface or an InfoExplorer ASCII interface. However, you access the information differently and it is displayed differently depending on which of these interfaces you are using. In both environments, you have access to powerful retrieval methods to help you find the information you need. If you are using a graphical interface, see the online InfoExplorer

article "Using the InfoExplorer Window Interface." If you are using an ASCII interface, see the online InfoExplorer article "Using the InfoExplorer ASCII Interface."

The InfoExplorer program is the tool you use to learn about the AIX operating system and programming language software. As a graphical interface user, you have access to many volumes of information about software and hardware. Since InfoExplorer information is *hypertext*, you can read it without turning a single page. Instead, you view the information on your computer screen and select hypertext links to move from one "article" to another. This way, you can select your own path through the hypertext documentation.

Highlighting Conventions in Articles

The *Hypertext Information Base Library* uses the following font and highlighting conventions:

Bold	Identifies commands, keywords, files, directions, and other items named by the system.
<i>Italics</i>	Identifies parameters for which you supply the names or values.
Courier	Identifies examples of specific data values, displayed text, portions of program code, messages from the system, or information you enter.

Types of InfoExplorer Windows

In the InfoExplorer program, different types of windows are used for different purposes. For example, you use some windows specifically for navigating to articles, and others for reading about tasks, and the procedures and commands needed to accomplish them.

Navigation windows help you navigate to the articles containing the information you want. Navigation windows contain lists of topics with hypertext links, such as the Topic & Task Index and Books, that allow you to display articles on the specific topic. Only one navigation window can be displayed at a time. The contents of the navigation window are replaced each time you display another navigation window.

Reading windows contain information on a specific topic. Reading windows contain conceptual, procedural, or reference information on a topic, explain how to do something, or document commands, calls, subroutines, files, or file formats. You can display more than one reading window at a time or you can have the contents of the window replaced each time you select more information (see "Holding and Releasing a Reading Window" on page 7-18).

From navigation and reading windows, you can open the following types of windows to perform specific tasks:

File	Displays an operating system file selected from a file link.
Glossary	Displays a glossary term or phrase selected from a reading window.
Simple Search	Handles searches on titles or databases for a single word or phrase.
Compound Search	Handles searches on compound search strings within one or more selected information bases.
Database Selection	Allows you to choose the information bases to use during a search.
Defaults Editor	Allows you to set default values for various InfoExplorer functions.
Preferences Editor	Provides a way to customize InfoExplorer options.
Notes Editor	Allows you to enter and edit notes in the hypertext documentation.
Utility	Displays the list of bookmarks, list of notes, history lists, path lists, search lists, references, citations, and outlines.

Graphics	Displays InfoExplorer diagrams, figures, and illustrations.
File Selection	Displays existing note, bookmark, or history files and allows you to select or enter a file name for saving, loading, or deleting the file.
Library Selection	Displays a list of all the defined libraries and allows you to select or enter a library name for loading or deleting the library.
Library Definition	Allows you to define a library by specifying the library path and name.

When you start a session, InfoExplorer displays both a reading window and a primary navigation window. The reading window contains the “Welcome to the InfoExplorer Window Interface” article, which shows you how to perform basic window operations and explains how to access InfoExplorer Help, copyrights, and trademarks. You can select which navigation window is automatically displayed with the **Default Navigation Article** option. To change the default navigation article, move the mouse pointer to the menu bar and click the left-mouse button on **Options**. Click on the **Defaults** option on the pull-down menu and select which navigation article you want automatically displayed.

Managing Windows and Menus (InfoExplorer Windows)

The windows in InfoExplorer 1.4.0 conform to the standard Motif window interface. InfoExplorer windows are a type of AIX window. You can customize these windows to make them most useful for you. For example, you can move and stack windows, display them simultaneously, open and close them, or convert a window to an icon.

Within a window, you can view information by scrolling with the scroll bar (located on the right side of the window), using the Page Up or Page Down keys, or resizing the window to see more of the text.

InfoExplorer windows contain a menu bar that is displayed at the top of each window. The menu bar contains the standard pull-down menus that you use to access specific InfoExplorer features or to exit the current window. For information on the features available from the different menus, see the online InfoExplorer article “Menus Available (InfoExplorer Windows).”

Getting Help (InfoExplorer Windows)

To get more information about how to use the InfoExplorer program, you can use InfoExplorer Help. By using Help, you can find out more information on using the current window. Or, you can move to a list of helps that explain how the InfoExplorer program works.

To get help, move the mouse cursor to the Help menu in the menu bar at the top of the window and click the left mouse button. You can then choose between the following options:

On Window Displays specific information about the current window including:

- A diagram labeling specific menus and buttons in the window
- Descriptions of features available from boxes in the window
- A list of menus available and descriptions of the menu options
- A list of articles describing the window and functions available

List of Helps Displays the **List of Helps**, a list of hypertext links to articles that describe key aspects of the InfoExplorer program and documentation, along with links to helps for each individual window.

You can select links to display information that you want to read. The InfoExplorer program automatically continues to display the Help window so that it is not covered when you select a link to another article.

Getting Started (InfoExplorer Windows)

The InfoExplorer program is a powerful text retrieval tool with several information navigation aids to help you find and manage information. Learning just a few of these aids, however, is all you need to begin using it. Use the basic procedures that you learn in this section to explore in the InfoExplorer information base where you will find useful information.

Some of these exercises require that you open several windows at a time. To see the contents of each window, it may be necessary to move and resize them. To learn about moving and resizing windows see the online InfoExplorer articles "How to Set Window Position" and "How to Set Window Size with the InfoExplorer Program."

In this article you learn about:

- Starting the InfoExplorer Windows Program on page 7-12
- Recognizing Window Types (InfoExplorer Windows) on page 7-13
- Selecting a Hypertext Link (InfoExplorer Windows) on page 7-16
- Selecting a Button (InfoExplorer Windows) on page 7-16
- Selecting a Menu Option (InfoExplorer Windows) on page 7-17
- Scrolling Information (InfoExplorer Windows) on page 7-17
- Holding and Releasing a Reading Window (InfoExplorer Windows) on page 7-18
- Returning to a Previous Location (InfoExplorer Windows) on page 7-19
- Searching for Information (InfoExplorer Windows) on page 7-20
- Printing Information (InfoExplorer Windows) on page 7-23
- Accessing Help (InfoExplorer Windows) on page 7-24
- Using Special Keys and Key Sequences (InfoExplorer Windows) on page 7-24
- Starting an Alternate InfoExplorer Library (InfoExplorer Windows) on page 7-25
- Stopping the InfoExplorer Windows Program on page 7-26

Starting the InfoExplorer Windows Program

To start the InfoExplorer program:

- From your AIX Common Desktop Environment, move the mouse pointer to the **Application Manager** icon and click the left mouse button twice. This brings up a window with several application groups, which represent directories. Click on the **Information** icon and then on the InfoExplorer icon.

You may find it easier if you drag the InfoExplorer icon over to the **Install** icon in the Personal Application subpanel. The InfoExplorer icon will then appear on the Front Panel of the AIX Common Desktop Environment.

- From an operating system command line in an AIX window, type the following at the system prompt and press the Enter key:

```
info
```

The Welcome to the InfoExplorer Window Interface displays in the reading window and the Topic & Task Index displays in a navigation window.

The Topic & Task Index serves as an entry point into the hypertext information by grouping related sets of tasks under the main topic areas for using, managing, and programming the operating system and other programs installed on your system.

The welcome information explains how to do basic window operations and how to access InfoExplorer Help, copyrights, and trademarks.

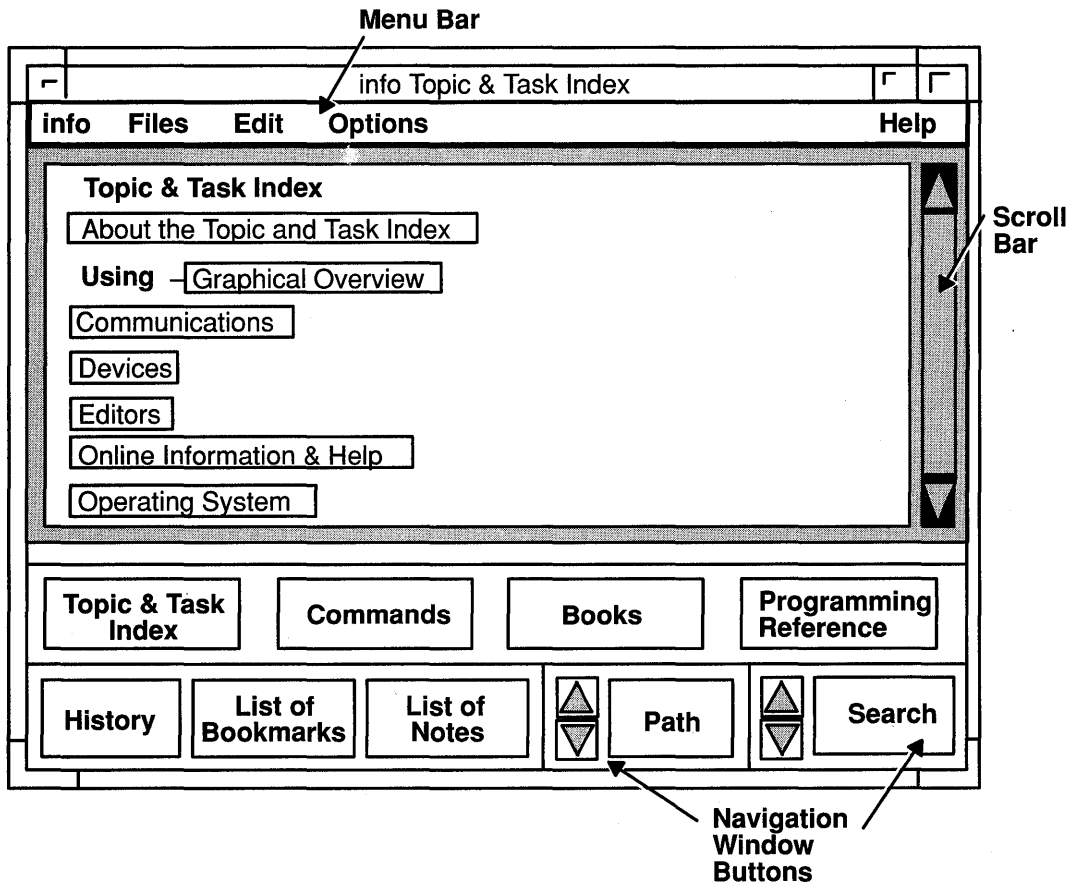
Note: If the windows overlay each other in the screen, rearrange the windows so that you can see both at the same time.

Recognizing Window Types (InfoExplorer Windows)

Two primary window types exist in the InfoExplorer program: the *navigation* window and the *reading* window.

Navigation Window

The navigation window contains information designed to assist you in finding the desired documentation. Information is organized by topic and task, by book, or alphabetically by commands or programming reference item. The primary navigation routes display in the navigation window:



Note: The navigation information in this section applies to the InfoExplorer program that is shipped with your operating system. The navigation information may or may not apply to other libraries.

