

substituting text in the editing buffer

You can delete portions of a line and substitute other letters or words. For example, let's change the word "ceaselessly" to "unceasingly" in Line 2 of the Olaf file.

1. Type:

2s/ceaselessly/unceasingly/

2. To verify that the substitution was made, type:

p

The screen shows:

Did almost unceasingly repeat:

In Step 1, 2 is the line number, and s tells ed to "substitute." The text to substitute for and the text to substitute are separated by slashes.

deleting text from the editing buffer

You can delete a portion of a line, or you can delete an entire line or several lines.

deleting a portion of a line

1. You use the s command to delete only part of a line, that is, a character or a string of characters. For example, delete the word *Olaf* from Line 1 of the file Olaf. Type:

1s/Olaf//

2. Now display the line. Type:

1

The screen shows:

And who on bended knee

deleting lines

1. You use the d command to delete a single line or several lines. To delete Line 2 from the file Olaf, type:

2d

2. Display the contents of the file to verify that Line 2 is deleted. Type:

1,\$p

3. The screen shows:

And who on bended knee

undeleting lines

1. You use the u command to undelete the last line deleted. To undelete Line 2 from the file Olaf, type:

u

2. Display the contents of the file to verify that Line 2 has been restored to the file. Type:

1,\$p

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permissions

The 3 kinds of permissions in XENIX are read, write, and execute.

If you have **read** permission for a file, you can display it on the screen and read the information in it. If you have read permission for a directory, you can display its "table of contents" on the screen. That is, you can see a list of all the subdirectories and files in that directory.

If you have **write** permission for a file or a directory, you can move it, add to it, delete information from it, remove it, rename it, or change it in anyway. If you have write permission for a directory, you can create subdirectories and files within it.

If you have **execute** permission for a program, you can run it. If you have execute permission for a directory, you can move into it and search it for files, such as programs to run.

The 3 kinds of permissions are available to 3 categories of users: individual users (u), groups (g), and others (o). An individual user is the owner of a particular file or directory. He or she usually has read, write, and execute permission for all files and directories in his or her home directory.

A group of users may have collective permissions for a particular file or directory.

Others are anybody and everybody who neither own a file or directory nor are members of an owner's group.

4. The **w** copies the file and saves it as a file named "Olaf." Your screen shows 59, the number of characters in the file Olaf.
5. Now end, or quit, your editing session. Type:

q **ENTER**

displaying the contents of the editing buffer

1. To reenter the editor and to see the contents of the file you just created, type:

ed Olaf **ENTER**

2. **ed** displays:

59

3. To display the contents of the file, type:

1,\$p **ENTER**

4. The screen shows:

```
And Olaf who on bended knee
Did almost ceaselessly repeat:
```

(Did you complete the quote? If so, your third line also appears!)

Typing **1,\$** tells ed to start displaying at Line 1 of the text and to display through to the last line (\$). To display only the last line, type:

\$ **ENTER**

To display any single line, type the line number and **ENTER**. You need not type p.

5. You can move back and forth among lines quickly by typing either a plus (+) or a minus (-) and **ENTER**. A plus displays the next line in the file, and a minus displays the previous line. To display the current line, type a period and **ENTER**.

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using ed

An editor is a computer program that creates, displays, changes, and deletes files or portions of files. Your XENIX editor is called ed.

In this chapter, you learn how to use ed.

creating a file

1. Log in as a user and at the prompt, type:

```
ed 
```

Your screen now shows the ed prompt, the asterisk (*).

2. Now type a , and you are ready to begin entering, or appending, text. Type:

```
And Olaf who on bended knee 
```

```
Did almost ceaselessly repeat: 
```

(If you know the rest of this quote, you can also enter it.)

3. When you are through entering text, type to end the last line. At the beginning of the next line type a period (.) and . The screen again shows the ed prompt (*). The period tells ed that you have finished appending.

While you are entering text, it is kept in a special work space called a "buffer." To save this text as a file, now type:

```
w Olaf 
```

reading permission settings

Whenever you as a user create a file or directory, XENIX automatically assigns these permissions: read and write for you, read for your group, and read for others on the system.