When the navigation window displays, two rows of buttons display at the bottom of the window. The top row displays the four primary navigation routes:

Topic & Task Index

Displays information by task. It is the default navigation article.

Commands

Displays an alphabetical list of available commands.

Books

Displays a list of books available in InfoExplorer.

Programming Reference

Displays lists of programming functions in alphabetical order by functional categories.

The bottom row displays the following hypertext navigation functions:

History

Lists every location you have been in the information base, including searches and helps.

List of Bookmarks

Lists each location marked with a bookmark.

List of Notes

Lists each location marked with a note.

Path

Allows you to jump to the previous or next location, and to display a list of locations.

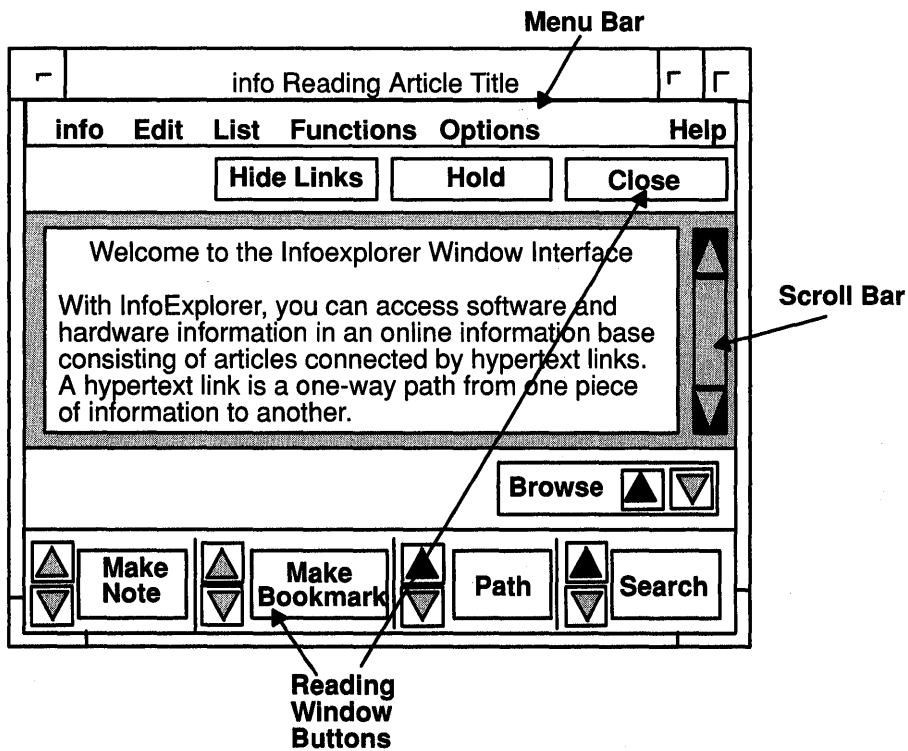
Search

Allows you to search the information base for a specified text string

The navigation article is the starting point for finding information. There is one navigation window available while running the InfoExplorer program. Each time you select another navigation article, the contents of the original article are replaced. For example, if you are viewing the Topic & Task Index and decide to view the Commands, Commands replaces the Topic & Task Index in the navigation screen.

Reading Window

The reading window contains procedural, conceptual, and reference information. Procedural information explains how to accomplish a task, conceptual information teaches you about various topics, and reference information provides you with information about commands, subroutines, and so on.



When the reading window displays, the following buttons display at the bottom of the window:

Make Note Allows you to create a note and places a note icon in the text. The Up Arrow button jumps to the previous note and the Down Arrow button jumps to the next note.

Make Bookmark Allows you to create a bookmark in the text. The Up Arrow button jumps to the previous bookmark and the Down Arrow button jumps to the next bookmark. The previous bookmark may be either one that you just created, or if you have previously loaded a list of bookmarks, it is the previous bookmark on that list. You can use the Down Arrow button to jump to another bookmark only if you have previously loaded a list of bookmarks.

Path Displays your path list. You can jump to any article in your path list, or you can clear or modify the path list. Use the Up Arrow button to jump to the previous item and the Down Arrow button to jump to the next item on your path list.

Search Allows you to search the InfoExplorer or other databases for specific terms or phrases.

At the top of the window, there are three buttons that you can select to activate reading window functions:

- | | |
|-------------------|---|
| Hide Links | Allows you to alter the text so no links show. To hide links, press the Hide Links button by clicking the left mouse button. To show all links, release the Hide Link button by clicking the left mouse button again. |
| Hold | Allows you to open a reading article in a new window without replacing the original article. |
| Close | Closes the reading window. |

Other Types of InfoExplorer Windows

In addition to the navigation and reading windows, the InfoExplorer program uses other types of windows, each with a different purpose and different functions. For example, there are utility windows, search windows, artwork windows, glossary windows, and operating system file windows.

To find out more about these windows, you can select the **Help** option on the menu bar and select either the **On Window** option for help on the current window or the **List of Helps** option and locate the help information for other InfoExplorer windows.

Selecting a Hypertext Link (InfoExplorer Windows)

A hypertext link is a connection between one piece of information and another, and displays as text in a box. Links allow you to view information that is related to the currently displayed article.

The Welcome window displays six links. They appear as a list of six items, with a box around each one.

To select a link, do the following:

1. Position the mouse pointer on the text inside the box.
2. Click the left mouse button. The link changes to reverse video indicating that it is selected and a clock icon displays if the action is not immediate. The target information displays in the same window.

Before you continue with the next section, try selecting a link in the Welcome window.

Selecting a Button (InfoExplorer Windows)

The InfoExplorer program uses many types of buttons:

- Reading window buttons such as **Close**, **Hold**, and **Path**.
- Navigation buttons such as **Task Index**, **List of Books**, and **History**.
- Special function buttons such as **Go to**, **Cancel**, and **Browse** that display when special functions are performed.

The text on some buttons is highlighted in bold and the text on other buttons is not highlighted at all. Only those buttons displaying bold text are currently active and can be selected.

Although many types of buttons are used in the InfoExplorer program, the procedure for selecting them is the same:

1. Position the mouse pointer on the button.
2. Click the left mouse button to press the button, indicating that it is selected. A clock icon displays if the action is not immediate.

Suppose you need information about how to print a file on a line printer. You could start the search with a primary navigation route such as the Topic & Task Index. From the Topic & Task Index, you can follow links until you reach the window containing the information you want.

1. Select "Using" from the list.
2. Select the link to the article.

Selecting a Menu Option (InfoExplorer Windows)

Menus allow you to perform common tasks, such as saving and deleting bookmarks, printing out articles, and getting help. Each InfoExplorer window has a menu bar located across the top. Menu bars contain from two to five menu titles, depending on the window type. Each menu title displays a pull-down menu with available options.

To select a menu option, do the following:

1. Place the mouse pointer on the menu title in the menu bar.
2. Click the left mouse button. A list of menu options displays.
3. Move the mouse pointer to the menu option in the pull-down menu.
4. Click the left mouse button to select an option.

After you display a menu, you may want to remove it without selecting an option. To do this, move the mouse pointer off the menu and click the left mouse button. The menu disappears.

Scrolling Information (InfoExplorer Windows)

Very often the text in a window is longer than the window itself. To read the text, you need to scroll through it. You can either press the Page Up and Page Down keys to scroll a screen at a time, or you can use the scroll bar.

If the text in a window is wider than the window itself, the horizontal scroll bar indicates that not all the text is visible. Most text will wrap to fit on the screen, but occasionally with tables or examples, you may need to resize or scroll to the right.

Either the horizontal scroll bar, Ctrl-Page Up, or Ctrl-Page Down will move the display to the right or left. To learn how to resize the navigation and reading windows only, see the online InfoExplorer article "How to Set Window Size with the InfoExplorer Program." To learn how to resize all InfoExplorer windows, see the online InfoExplorer article "How to Set Window Size with X Resources (InfoExplorer Windows)."

Working With Scroll Bars

InfoExplorer windows have a vertical scroll bar on the right side and a horizontal scroll bar at the bottom of the window. The scroll bar indicates the approximate length of the article, your location in the article, and provides a convenient method for paging through text. The scroll bars have a small triangular arrow at each end that are used to scroll incrementally.

The size of the scroll bar relative to the size of the scrolling area indicates the size of the article. The location of the scroll bar within the scrolling area indicates your approximate location in the article you are currently viewing. For example, if the scroll bar is approximately half the length of the scrolling area, you know that you have seen approximately one half of the article. You also know that the article is two screen-lengths long.

The position of the scroll bar in the scrolling area tells you which portion of the article is displayed. If the scroll bar is at the top of the scrolling area, the top of the article is displayed

on the screen. If the scroll bar is at the bottom of the scrolling area, the bottom of the article displays on the screen.

To Scroll

The scroll bar provides three methods for scrolling, one by screen and two by increments:

To scroll screen by screen:

1. Position the mouse pointer below the scroll bar.
2. Click the left mouse button. The next text screen displays.

To scroll by increments with the triangular arrow:

1. Move the mouse pointer onto the small triangular arrow at the bottom or top of the scroll area.
2. Press and hold the left mouse button. The article scrolls up or down until the mouse is released.

To scroll by increments with the scroll bar:

1. Move the mouse pointer onto the scroll bar.
2. Press and hold the left mouse button.
3. Drag the mouse slowly up or down to scroll the article.

Before continuing with the next section, try scrolling through the reading window using all three methods.

Holding and Releasing a Reading Window (InfoExplorer Windows)

The **Hold** button allows you to open more than one reading window at a time. When you press the **Hold** button, previous information windows remain open when you open new windows. When you release the **Hold** button, successive information windows replace previous windows.

Click the left mouse button to press or release the **Hold** button. Each time you click on it, you either press or release the button.

Note: You can set the Auto-Hold default to hold or release reading windows. To set the Auto-Hold default, click the left mouse button on the Options pull-down menu. Click the left mouse button on the Preferences option. On the Preferences menu, click the left mouse button on the Auto-Hold Articles **On** or **Off** button.

To see the effects of the **Hold** button, click on a link in any article.

1. Click the left mouse button to press the **Hold** button, if it is not already pressed.

Note: If you are using a black and white monitor, you can tell whether the Auto-Hold option is on by clicking on a hypertext link. If the previous information window remains open when you open a successive window, the Auto-Hold option is on.

2. Click on any link within the article. The linked article opens in a new reading window that overlays the original window.
3. Click the left mouse button to release the **Hold** button and close the second reading window.
4. Click on any link within the article. The new article replaces the old one in the same window.

Returning to a Previous Location (InfoExplorer Windows)

During the InfoExplorer session, the InfoExplorer program keeps two different records of where you have previously been: the History List and the Path List. These lists enable you to return to previous locations in the information base.

The History List records every location that you have been in the information base. To view the History List, select the **History** button in the navigation window. To learn how to use the History list, go to the Help menu and select the **List of Helps** option from the pull-down menu. **Moving Around** in the List of Helps provides information about the History function.

The Path List keeps track of your navigation route starting with a primary navigation article (Topic & Task Index, Books, Commands, or Programming Reference). Every time you return to a primary navigation article, your previous path list is overwritten.

The Path function consists of three buttons:

Path Show Displays the Path List in a utility window.

Path Up Arrow Displays the windows you viewed previously at the link points you had selected.

Path Down Arrow

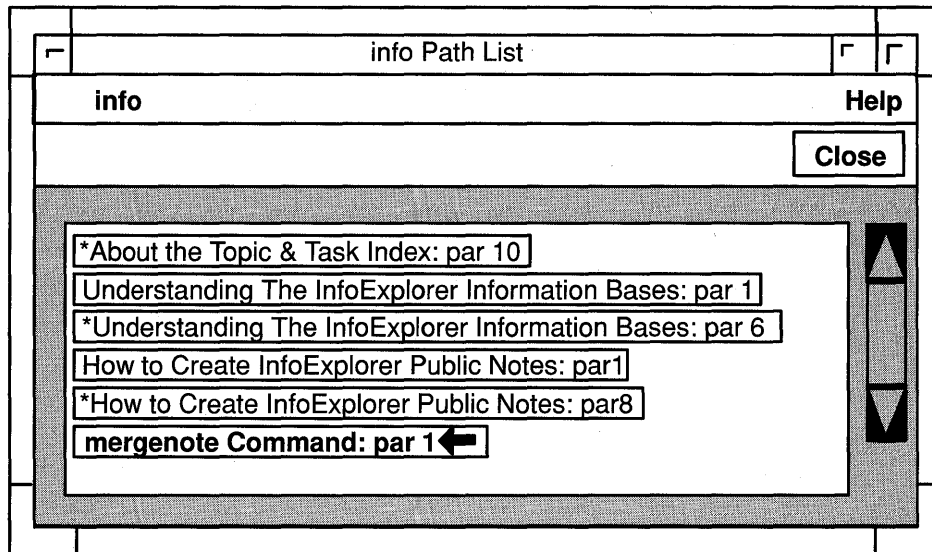
Returns you to the windows you viewed before following the path backward (using the **Up Arrow** button). If you have not used the Path function yet, the **Path Down Arrow** button may be inactive since there are no articles in the path.

Try following the path up and down using the Path arrow buttons. Remember, if you follow the path back to a primary navigation article (such as the Topic & Task Index), your Path List is wiped out and you will not be able to follow a path down until you start a new path. If you want to return to a location that is not in the current path, use the History function.

You can jump directly to any location along the path using the Path List as follows:

1. Press the **Path Show** button to display the Path List. A utility window opens and displays the Path List.

Each entry in the path list identifies the name of the article and the paragraph location that you linked to in order to arrive at the current article. The item displayed in bold is the current article. Article names that are preceded by an * (asterisk) are the articles containing the hypertext link you clicked on. Article names that are not preceded by an * (asterisk) are the articles to which you have linked.



2. Point the cursor at a location in the Path List.
3. Click the left mouse button to select the location.
4. The reading or navigation window displays the specified article.
5. Press the **Close** button to close the path window.

Before you continue with the next section, try using the **Path Show** button in an open reading window

Searching for Information (InfoExplorer Windows)

In addition to using primary navigation routes to get to information, the InfoExplorer search facility allows you to look for information by word or phrase. You can search on virtually every word in the hypertext information base so that you can use different types of searches to look for information even if you do not know the task or command name or where the information is stored.

Two types of searches are available in the InfoExplorer program: the simple search and the compound search. The *simple search* allows you to search on a word or string of words (in exact order) in text, article titles, or both. The *compound search* allows you to search on a word, set of words, or several sets of words. You can further specify the search with the following options:

- **And, Or, and But Not** connective options
- Proximity options
- Search categories
- Precedence

You can specify the information bases to be searched for both simple and compound searches. There are two ways to specify an information base selection:

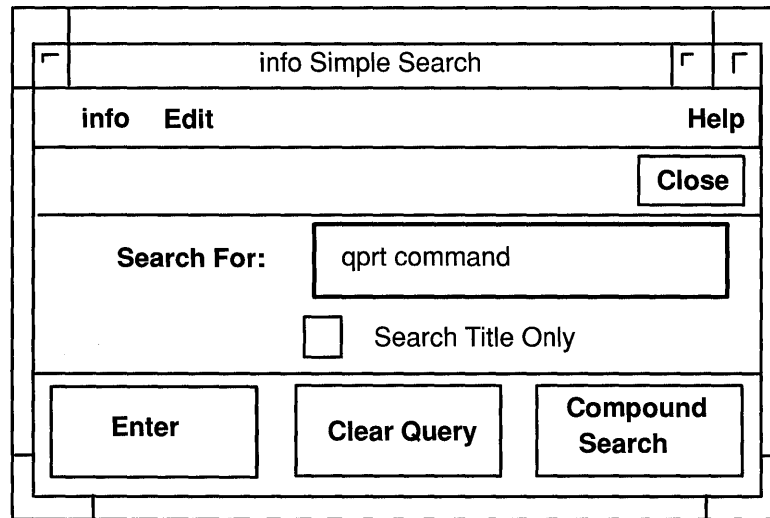
- You can specify a temporary information base selection from the Compound Search window. This selection applies to both simple and compound searches, and stays in effect for the current session of InfoExplorer, or until you change it during the session.
- You can specify an information base selection as a default by choosing **Defaults** from the Customize menu, and selecting **Default Search Databases**. An information base selection made from the Defaults window applies to both simple and compound searches,

and stays in effect for future sessions of InfoExplorer. (Temporary information base selections made from the Compound Search window can override the default selection during an InfoExplorer session, but the default selection returns when you restart InfoExplorer.)

The following steps take you through a simple search for the **qprt** command.

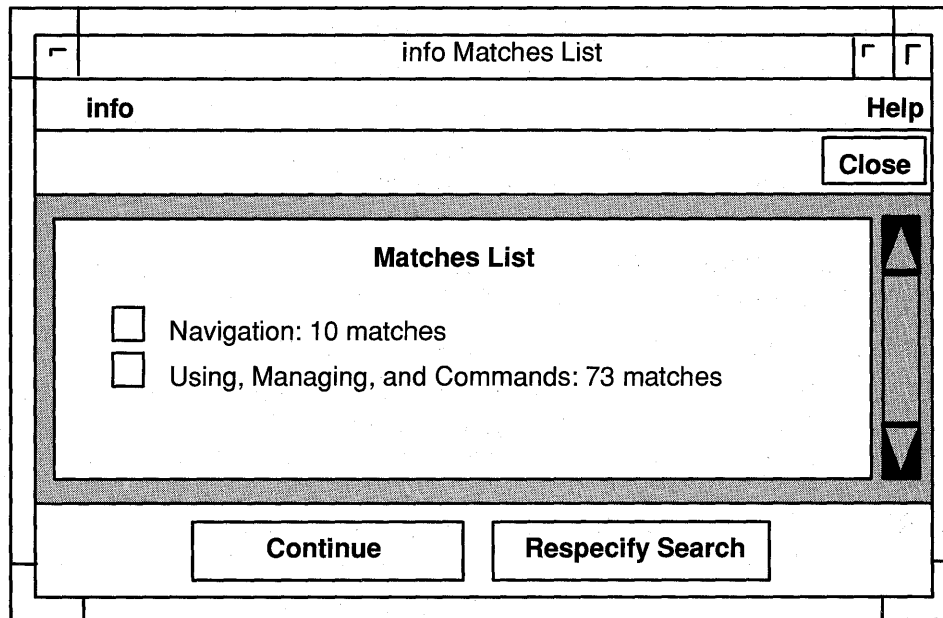
To perform a simple search for the **qprt** command:

1. In the navigation or reading window, select the **Search** button. If the Compound Search window displays, select the **Simple Search** button at the bottom of the Compound Search window. The Simple Search window displays:



2. Move the mouse pointer into the Search For field and click the left mouse button. Type `qprt command`. For this exercise, do not select the **Search Title Only** option.
3. Select the **Enter** button, or press the Enter key on the keyboard. If the search string appears in several information bases, a Matches List displays and shows where search matches were found, and the number of matches that were found. Each information base has a box next to it.

You can press the box to select the database or release the box to deselect the database, as in the following illustration:



Note: Depending on which databases are installed on your system, this list may vary.

- To view the matches from all information bases listed, select the **Continue** button or press the Enter key on the keyboard. To view the matches from only one of the information bases, click the left mouse button on the box to the left of each information base that you do not want to view. For example, to view the matches from the **Using, Managing, and Commands** information bases, click the left mouse button on the box next to the other information bases listed.

Note: If an information base that you wanted to search is not displayed on the Matches List, you can select the **Respecify Search** button, and then go to the Compound Search Window to select the information bases that you want to search.

- Click on the **Continue** button to search the selected information base. A list of article titles containing the search string displays in a List of Titles utility window.
- Click on the second title on the list: **qprt Command**. The article displays in the reading window. Note that the Up and Down Arrow buttons in the Search area are active now.
- Click on the **Down Arrow** button under Search. The next match for "qprt command" displays at the top of the reading window. **Up** and **Down Arrow** buttons in the Search area let you scroll up and down through the information base to other places in the article or to other articles where the phrase "qprt command" is discussed. The search phrase, "qprt command," is displayed in red (default).
- To close the List of Titles window, click on the **Close** button at the top of the window.
- To end the search, click on the **Close** button at the top of the Simple Search window.

If there are many matches, it can be difficult to find the right information. You may have to read through several articles to find the information you want. However, you can use a compound search to narrow the search by selecting only those information bases most likely to contain the information you are seeking or by limiting the search to article titles that contain the search string. For more information about compound searches, see the online InfoExplorer articles "How to Perform a Compound Search" and the "Compound Search Window."

Printing Information (InfoExplorer Windows)

You can print the following information from the InfoExplorer Window Interface:

- Articles from a reading window
- All articles referenced by a navigation window
- Artwork displayed in a graphic window
- Public and private notes.

To Print an Article from a Reading Window

1. Move the mouse pointer to the **info** option in the menu bar.
2. Press and hold the left mouse button. The info pull-down menu displays.
3. Move the mouse pointer down the info pull-down menu and select to the **Print** option. The article currently displayed in the reading window is sent to the default printer, or to the printer defined in the Default Editor window.

To Print All Articles Referenced by a Navigation Article

1. Move the mouse pointer to the **info** option in the menu bar.
2. Press and hold the left mouse button. The info pull-down menu displays.
3. Move the mouse pointer down the pull-down menu to the **Print References** option and release the mouse button. All articles referenced by the current navigation article displayed in the navigation window are sent to the default printer, or to the printer defined in the Default Editor window.

To Print Artwork Displayed in a Graphic Window

Note: You must use a PostScript printer to print artwork.

1. Move the mouse pointer to the info pull-down menu in the Graphics window.
2. Press and hold the left mouse button. The info pull-down menu displays.
3. Move the mouse pointer down the pull-down menu to the **Print** option and release the mouse button. The artwork currently displayed in the graphic window is sent to the printer specified as the Art Printer in the Defaults Editor window.

To Print Public and Private Notes

1. Move the mouse pointer to the **List of Notes** button at the bottom of the navigation window. The List of Notes window displays.
2. Move the mouse pointer to the note you want to print and click the left mouse button once. The note is now highlighted in bold text.
3. Move the mouse pointer to the **Print** button at the bottom of the List of Notes window and click the left mouse button. The selected note is printed with the print command specified as the Simple Printer in the Defaults Editor window.