You can look at the permission settings on a particular file or directory. For purposes of example, let's look at the phonebook directory you created earlier. To do so, at your user prompt, type:

```
lc -l /usr/name 
```

Of course, use the user name under which you created the directory. Your screen shows:

```
total x
-rw-r----- 1 name group 344 Aug 16 15:00 .profile
drwxr-xr-x 2 name group 32 Aug 16 17:15 Phonebook
```

Note: Your screen will show 2 entries in this directory—.profile and phonebook. The date for .profile is the date you created this user. The date for phonebook is the date you created your phonebook directory.

For purposes of example, let's look in detail at the entry for your phonebook directory. The 10-character letter-and-dash grouping that begins with d describes the permissions.

d Indicates that this is a directory, not a file. A file is indicated by a dash (-) in this place.

rwX The characters in these next 3 positions indicate the individual user's permissions. In this case, they are read, write, and execute.

r-x These 3 characters indicate the permissions of the members of the individual user's group. In this case, they are read and execute, not write, since a dash is in the write position.

r-x These 3 characters indicate the permissions of others. In this case, they are read and execute.

The number 2 following the permission settings is the number of links for this directory (a link is a connection between blocks). XENIX uses this information internally.

The next numbers show the size of the directory in bytes.

The date and time indicate when the directory was created or last changed. The last item on the line is the name of the directory.

setting and changing permissions

To set or change permissions, you must be in the directory in which you want to make changes, and you must have write permission for the directory. You use the following characters when changing permissions:

u	user	+	add
g	group	-	remove
o	other	=	set
a	all		

You also use *r*, *w*, and *x* to indicate read, write, or execute permission.

For purposes of example, let's change the permissions for the phonebook directory.

1. Position yourself in the `/usr/name/phonebook` directory.
2. To give the individual user, the group, and others read, write, and execute permission, type:

```
chmod a=rwx /usr/name/phonebook 
```

chmod tells XENIX to change mode.

3. To verify that the settings have been changed, type:

```
lc -l /usr/name 
```

4. Your screen shows that everyone now has read, write, and execute permission. The settings are:

```
drwxrwxrwx
```

5. To remove permissions, you use the minus sign. Let's remove write permission for others. At the prompt, type:

```
chmod o-w /usr/name/phonebook 
```

6. You can verify that the changes were made. To add permission, you use the same format, or syntax, as above, substituting the appropriate user character and the plus sign.

2. To return to your home directory, type:

```
cd /usr/name 
```

3. Now to remove the schedule directory, type:

```
rmdir schedule 
```

4. To verify that the schedule directory no longer exists, list the contents of your home directory. Type:

```
lc /user/name 
```

Your screen shows that your home directory contains the phonebook directory but not the schedule directory.

Your screen shows that the phonebook directory now contains 2 files—namelist and todo.

Note: To keep the todo file in the schedule directory and also place a copy of it in the phonebook directory, follow Steps 1-4 above and change Step 2 slightly. Instead of typing mv (move), type cp (copy).

removing a file

To remove, or delete, a file you must position yourself in the directory that contains the file. For purposes of this example, let's delete the todo file from the phonebook directory, where we last placed it.

1. First, verify that you are in the phonebook directory by typing `pwd` . Now, type:
`rm todo`
2. Now list the directory contents to verify that todo has indeed been removed. Type:
`lc`

Your screen shows that the directory now contains only one file—namelist.

Note: If you want to remove all the files in a directory, you can do so by typing `rm *` . The asterisk (*) is the wild card character and in this case tells XENIX to remove all files. Use `rm *` with extreme caution. You can inadvertently lose all your files.

removing a directory

Before you can remove a directory, you must first remove all the files in that directory. Since we have already removed the file from the schedule directory, it is empty and we can delete it.

1. You cannot be positioned in a directory you are removing. You were in the phonebook directory when you deleted the todo file. Type `pwd` to verify that you are still there.