Accessing Help (InfoExplorer Windows)

From an InfoExplorer window, you can view help information about the functions and options available on the InfoExplorer window you are viewing or you can search through a list of topics for which help information is provided.

To Get Help on a Specific Window

There are several types of InfoExplorer windows; each serves a different purpose and contains different functions. The Help menu in each window contains an **On Window** option, which displays an article describing the function, menus, and buttons that are available in the current window.

To display Help on a window, do the following:

1. Display the Help menu by clicking with the left mouse button on **Help** in the menu bar.
2. Select the **On Window** option by clicking on it with the left mouse button. A Help article opens in a new reading window.

Before you continue with the next section, try looking at the Help text for the current windows open on the screen.

To Get Help from the List of Helps

The Help menu in each InfoExplorer window contains a **List of Helps** option, which displays a list of InfoExplorer Help topics. The Help articles display the prerequisite information and procedures for a wide range of tasks.

To display and use the List of Helps, do the following:

1. Display the Help menu by clicking with the left mouse button on **Help** in the menu bar.
2. Display the list of helps by selecting the **List of Helps** option.
3. Click on the desired Help topic.

Before you continue with the next section in which you stop the InfoExplorer program, try looking at some options from the **List of Helps** and using the helps to learn and practice some new skills.

Using Special Keys and Key Sequences (InfoExplorer Windows)

In the InfoExplorer window interface, you can use special keys and key sequences to move within a window, select items from a menu, access additional windows, and start processes.

Keys	Action
Backspace	Deletes one character to the left of the cursor.
Shift + Tab	Highlights the previous button or field.
Ctrl + Home	Displays the top of the article.
Home	Moves the cursor to the beginning of the current line, or to the far-left choice in a group of choices.
Alt + F4	Closes the active window.
F1	Displays contextual help information.
Ctrl + Insert	Copies selected text to the clipboard.
Down Arrow	Moves the cursor down one line.
Left Arrow	Moves the cursor one character to the left.
Right Arrow	Moves the cursor one character to the right.

Up Arrow	Moves the cursor one line up.
Shift + Delete	Deletes selected text and copies it to the Motif clipboard.
Enter	Performs the default action for the highlighted button or key.
Delete	Deletes selected text in an entry field.
Ctrl + End	Displays the bottom of the article.
End	Moves the cursor to the end of the current line, or to the far-right choice in a group of choices.
Alt + F10	Enlarges the window to its largest size.
Alt + F5	Restores the window to its original size.
Alt + F9	Iconifies the window.
Alt + F7	Allows you to move a window to a different position.
PageDown	Scrolls down.
Ctrl + PageUp	Scrolls left.
Ctrl + PageDown	Scrolls right.
PageUp	Scrolls up.
Shift + Insert	Pastes the contents of the clipboard into an edit field at the specified location.
F5 (Ctrl + L)	Updates the window display.
Alt + F8	Allows you to change the size of a window.
Tab	Highlights the next button or field.

Starting an Alternate InfoExplorer Library (InfoExplorer Windows)

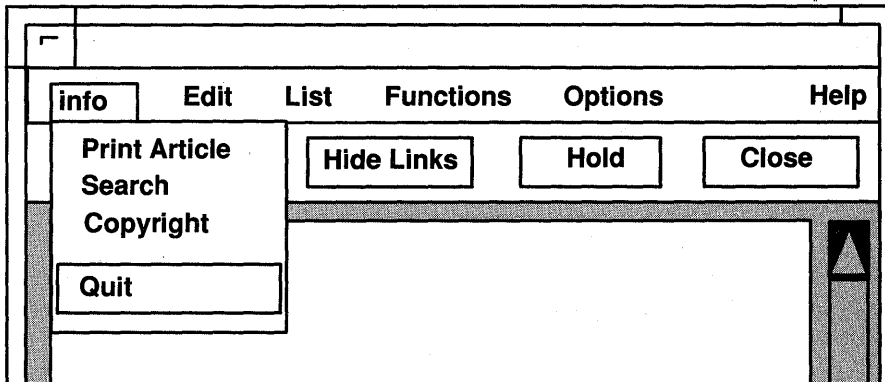
You can request the InfoExplorer program to load an alternate database library by using the **-l** flag with the **info** command. For example, if you wish to start the InfoExplorer Library containing C++, FORTRAN and Ada documentation, start that library with the following command:

```
info -l compiler
```

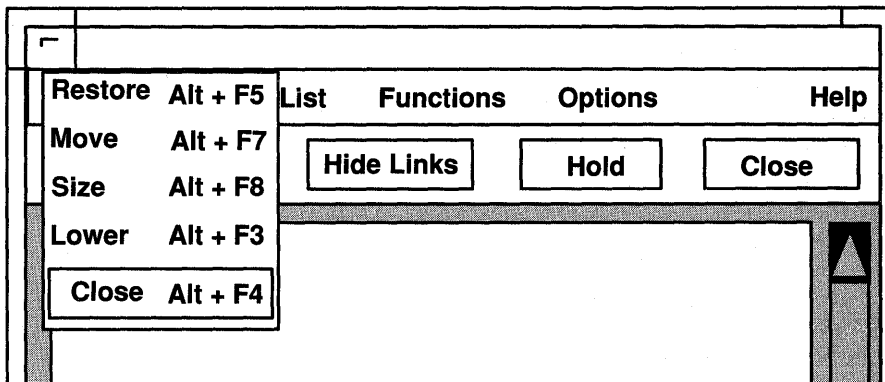
Stopping the InfoExplorer Windows Program

You can stop the InfoExplorer program from any open InfoExplorer window.

To exit the InfoExplorer program and save all bookmarks and notes, select the **Quit** option in the info pull-down menu from any InfoExplorer window. All open windows are closed and the program is exited.



To exit the InfoExplorer program without saving all bookmarks and notes, select **Close** in the navigation window menu located to the left of the title bar. All open windows are closed and the program is exited.



Using the InfoExplorer ASCII Interface

This section introduces the InfoExplorer program ASCII interface, provides a tutorial for first-time users, and contains procedures for performing other tasks as described in the following overview.

The InfoExplorer program is the tool you use to learn about the AIX operating system and other software. As an ASCII interface user, you have access to many volumes for software and hardware. Since InfoExplorer information is *hypertext*, you can read this information without turning a single page. Instead, you view the information on your computer screen and select links to move from one "article" to another. This way, you can choose your own path through the hypertext documentation.

Using InfoExplorer Screens

In the InfoExplorer ASCII interface, different screens contain different types of information. For example, you use some screens specifically for moving around. These screens, which include the Topic & Task Index and the Books, are *navigation* screens. The InfoExplorer program displays one navigation screen at a time. The contents of this screen are replaced each time you select a function that displays its information in this location.

Another type of screen contains the text you want to read. These are called *reading* screens. Reading screens provide conceptual, procedural, or reference information. They display articles that teach you about a topic, explain how to do something, or provide you with information about commands, calls, subroutines, files, or file formats.

From navigation and reading screens you can open other screens to perform specific tasks. The InfoExplorer program provides the following task-oriented screens:

Simple Search	Handles searches on a title or information base for a single set of words.
Compound Search	Handles searches on compound search strings within one or more selected information bases.
Search Matches List	Displays where search matches were found, how many matches were found, and the number of articles in which they were found.
Glossary	Displays a glossary term or phrase selected from a reading screen.
Defaults Editor	Allows you to set default values for various InfoExplorer functions.
Preferences Editor	Provides a way to customize InfoExplorer program options.
List of Links	Allows you to select a previous link and access the information, delete a previous link from the list, clear all of the lists, or rename a previous link.
List of Files	Allows you to load a previously saved file, save a list to a file, or delete a file.

When you start a session, the InfoExplorer program displays first the navigation screen and then the reading screen. The reading screen contains the "Welcome to the InfoExplorer ASCII Interface" article, which shows you how to perform basic operations and explains how to access InfoExplorer Help, copyrights, and trademarks. Return to the navigation screen by typing Ctrl-w.

Using Menus

The InfoExplorer ASCII interface displays a menu bar at the top of each screen. You select options in the menus to access specific InfoExplorer features.

Getting Help

To get more information on how to use the InfoExplorer program, you can use InfoExplorer Help. By using Help, you can find out more information on using the current screen. Or you can move to a list of articles that explain how the InfoExplorer program works.

To get Help, press the Ctrl-O key sequence, use the arrow keys to highlight the word **Help**, and press the Enter key. You can then choose between the following options:

- | | |
|----------------------|--|
| On Screen | Displays specific help information for the screen you are viewing, including links to articles that describe the screen, as well as functions available from that screen and a list of menus available in the screen, with links to descriptions of the menu options.

You can select links to display information that you want to read. To return to the help information screen after selecting a link, use the Path or .History menu option on the menu bar. |
| List of Helps | Displays the List of Helps , a list of hypertext links to articles that describe key aspects of the InfoExplorer program and documentation, along with links to the helps for each individual screen. |

Getting Started (InfoExplorer ASCII)

The InfoExplorer program is a powerful text retrieval tool with several information navigation aids to help you find and manage information. Learning just a few of these aids, however, is all you need to begin using it. Use the basic procedures that you learn in this section to explore in the InfoExplorer information base where you will find useful information.

In this article you learn about:

- Starting the InfoExplorer ASCII Program on page 7-29
- Recognizing Screen Types (InfoExplorer ASCII) on page 7-30
- Selecting a Hypertext Link (InfoExplorer ASCII) on page 7-32
- Scrolling Information (InfoExplorer ASCII) on page 7-33
- Selecting a Menu Option (InfoExplorer ASCII) on page 7-33
- Returning to a Previous Location (InfoExplorer ASCII) on page 7-34
- Searching for Information (InfoExplorer ASCII) on page 7-35
- Printing Information (InfoExplorer ASCII) on page 7-37
- Accessing Help (InfoExplorer ASCII) on page 7-38
- Using Special Keys and Key Sequences (InfoExplorer ASCII) on page 7-40
- Starting an Alternate InfoExplorer Library (InfoExplorer ASCII) on page 7-42
- Stopping the InfoExplorer ASCII Program on page 7-42

Starting the InfoExplorer ASCII Program

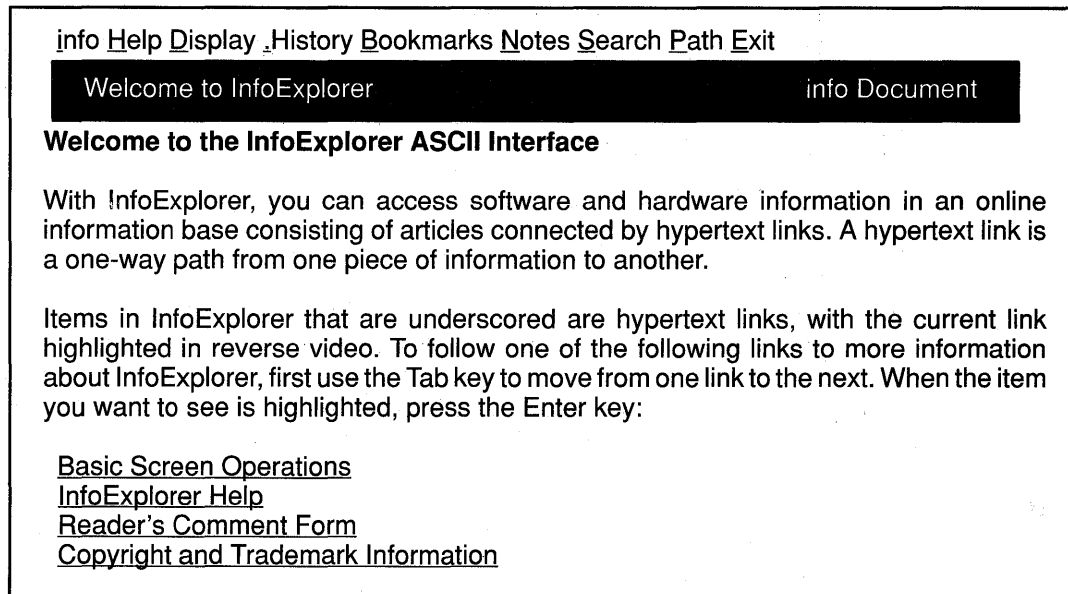
To start the InfoExplorer program, type the following at an operating system command prompt and press the Enter key:

```
info
```

Note: If you want to start InfoExplorer ASCII within an AIXwindow, type the following at an operating system prompt, and press the Enter key:

```
info -a
```

Either the "Welcome to the InfoExplorer ASCII Interface" article (see illustration) or the default navigation article displays in the reading screen. The welcome screen explains how to do basic screen operations and how to access InfoExplorer Help, copyrights, and trademarks.



Recognizing Screen Types (InfoExplorer ASCII)

Two primary screen types exist in the InfoExplorer program: the *navigation* screen, and the *reading* screen.

Navigation Screen

The navigation screen is the starting point for finding documentation about the operating system and other programs available on your workstation and contains information designed to assist you in finding the desired documentation. Information is organized by topic and task, by book, or alphabetically by commands or programming reference item. The primary navigation routes display in the navigation screen:

Topic & Task Index

Displays information by task. It is the default navigation article.

Commands Displays an alphabetical list of available commands.

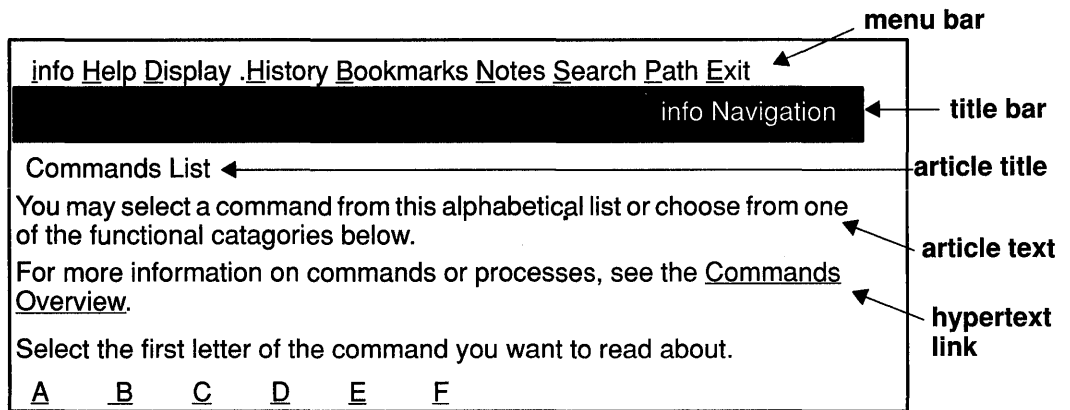
Books Displays articles in book order.

Programming Reference

Displays lists of programming functions in alphabetical order by functional categories.

Note: The navigation information in this section applies to the InfoExplorer program that is shipped with your operating system. The navigation information may or may not apply to other libraries.

The first line of the screen contains the menu bar, and the second line displays a reverse-video title bar. The title of the screen displays at the right end of the title bar. This title bar also separates the menu options from the article text.

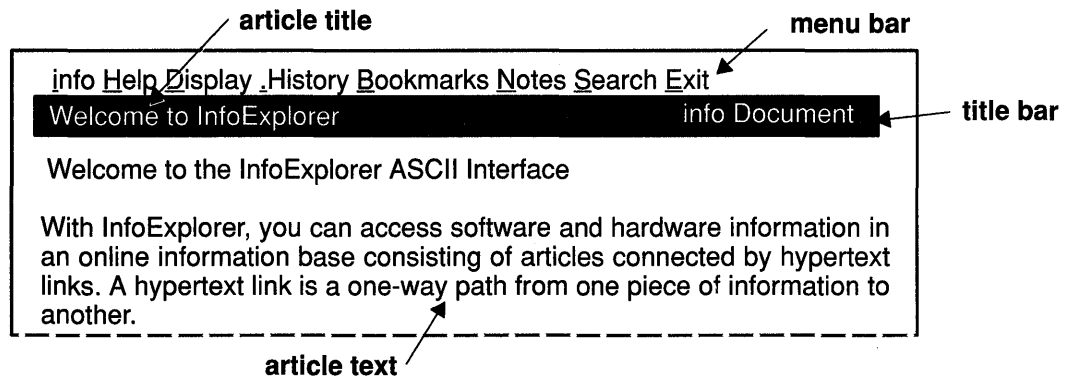


While you are viewing the InfoExplorer program through the ASCII interface, only one navigation screen is available at a time. Each time you select a link to another navigation article, the contents of the article you select replace the contents of the original article. For example, if you are viewing the Topic & Task Index and decide to view Commands, a list of commands replaces the Topic & Task index in the navigation screen.

Reading Screen

The reading screen contains procedural, conceptual, and reference information. Procedural information explains how to accomplish a task, conceptual information discusses various topics, and reference information provides you with information about commands, subroutines, and so on.

As in the navigation screen, the first line of the screen displays the menu options, and the second line displays a reverse-video title bar. "Info Document" displays at the right end of the title bar. This title bar also separates the menu options from the article text.



While you are viewing the InfoExplorer program through the ASCII interface, only one reading screen is available at a time. Each time you select a link to another article, the contents of the article you select replace the contents of the original article. For example, if you are viewing the "Starting the InfoExplorer Program (ASCII Interface)" article and decide to view the **info** command article, the **info** command article replaces the "Starting the InfoExplorer Program (ASCII Interface)" article in the reading screen.

To Move between the Screens

To display the navigation screen from the reading screen (or to go back to a current reading screen from the navigation screen), press and hold the Control key (Ctrl) and press the w key (Ctrl-w). The Ctrl-w key sequence toggles between the navigation screen and the

reading screen. You can also move between the screens using menu options available on the menu bar.

Before you continue, toggle back and forth a few times between the navigation and reading screens. Note the differences between them.

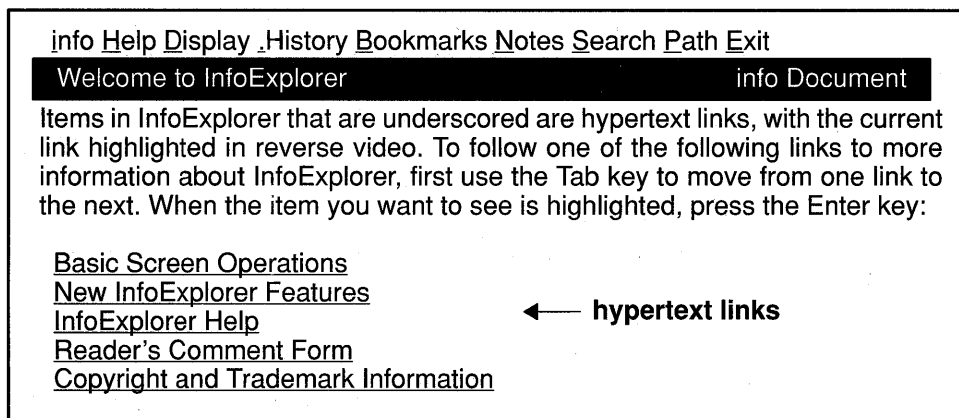
Some additional screen types are *search*, *glossary*, *file*, and *utility*. To find out more about the various screen types, see the online InfoExplorer article "Accessing Help on a Specific Screen."

Selecting a Hypertext Link (InfoExplorer ASCII)

Suppose you need information about how to print a file on a line printer. You could start the search with a primary navigation route such as the List of Tasks. From the List of Tasks, you can follow hypertext links until you reach the screen containing the information you want.

A hypertext link is a connection between one piece of information and another. These links display as underlined text. When you move to a link, the link changes to reverse video. To display the target or connected piece of information, press the Enter key.

The Welcome screen displays five links. They appear as a list of five underlined items.



The screenshot shows the InfoExplorer interface. At the top, there is a menu bar with the following items: info Help Display _History Bookmarks Notes Search Path Exit. Below the menu bar, the text "Welcome to InfoExplorer" is displayed on the left, and "info Document" is displayed on the right. The main content area contains a list of five underlined items: Basic Screen Operations, New InfoExplorer Features, InfoExplorer Help, Reader's Comment Form, and Copyright and Trademark Information. An arrow points from the text "← hypertext links" to the underlined items.

To move to the next hypertext link, press either the Tab key or the Ctrl-f key sequence. If the next link is not currently visible on the screen, the screen is updated to show the link. To move back to the previous link, press the Ctrl-b key sequence.

To select a hypertext link, follow these steps:

1. If the text cursor is not in the text area of the screen, press the Ctrl-o key sequence.
2. Move to the next hypertext link by pressing the Tab key or the Ctrl-f key sequence.
3. Move to the previous link by pressing the Ctrl-b key sequence.
4. To select the link, press the Enter key. The target text appears on the screen.

Practice moving the cursor from one link to another with the Ctrl-f and Ctrl-b key sequences. Before you continue with the next section, try selecting one of the links in the Welcome screen. Remember that you can return to the primary navigation screen by pressing the Ctrl-w key sequence.

You cannot display artwork on an ASCII terminal. When a link to a piece of artwork is selected, a pop-up panel displays with a message that the artwork cannot be displayed. The message prompts you to press a key to continue. For example, command articles contain syntax diagrams that can only be viewed on a graphics display. However, you can view the brackets-and-braces version of the syntax on an ASCII terminal.

Scrolling Information (InfoExplorer ASCII)

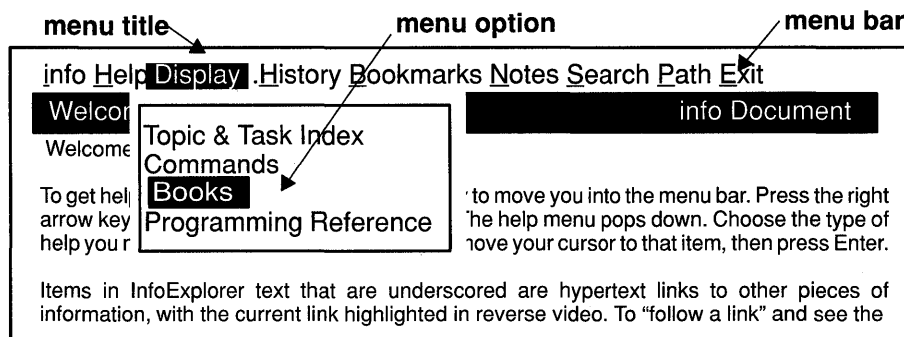
You can move forward and backward through text displayed in either the navigation screen or in the reading screen by using keys and key sequences that have been defined for this purpose.