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using the printer

If you have a line printer connected to your terminal, you can print on it, or you can print on the system line printer.

using the system printer

To print on the system printer, type:

`lpr filename`

XENIX places the file in the system spooler and prints it on the system printer when it is available. In other words, if the printer is not busy, the system printer prints your file as soon as you issue the command to do so. If the printer is already printing, XENIX places your file in line to wait its turn to be printed.

using your "local" printer

The local printer is the one connected to your terminal.

If you are using a DT-1, it must be modified before you can use it for local printing. Consult your Radio Shack Computer Center representative about this modification.

If you are using a DT-100, to do local printing you need a Tandy DT-100 Terminal Interface (Cat. No. 26-1198).

After you connect your printer; turn it on and be sure that it is online. Now type:

```
local lpr filename 
```

If the printer does not start or if it stops during printing, check the printer before pressing any key. If the printer goes offline, the system waits for it to come back online. Correct the problem that caused the printer to go offline and place the printer back online. The printer then continues from the point that it went offline.

Warning: While doing local printing, do not press any key on the keyboard unless your terminal screen displays a message asking you to do so. Do not attempt to terminate the printing process by pressing or any other key. Inadvertently pressing a key may cause extra characters to be printed on the printer and may cause the printer, the terminal, or both to end processing.

XENIX automatically sets the size of the form on which you print to 66 lines (6 lines = 1 inch). This does not mean that you actually print 66 lines of text on the form. The printer prints whatever you have specified and then goes to the top of the next form. From the top of the form to the bottom is 66 lines.

You can change the number of lines per form by using the following command:

```
local lpr -F "p=x" filename 
```

-F tells XENIX that you want to change the size of the form. For *x*, substitute the number of lines you want per form. For example, to print checks or invoices that are 30 lines (5 inches) from top to bottom, type:

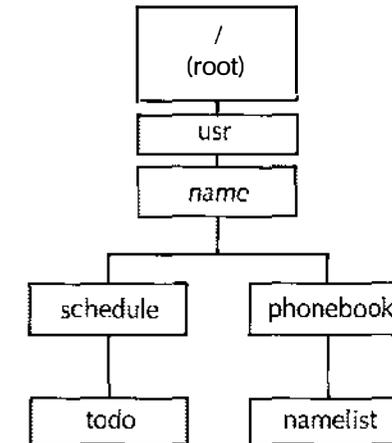
```
local lpr -F "p=30" filename 
```

Note: Using **-F** with **lpr** is not a way to paginate. You are not specifying the number of text lines on a page, but rather the number of lines from the top to the bottom of a form. Do not attempt to use **-F** as a paginating device. It will not work as such.

To use local printing with applications programs, see the instructions in the manual that comes with the program.

moving files

You now have 2 directories in your home directory, and you have a file in each of these directories. In the XENIX hierarchical system, a diagram that shows these files and directories looks like this:



You may occasionally want to move a file from one directory to another. For purposes of example, let's move the `todo` file out of the `schedule` directory and into the `phonebook` directory.

1. After you displayed the `namelist` file above, you were in the `phonebook` directory. To move the file, first position yourself in the directory in which that file exists. To do so, type:

```
cd /usr/name/schedule 
```

2. Verify that you are in the `schedule` directory by typing `pwd` . Now, at the prompt type:

```
mv todo /usr/name/phonebook 
```

3. Now move to the `phonebook` directory. Type:

```
cd /usr/name/phonebook 
```

4. List the contents of the `phonebook` directory. Type:

```
lc 
```

As in Step 4, make entries in your file and then type `CTRL`
d. The user prompt appears on your screen. To return to
your home directory, type:

```
cd /usr/name ENTER
```

You can also type `cd ENTER` (without the filename) to get to
your home directory.

displaying the contents of directories and files

1. You can verify that the directory and files you created now
exist. To list (or display) on the screen the contents of your
home directory, type:

```
lc ENTER
```

The screen shows:

```
phonebook  schedule
```

Note: The list is in alphabetic order.

2. To display the contents of the todo file on the screen, first
move to the schedule directory. Type:

```
cd schedule ENTER
```

3. Now type:

```
cat todo ENTER
```

Your screen shows the list of things you have to do that you
entered earlier. Now display the contents of namelist. First,
move to the phonebook directory and then type:

```
cat namelist ENTER
```

Note: For an explanation of some new words you've been using
in these examples (cat, cd, lc, mkdir), see the *XENIX Quick
Reference Guide to Commands*.