- To move to the previous screen, use either the Page Up key or the Ctrl-P key sequence.
- To move to the next screen, use either the Page Down key or the Ctrl-N key sequence.
- To move the text cursor up one line, press the Up Arrow key.
- To move the text cursor down one line, press the Down Arrow key.

Before you continue, try moving up and down through the text on the terminal screen.

Selecting a Menu Option (InfoExplorer ASCII)

Each InfoExplorer screen contains a menu bar that is located across the top of the screen. The menu bars contain many of the menus that you need to use InfoExplorer features. For example, the Display menu allows you to choose the navigation document you want to display in the navigation screen and the Help menu provides you with help on using the InfoExplorer program.



To select a menu option, do the following:

1. Activate the menu bar by pressing the Ctrl-O key sequence.
2. Use the Left and Right Arrow keys to highlight the title of the menu you want to display and press Enter, or type the underlined character in the menu title. The menu is displayed as a pull-down panel with several options.
3. Use the Up and Down Arrow keys to highlight a menu option and press Enter, or type the underlined character in the menu option. The option you select is invoked or another menu is displayed in a pop-up panel. The menu options are displayed in the menu bar of this menu.

After you display a menu, you may want to remove it without selecting an option. To do this, press the Ctrl-O key sequence. The cursor returns to the screen.

To select an option in a pop-up panel, do the following:

1. Activate the menu bar as you normally would, using the Ctrl-O key sequence.
2. Highlight an option by either typing the underlined character in the option that you want, or by using the Left and Right Arrow keys.
3. Select the option by pressing the Enter key. The pop-up panel closes and the appropriate action is taken.

After you display a pop-up panel, you may want to remove it without selecting an option. To do this, press the Ctrl-O key sequence and select **Quit** in the menu bar.

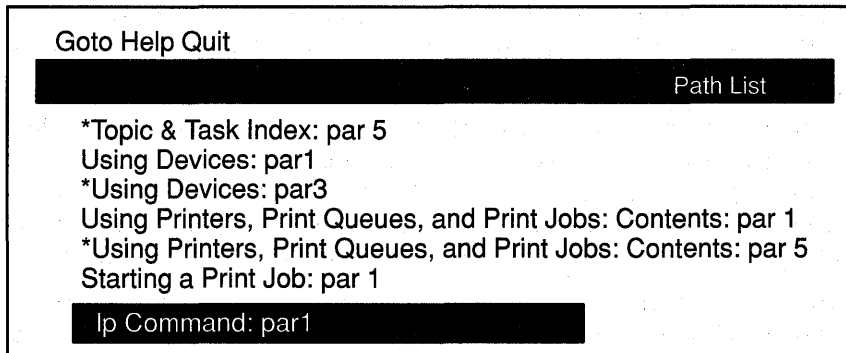
Before you continue with the next section, practice using menus. Try displaying the Path menu and selecting the **Show List** option. A pop-up panel displays the Path list. To close the pop-up panel, select **Quit** in the menu bar.

Returning to a Previous Location (InfoExplorer ASCII)

During the InfoExplorer session, the InfoExplorer program keeps two different records of where you have previously been: the History List and the Path List. These lists enable you to return to previous locations in the information base.

The History List records every location that you have been in the information base. To view the History List, display the .History menu and select the **List All** option. To learn how to use the History List, go to the Help menu and select the **List of Helps** from the pull-down menu. **Finding Information in InfoExplorer** in the List of Helps provides information about the History function.

The Path List keeps track of your navigation route starting with a primary navigation article (Topic & Task Index, Books, Commands, or Programming Reference). Every time you return to a primary navigation screen, your previous path list is overwritten.



The Path menu contains three options: **Show List**, **Previous**, and **Next**. Use the **Show List** option to display the Path List. Use the **Previous** and **Next** options to jump to the previous or next location without displaying the Path List.

To return to a previous location in the InfoExplorer program, do the following:

1. Activate the menu bar by pressing the Ctrl-O key sequence.
2. Type **P** to display the Path menu.
3. Type **S** to display the Path List. A pop-up box displays a list of locations in the path. If you are in a primary navigation screen, you receive a message stating that the Path List is empty.
4. Highlight the location that you want to return by using the Up and Down Arrow keys.
5. Select the **Go to** option in the menu bar. The text displays in the reading screen.

Before you continue, try following the path up and down using the **Next** and **Previous** options. Remember, if you follow the path back to a primary navigation article (such as the Task Index), your path list is wiped out and you are unable to follow a path down until you start a new path. If you want to return to a location that is not in the current path, use the History function.

Searching for Information (InfoExplorer ASCII)

The early part of this chapter described how to find information using primary navigation routes. But what if you do not know what the task or command is or in which book the information might be? You can search on virtually every word in the InfoExplorer information base. Using the InfoExplorer search facility, you can look for information by word or phrase.

Two types of searches are available in the InfoExplorer program: the simple search and the compound search. The *simple search* allows you to search on a word or string of words (in exact order) in text, article titles, or both. (In the ASCII version of InfoExplorer, the Article Title selection on the Search menu gives you a simple search of article titles.) The *compound search* allows you to search on a word, set of words, or several sets of words. You can further specify the search with the following options:

- **AND, OR, and BUT NOT** connective options
- Proximity options
- Search categories

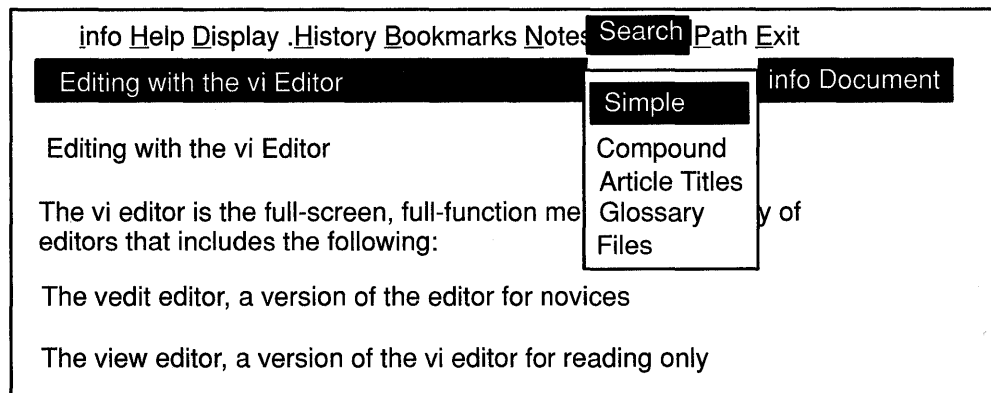
You can specify the information bases to be searched for both simple and compound searches. There are two ways to specify an information base selection:

- You can specify a temporary information base selection from the Compound Search window. This selection applies to both simple and compound searches, and stays in effect for the current session of InfoExplorer, or until you change it during the session.
- You can specify an information base selection as a default by choosing Defaults from the info menu, and selecting the **DBselect** option. An information base selection made from the Defaults window applies to both simple and compound searches, and stays in effect for future sessions of Info. (Temporary information base selections made from the Compound Search window can override the default selection during an InfoExplorer session, but the default selection returns when you restart InfoExplorer.)

As an example, the following steps take you through a simple search for the **qprt** command, and then further specify the search with a database selection from the Compound Search menu.

To perform a simple search for the **qprt** command, follow these steps:

1. Display the Search menu in the menu bar.



2. Select the **Simple** option in the Search menu. The Simple Search pop-up panel displays.
3. In the Find field, type `qprt` command and press the Enter key. The Search Match List pop-up panel displays the following information:

commonly used InfoExplorer procedures. From the List of Helps, select **Performing a Compound Search**.

Another way to narrow the scope of the search even further is to go to the compound search menu and select the database that is most likely to contain the information that you want. There are several databases to choose from depending on your system. For example, if you want to limit your search to information about using and managing, choose the **Using, Managing, and Commands** database.

To specify a database from the compound search pop-up panel, follow these steps:

1. Press the Ctrl-O key sequence to go to the menu bar.
2. Select the **DBselect** option. The Databases List displays.
3. A > (greater than sign) displayed to the left of an information base in this list indicates that the information base is included in the current compound search.
4. Mark the databases that you want to exclude from the search by doing the following:
 - a. Use the Up and Down Arrow keys to select a database currently included in the search that you do not want to search. The database is highlighted.
 - b. Press the Ctrl-O key sequence to go to the menu bar in the Databases List pop-up panel.
 - c. Select the **Bypass** option. The > is removed from the margin.

Repeat this procedure for each database that you do not want to search.

5. Mark the databases that you want to include from the search by doing the following:
 - a. Use the Up and Down Arrow keys to select a database currently not included in the search. The database is highlighted.
 - b. Press the Ctrl-O key sequence to go to the menu bar in the Databases List pop-up panel.
 - c. Select the **Select** option. The > is displayed to the left of the selected database.

Repeat this procedure for each database that you want to search.

6. When you have finished selecting databases, press the Ctrl-O key sequence to go to the menu bar and select the **Quit** option. The Compound Search pop-up panel is displayed again (with all information bases displayed in the Search Field) and you can continue with your search.

When you specify a database selection from the Compound Search menu, the selection is retained until you change it again, or until you quit the InfoExplorer session. This database selection will apply to both simple and compound searches. You can save a database selection for future sessions of InfoExplorer from the Defaults window under the info menu.

Printing Information (InfoExplorer ASCII)

You can print the following information from the InfoExplorer ASCII interface:

- An article from a reading screen
- An article from a navigation screen
- References from a navigation screen
- Articles from a Search Match list
- Public and private notes

Note: You must have one or more printers configured for your system.

To Print an Article from a Reading Screen

1. Press the Ctrl-O key sequence to activate the menu bar. The **info** menu option is the default and is highlighted.
2. Press the Enter key to display the **info** menu options.
3. Press the P key to select the **Print Article** option. The article currently displayed in the reading screen is printed.

To Print an Article from a Navigation Screen

1. Press the Ctrl-O key sequence to activate the menu bar. The **info** menu option is the default and is highlighted.
2. Press the Enter key to display the **info** menu options. The **Print Article** option is the default and is highlighted.
3. Press the Enter key. The current navigation article is printed.

To Print References from a Navigation Screen

1. Press the Ctrl-O key sequence to activate the menu bar. The **info** menu option is the default and is highlighted.
2. Press the Enter key to display the **info** menu options.
3. Press the Down Arrow key until the **Print References** option is highlighted.
4. Press the Enter key to print all referenced articles in the navigation screen.

To Print Articles from a Search Match List

1. Press the Ctrl-O key sequence to activate the menu bar. The **info** option is the default and is highlighted.
2. Press the S key to select the **Search** menu option.
3. Press the Down Arrow key until the **Show Hit List** option is highlighted, then press the Enter key. The Search: List of Titles pop-up panel is displayed.
4. Press the Ctrl-O key sequence to activate the menu bar in the Search: List of Titles pop-up panel.
5. Press the P key to select the **Print** option. All articles referred to in the Search: List of Titles pop-up panel are printed.

To Print Public and Private Notes

1. Press the Ctrl-O key sequence to activate the menu bar. The **info** option is the default and is highlighted.
2. Press the N key to select the **Notes** option. The **List All** option is the default and is highlighted.
3. Press the Enter key to display the Notes List pop-up panel.
4. Press the Ctrl-O key sequence to activate the menu bar in the Notes List pop-up panel.
5. Press the P key to select the **Print** option. All notes in the Notes List pop-up panel are printed.

Accessing Help (InfoExplorer ASCII)

From an InfoExplorer screen, you can view help information about the functions and options available on the InfoExplorer screen you are viewing or you can search through a list of topics for which help information is provided.

To Access Help on a Specific Screen

The InfoExplorer program uses many different kinds of screens in addition to the basic navigation and reading screens, such as:

- Glossary screens
- List of links screens
- File screens
- Simple and compound search screens

Each screen type serves a different purpose and provides a different function. The Help menu in each screen contains an **On Screen** option, which displays an article describing the function that is available in the current screen.

To display Help on a specific screen, do the following:

1. Activate the menu bar by pressing the Ctrl-O key sequence.
2. Use the arrow keys to highlight **Help** and press the Enter key to display the Help menu.
3. Use the arrow keys to select the **On Screen** option and press the Enter key. A Help article replaces the current reading article.

Before you continue with the next section, try looking at the Help articles available for the screens currently open. Use the Path function to return to this screen.

To Access the List of Helps

The Help menu provides two help options, the **List of Helps** and **On Screen**. **On Screen** allows you to find out about the current screen. For more information about this option, see "Accessing Help on a Specific Screen." The **List of Helps** option in the Help menu displays a list of InfoExplorer help topics. To use the list of helps, do the following:

1. Activate the menu bar by pressing the Ctrl-O key sequence.
2. Use the arrow keys to highlight the **Help** menu and press the Enter key. The Help menu displays.
3. Select the **List of Helps** option to display the list of helps.
4. Select a help topic and press the Enter key.

The list of helps contains step-by-step procedures for a wide range of tasks. Before you go on to the next section, select an option or two in the list of helps. See what is available, and then try using the helps to learn and practice some new skills.

Using Special Keys and Key Sequences (InfoExplorer ASCII)

In the InfoExplorer ASCII Interface, you use special keys and key sequences to move within a screen, select items from a menu, access additional screens, and start processes.

Different keys and key sequences are active depending on whether you are working from a text area, a menu bar, or a pop-up screen.

Keys and Key Sequences Used in Text Areas

You can use the following keys and key sequences in text areas:

Keys	Action
Ctrl-W	Moves between the navigation screen and the reading screen. If the navigation screen is displayed, you can press the Ctrl-W key sequence to display the reading screen. If the reading screen is displayed, you can press the Ctrl-W key sequence to display the navigation screen.
Ctrl-F or Tab	Moves to the next hypertext link.
Ctrl-B	Moves to the previous hypertext link.
Enter or Return	Activates the operation. For example, if you have moved to a hypertext link and press the Enter key, the system follows the link and displays the target information.
Ctrl-L	Refreshes the screen.
Ctrl-N or Page Down	Scrolls vertically to the next screen.
Ctrl-P or Page Up	Scrolls vertically to the previous screen.
Left Arrow	Moves the text cursor one character to the left. If the text can be scrolled horizontally and the text cursor is at the left edge of the screen, the text scrolls one character.
Right Arrow	Moves the text cursor one character to the right. If the text can be scrolled horizontally and the text cursor is at the right edge of the screen, the text scrolls one character.
	Note: The Left and Right Arrow keys do not function for the InfoExplorer program on WYSE terminals.
Up Arrow	Moves the text cursor up one line. If the text cursor is on the top line of the screen, the text scrolls vertically, one line at a time.
Down Arrow	Moves the text cursor down one line. If the text cursor is on the last line of the screen, the text scrolls vertically, one line at a time.
<	Moves the text cursor 20 characters to the left. If the text can be scrolled horizontally, the text scrolls 20 characters to the left.
>	Moves the text cursor 20 characters to the right. If the text can be scrolled horizontally, the text scrolls 20 characters to the right.

Keys and Key Sequences Used in Menu Bars

The following keys and key sequences help you work with items in the menu bar:

Keys	Action
Ctrl-O	Makes the menu bar active or inactive. If your text cursor is located in the text area of the screen, you can press the Ctrl-O key sequence to make the menu bar active. If the menu bar is already active, you can press the Ctrl-O key sequence to make it inactive, which moves the text cursor to the text area.
Esc-Esc or Ctrl-O	Closes a menu bar pull-down menu and places the cursor in the text area.
Tab	<p>Moves to the next menu bar option in the menu bar. If a pull-down menu is not displayed and you press the Right Arrow key, the next menu bar option is displayed in reverse video.</p> <p>In pop-up screen menu bars, moves the cursor from the menu bar into the text area if no menu bar pull-down menus are currently selected.</p>
Left Arrow	<p>Moves to the previous menu bar option. If a pull-down menu is not displayed and you press the Left Arrow key, the previous menu bar option is displayed in reverse video.</p> <p>If a pull-down menu is displayed and you press the Left Arrow key, the previous menu bar option is selected and its pull-down menu is displayed.</p>
Right Arrow	<p>Moves to the next menu bar option. If a pull-down menu is not displayed and you press the Right Arrow key, the next menu bar option is displayed in reverse video.</p> <p>If a pull-down menu is displayed and you press the Right Arrow key, the next menu bar option is selected and its pull-down menu is displayed.</p>
Up Arrow	Displays the pull-down menu for the selected menu bar option or moves the selection to the previous option in a pull-down menu.
Down Arrow	Displays the pull-down menu for the selected menu bar option or moves the selection to the next option in a pull-down menu.
Enter or Return	Activates the selected operation. For example, if a menu bar option is displayed in reverse video and you press the Enter key, the pull-down menu is displayed. If a pull-down menu is already displayed and you press the Enter key, the appropriate action is taken on the item shown in reverse video.

In some cases, the menu bar within a pop-up screen contains options that start or stop a process. The following keys can also be used to move within a pop-up screen or to cycle through options in the screen:

Keys	Action
Tab	Moves to the next field.
Left Arrow	Moves to the previous option in an option ring.
Right Arrow	Moves to the next option in an option ring.
Spacebar	Cycles through the options in an option ring.
Up Arrow	Selects the previous item in a list.
Down Arrow	Selects the next item in a list.
Enter or Return	Activates the selected operation or ends text entry and advances to the next field.

Starting an Alternate InfoExplorer Library (InfoExplorer ASCII)

You can request the InfoExplorer program to load an alternate database library by using the `-l` flag with the `info` command. For example, if you wish to start the InfoExplorer Library containing C++, FORTRAN and Ada documentation, start that library with the following command:

```
info -l compiler
```

Stopping the InfoExplorer ASCII Program

To leave the InfoExplorer program from either the navigation screen or the reading screen, do the following:

1. Activate the menu bar by pressing the Ctrl-O key sequence.
2. Use the arrow keys to highlight the Exit menu and press the Enter key. The Exit menu displays.
3. Select the **Confirm** option by pressing Enter. The operating system command prompt displays and the InfoExplorer program stops.

`info Help Display .History Bookmarks Notes Search Path Exit`

`qprt Command Confirm Document`

The qprt command creates and queues the print job to print the file specified by the file parameter. A file name of - (dash) represents a file to be read from standard input. If more than one file is specified, The files together make up one print job. These files

Chapter 8. System Problems and Error Messages

Sometimes, your understanding of a system problem may be very general: you may know that you have a problem but cannot figure out the cause. At other times you may be able to pinpoint the part of the system causing the problem: software, hardware, a particular device such as a terminal, or a particular part of the operating system such as the file system or logical volume system. Sometimes you may know specifically what is causing a problem and want to use a particular tool to study or fix the problem.

The following sections recommend what to do when you encounter system problems or error messages.

- Responding to System Problems on page 8-2.
- Responding to Error Messages on page 8-3.

Responding to System Problems

The *AIX Version 4 Problem Solving Guide and Reference* provides information to help you investigate, define, and fix system problems. The book is intended for system users who are having problems with software or hardware operation, the operating system, or other programs installed on the system. The chapters in the *AIX Version 4 Problem Solving Guide and Reference* cover general symptoms, specific problems, and problem-solving tools.

General Symptoms

Chapter 1 of *AIX Version 4 Problem Solving Guide and Reference* gives you a Symptom Index to help you identify your problem.

Specific Problems

Chapters 2 through 8 of *AIX Version 4 Problem Solving Guide and Reference* contain information to help you solve these specific problems:

- Inactive system
- Terminal problems
- Inaccurate system clock
- Device problems
- Media problems
- Network problems
- Printing problems

Problem Solving Tools

Chapters 9 through 12 of *AIX Version 4 Problem Solving Guide and Reference* document the following tools you can use to investigate and fix problems:

- A hardware diagnostics facility to obtain a service request number (SRN) for assistance in restoring your system to correct operation.
- An error logging facility for recording hardware and software problems and providing informational messages about system operation.
- A trace facility for monitoring system events to isolate system problems.
- A system dump facility to generate a file containing information on the state of working memory when a severe error occurs.

The appendixes at the back of *AIX Version 4 Problem Solving Guide and Reference* contain information on the following:

- Booting from maintenance mode
- Software validation to verify that an installed software product (or licensed product) has not been damaged or corrupted
- Error identifiers for the error log
- Recovering volume groups.

Responding to Error Messages

The *AIX Version 4 Messages Guide and Reference* provides you with information to help you identify and resolve any errors you receive that are identified by a message number. There are two types of numbered error messages that you can receive:

- Seven-digit software messages caused by errors in a command, system call, or subroutine. These messages are displayed at the AIX command line or in a pop-up window.

For information about identifying and resolving software errors, see “Recovering from Software Errors” in *AIX Version 4 Messages Guide and Reference*.

- Three-digit messages caused by hardware problems or software problems. These messages are displayed on the system operator panel.

For specific error messages, see the *AIX Version 4 Messages Guide and Reference* for a listing of error message identification numbers and their associated articles.

Chapter 9. Available Hardcopy Documentation

This chapter lists some other documentation you can use with this product. You can order these items from your sales representative or from your point of sale. The items listed under "Industry Documentation" can also be ordered through most bookstores.

For a complete listing of documentation available in the product library for the AIX operating system, see *AIX and Related Products Documentation Overview*, order number SC23-2456.

Product Library Documentation

This section contains a list of some related documentation in the product library.

AIX and Related Products Documentation Overview

SC23-2456

This book describes the documentation available for use with AIX products.