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communicating with other systems

cu is a XENIX utility that lets you communicate with other
systems. The systems can be connected manually, that is, by
cable, or they can be remote, that is, connected via modem.

Regardless of how the systems are connected, you must disable
the channel you are using (tty01 or tty02) before you call up
another system. When you are through using cu, enable the
channel so that you can be reached by others calling in. (See your
System Administrator for help with enabling and disabling
channels.)

calling up a manually connected system

At the system prompt, type:

```
cu wait -s baud rate -a /dev/null -l /dev/channel
```

The baud rate must be the same for both the sending and the
receiving devices. The possible baud rates are:

```
300, 1200, 9600
```

/dev/null indicates that you are not connected via modem.
channel is the serial channel to which the cable is connected at
your terminal. If you are connected through Channel A, replace
channel with tty01; if you are connected through Channel B,
replace *channel* with tty02.

For example, if you are sending and receiving at 1200 baud and are connected through Channel B, type:

```
cu wait -s 1200 -a /dev/null -l /dev/tty02 ENTER
```

calling up a remote system

If you are using a modem, you can call up another system and let XENIX identify the speed (baud rate) of your modem. To do so, you use the following command:

```
cu phonenumber -s speed
```

You can, however, select the dialout speed to your modem.

To select a dialout speed of 1200 baud (and 1200 baud only), type:

```
cu phonenumber -a /dev/cua#.1200 -s 1200 ENTER
```

phonenumber is the desired phone number. # is 0 if you are dialing out on tty01; it is 1 if you are dialing out on tty02.

To select a dialout speed of 300 baud (and 300 baud only), simply substitute 300 for 1200 in the above command line.

You can use **cu** to transfer only ASCII files; you cannot transfer binary files with **cu**.

You may lose characters during a file transfer if your communication lines have noise. To correct this problem, you may need to place the call again or lower the baud rate.

using cu

You can use **cu** to access a network, call up a bulletin board, or communicate with a terminal on another system. You do not use it to communicate with other users on your XENIX system.

After you connect, **cu** runs as two processes—send and receive. You communicate by transferring files between 2 systems. The send process reads what you type at the keyboard, or a file you previously created, and passes it to the other system. The receive system reads what is transmitted from the other system and displays it on your screen.

use spaces. However if you use spaces or some special characters when you access the file, you must enclose it in single quotes.

Note: You can use the same filename for different files, but the files must be in different directories. The same file can exist several times in the same directory, but each time it must have a different name.

4. You are now ready to make notes in your todo file. Type whatever you wish. To end a line, press **ENTER**. When you finish, type **CTRL d**, and the system prompt appears on your screen.
5. Now create another directory and another file. This time create a file of frequently used names, addresses, and phone numbers. First, determine your current directory, that is, the directory you are in at present. To do so, type:

```
pwd ENTER
```

The screen shows:

```
/usr/name/schedule
```

6. To create another directory in your home directory, you must again change directories; that is, you must leave the schedule directory and go to the /usr/name directory. To do so, type:

```
cd /usr/name ENTER
```

7. Now you are ready to create another directory called phonebook. To do so, type:

```
mkdir phonebook ENTER
```

8. To move to the phonebook directory, type:

```
cd phonebook ENTER
```

Verify that you are now in the phonebook directory by typing:

```
pwd ENTER
```

9. To create a file, type:

```
cat >namelist ENTER
```

When the System Administrator creates a user, XENIX automatically assigns that user a workspace called `/usr/name`. `/usr` is a major XENIX directory that contains the workspaces of all users on the system. The user's login name is a subdirectory of `/usr`; it is also called the user's "home directory."

As a user, you may create further subdirectories in your home directory, and you may create files within those subdirectories. To access a file you have already created, you need to know its "pathname." A pathname is exactly what the word implies—the path XENIX takes to find the file. It consists of the directories and subdirectories within which the file exists and the name of the file.

creating directories and files

Although you can use XENIX to perform many complicated tasks, you can also use it to perform some simple tasks that will streamline your office routine. These examples show you how.