AIX Version 4 Getting Started

SC23-2527

This book contains information for first-time users with little or no experience with the AIX operating system. It introduces basic system commands for tasks such as starting and stopping the system, using a keyboard or mouse, logging in and out, identifying and using the various user interfaces, and running basic file commands. The book also covers different strategies for obtaining online help using InfoExplorer documentation. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 Quick Reference

SC23-2529

This pocket-sized reference is designed to provide quick access to frequently needed information, such as keyboard key functions for the vi, ed, and INed editors, InfoExplorer, SMIT, and Korn Shell; how to perform tasks using basic operating system commands; and SMIT fast-path commands.

AIX Version 4 INed Editor User's Guide

SC23-2524

This book describes how to use the INed editor. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 System User's Guide: Communications and Networks

SC23-2545

This book provides overviews, concepts, and procedures on receiving and sending mail, transferring files (**ftp** command), printing files from a remote system and on a remote system, running commands on other systems, communicating between local and remote systems, and customizing the communications environment. It describes features of the following applications: Mail, Transmission Control Protocol/Internet Protocol (TCP/IP), Basic

Networking Utilities (BNU), and Asynchronous Terminal Emulation (ATE). The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 System User's Guide: Operating System and Devices

SC23-2544

This book provides information on running commands, handling processes, handling files and directories, and printing. In addition, it introduces system commands covering tasks such as securing files, using storage media, customizing environment files, and writing shell scripts. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 Guide to Printers and Printing

SC23-2783

This book provides users, system administrators, and programmers with information about the printing facilities available in AIX. Topics include printing files and managing the progress of print requests, configuring printers and print spooling, and more advanced topics such as printer backends. The information in this book is also contained in *Hypertext Information Base Library Version 1 for AIX*.

Common Desktop Environment 1.0: User's Guide

SC23-2793

This book provides users with information on the basic features of the AIX Common Desktop Environment, including how to use the desktop and desktop applications. The information in this book is also contained in *Hypertext Information Base Library Version 1 for AIX*.

Common Desktop Environment 1.0: Advanced User's and System Administrator's Guide

SC23-2795

This guide assists advanced users and system administrators in customizing the AIX Common Desktop Environment for personal or systemwide use. This information helps the system administrator to add and administer new applications to the desktop and to configure desktop environments. The information in this book is also contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 System Management Guide: Communications and Networks

SC23-2526

This book provides installation, configuration, maintenance, and troubleshooting information for AIX communications products. It is written for system managers who manage the following applications: Transmission Control Protocol/Internet Protocol (TCP/IP), Basic Networking Utilities (BNU) (the AIX version of UUCP), NFS, NIS, NCS for AIX, and Asynchronous Terminal Emulation (ATE). The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

Wabi 2.0 for AIX: User's Guide

SC23-2765

This guide provides end users and system administrators with information on how to use Wabi 2.0 for AIX, including how to use it for running applications based on Microsoft Windows 3.1 software on the AIX operating system. Topics include: installing the Wabi 2.0 for AIX program, setting up drives, configuring ports, managing printing operations, and installing and running applications. Step-by-step instructions for completing all Wabi 2.0 for AIX tasks are included for end users. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 System Management Guide: Operating System and Devices

SC23-2525

This book contains procedural instructions and conceptual information needed for system managers to manage the AIX operating system. It covers such topics as managing the system with the System Management Interface Tool (SMIT), booting and shutting down the system, managing logical volume and file system storage, configuring and monitoring system environment (including national language support), managing processes and subsystems, managing system access (users and security), handling system accounting, and managing the InfoExplorer documentation retrieval tool. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 Commands Reference (Six Volumes)

SBOF-1851

These books contain descriptions and examples of the commands and their available flags. The command entries are arranged in alphabetical order. Each of the six volumes contains a comprehensive alphabetic and functional index. The information in these books is contained in *Hypertext Information Base Library Version 1 for AIX*. Also included with order number SBOF-1851 is *Go Solo: How to Implement and Go Solo with the Single Unix Specification* (X/Open Company, Ltd. and Prentice Hall, Inc.).

AIX Version 4 Files Reference

SC23-2512

This book provides system managers and programmers with reference information about file formats, special files, system files, header files, directories, and associated information. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 Problem Solving Guide and Reference

SC23-2606

This book serves as the primary reference for users who encounter problems with the system hardware or software that cannot be corrected by the normal message actions. This book provides users with steps that may either return the system to a normal operating condition or give users sufficient information to place a service call. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 Messages Guide and Reference

SC23-2641

This book helps users investigate the causes of three-digit display values or seven-digit software error messages. This book provides specific recovery actions to enable recovery from system error messages. This book also includes an Error Message Index, which contains brief information on AIX seven-digit error messages. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Versions 3.2 and 4 Performance Tuning Guide

SC23-2365

This book covers performance concepts and tools, and it provides information for system managers about monitoring and tuning performance in workstation, multiuser, and server environments. The information in this book is contained in *Hypertext Information Base Library Version 1 for AIX*.

AIX Version 4 Topic Index and Glossary

SC23-2513

This book contains a glossary of terms used in AIX documentation. It also contains a listing of topics in the AIX library and the books in which those topics are discussed.

Hypertext Information Base Library Version 1 for AIX

The *Hypertext Information Base Library Version 1 for AIX* contains AIX documentation (both text and graphics) that has been prepared for use with the InfoExplorer Hypertext retrieval system. The library is available under program number 5696-919.

Industry Documentation

This section contains a list of some documentation that is not part of the AIX product library but that describes utilities available in the AIX products. Because the AIX operating system contains many utilities that comply with industry standards, you can use a variety of books with your system. Your local bookstore may be able to help you find more books you can use with your system.

The UNIX / X Window Nutshell Combo Pack

SR28-4962

The UNIX / X Window Nutshell Combo Pack contains the following books:

- Todino, Grace, and John Strang, Jerry Peek. *Learning the UNIX Operating System*. Sebastopol, CA: O'Reilly & Associates, 1993.

If you are new to UNIX, this concise introduction will tell you just what you need to get started and no more. The third edition has been updated for new UNIX systems and now covers basic networking commands and e-mail and introduces the X window system.

- Gilly, Daniel, and the staff of O'Reilly & Associates. *UNIX in a Nutshell: A Desktop Quick Reference for System V and Solaris 2.0*. Sebastopol, CA: O'Reilly & Associates, 1992.

You may have seen UNIX quick-reference guides, but you've never seen anything like *UNIX in a Nutshell*. Not a scaled-down quick-reference of common commands, *UNIX in a Nutshell* is a complete reference containing all commands and options, along with

generous descriptions and examples that put the commands in context. For all but the thorniest UNIX problems, this one reference should be all the documentation you need.

- Cutler, Ellie, Daniel Gilly, and Tim O'Reilly, ed. *The Definitive Guides to the X Window System: Desktop Quick Reference, The X Window System in a Nutshell for Version 11 Release 4 and Release 5 of the X Window System*. O'Reilly & Associates, 1992.

Indispensable companion to the X Window System Series. Experienced X programmers can use this single-volume desktop companion for most common questions, keeping the full series of manuals for detailed reference.

Learning the vi Editor

SR28-4966

Lamb, Linda. *Learning the vi Editor*. Sebastopol, CA: O'Reilly & Associates, 1990.

A complete guide to text editing with vi, the editor available on nearly every UNIX system. Early chapters cover the basics; later chapters explain more advanced editing tools, such as ex commands and global search and replacement.

Learning the Korn Shell

SR28-5268

Rosenblatt, Bill. *Learning the Korn Shell*. Sebastopol, CA: O'Reilly & Associates, 1993.

A thorough introduction to the Korn shell, both as a user interface and as a programming language. It provides a clear explanation of the Korn shell's features, including ksh string operations, co-processes, signals and signal handling, and command-line interpretation. *Learning the Korn Shell* also includes real-life programming examples and a Korn shell debugger (kshdb).

sed & awk

SR28-4968

Dougherty, Dale. *sed & awk*. Sebastopol, CA: O'Reilly & Associates, 1990.

For people who create and modify text files, sed and awk are power tools for editing. Most of the things that you can do with these programs can be done interactively with a text editor. However, using sed and awk can save many hours of repetitive work in achieving the same result.

MH and xmh: E-mail for Users and Programmers

SR28-4967

Peek, Jerry. *MH and xmh: E-mail for Users and Programmers*. Sebastopol, CA: O'Reilly & Associates, 1995.

Customizing your e-mail environment can save time and make communicating more enjoyable. *MH & xmh: E-Mail for Users & Programmers* explains how to use, customize, and program with the MH electronic mail commands available on virtually any UNIX system. The handbook also covers xmh, an X Window System client that runs MH programs.

The Whole Internet User's Guide and Catalog

SR28-4852

Krol, Ed. *The Whole Internet User's Guide and Catalog*. Sebastopol, CA: O'Reilly & Associates, 1994.

A comprehensive—and best-selling—introduction to the Internet, the international network that includes virtually every major computer site in the world. The Internet is a resource of almost unimaginable wealth. In addition to electronic mail and news services, thousands of public archives, databases, and other special services are available: everything from space flight announcements to ski reports. In addition to electronic mail, file transfer, remote login, and network news, *The Whole Internet* pays special attention to some new tools for helping you find information. There's also coverage of the World Wide Web, including the Web's multimedia browser, Mosaic. Also includes a pullout quick-reference card.

Spinning the Web: How to Provide Information on the Internet

SR28-5646

Ford, Andrew. *Spinning the Web: How to Provide Information on the Internet*. London: International Thomson Publishing, 1995.

This book provides guidance for people who want to publish information on the World Wide Web. Topics covered include setting up and administering a server, preparing material for publication, converting existing material into a form suitable for publication, publicizing your presence, and making material available on the Web.

UNIX Power Tools

SR28-4965

Peek, Jerry, Mike Loukides, and Tim O'Reilly. *UNIX Power Tools*. O'Reilly & Associates, 1993.

Ideal for UNIX users who hunger for technical, yet accessible information, *UNIX Power Tools* consists of tips, tricks, concepts, and freeware (CD-ROM included). Covers add-on utilities and how to take advantage of clever features in the most popular UNIX utilities.

The 55 chapters in this book discuss topics like file management, text editors, shell programming — even office automation. Overall, *UNIX Power Tools* is loaded with practical advice about almost every aspect of UNIX. It will help you think creatively about UNIX, and will help you get to the point where you can analyze your own problems.

Essential System Administration

SR28-4856

Frisch, Aileen. *Essential System Administration*. Sebastopol, CA: O'Reilly & Associates, 1991.

Provides a compact, manageable introduction to the tasks faced by everyone responsible for a UNIX system. This guide is for those who use a standalone UNIX system, those who routinely provide administrative support for a larger shared system, or those who want an understanding of basic administrative functions. Covers all major versions of UNIX.

Practical UNIX Security

SR28-4870

Garfinkel, Simson, and Gene Spafford. *Practical UNIX Security*. Sebastopol, CA: O'Reilly & Associates, 1991.

Tells system administrators how to make their UNIX system—either System V or BSD—as secure as it possibly can be without going to trusted system technology. The book describes UNIX concepts and how they enforce security, tells how to defend against and handle security breaches, and explains network security (including UUCP, NFS, Kerberos, and firewall machines) in detail.

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