- To use XENIX as a reminder service, first create a subdirectory within which you can create a "To Do" file. Log in and at your user prompt, type:


```
mkdir schedule 
```
- Now your home directory contains a subdirectory called "schedule." You are still in your home directory, however. To create a file in the schedule directory, you must be **in** that directory. To get to the schedule directory, you must change directories. Type:


```
cd schedule 
```
- Within the schedule directory, you can now create a "To Do" file. At the prompt, type:


```
cat >todo 
```

The file is created, and you can now place information in it. Notice that we typed the filename in all lowercase letters and omitted the space between the 2 words. You can use any characters in a filename except the slash. You can also

If you are connecting to a bulletin board or a network, after you connect and log in you follow the communications protocol established by the system you are calling.

If you wish to communicate with a terminal on another XENIX system, you can use the procedure that follows. The procedure for initiating and terminating communication with `cu` are the same regardless of the device you wish to access.

sending and receiving messages

- After you type the `cu` command, the screen displays a message that you are connected. Press and log in at the prompt. To send a message, at the `cu` prompt type:

```
cat >/dev/ttyxx 
You can now type the message 
you want to send. Be sure to 
end each line you type by pressing the 
<ENTER> key. To end a message, type 
<CTRL> d at the beginning of a new line. 
 d
```

- After you type d, the other system's prompt appears on the screen. To exit `cu`, type:

```
 ~. 
```

Note: To obtain the tilde (~), type 6.

- Now your screen shows your XENIX prompt. When you use `cat` to send a message, that message immediately appears on the receiver's screen if the system is in use. If the receiver wishes to respond, he or she does so using the `cat` command as shown in Step 1 above. If the receiver does not wish to respond, he or she can ignore the message and continue with whatever task was at hand.

transferring files

You can use `cu` to communicate with another XENIX system and with a non-XENIX system. You can transfer files, however, only between 2 XENIX systems. You cannot use the following commands unless both systems are operating with XENIX.

When you transfer a file with `cu`, you simply copy it onto another XENIX system. You can copy it with the same name or with another name. To copy a file, you must be in the directory where the file exists.

To copy a file from your system to another XENIX system, at the other system's prompt type:

`~%put filename`

This command copies a file from your system to the other system; its name remains the same on both systems. If you wish to copy it and rename it on the other system, type:

`~%put filename new filename`

To copy a file from another system onto your system, type:

`~%take filename`

To copy a file from another system onto your system and rename it on your system, type:

`~%take filename new filename`

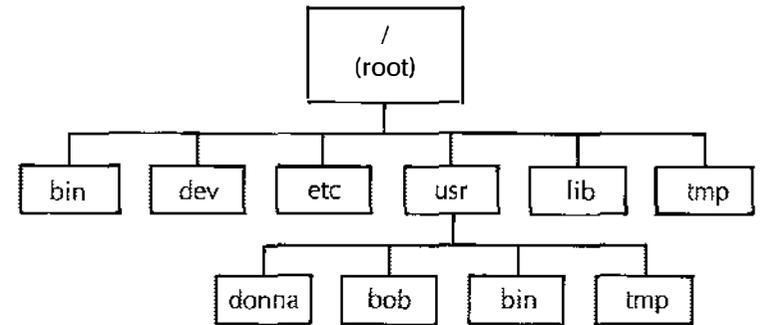
3

directories and files

XENIX is organized in a system of directories and files. Directories can themselves contain other directories, or subdirectories, which in turn contain files. XENIX stores information in directories and files in much the same way that a filing cabinet does. A directory is similar to the file cabinet itself, and a subdirectory is like a drawer in a file cabinet. Within the drawer are folders, some of which contain other folders that contain memos, letters, reports, charts—all kinds of information.

XENIX directories and files are organized "hierarchically"; that is, all directories and files branch from a single root. A chart of these directories and files looks like an inverted tree. The trunk is at the top, representing the "root" directory, and the main branches, smaller branches, and twigs are other directories and subdirectories. The leaves are the files.

Below is an example of a typical XENIX organizational structure.



- At the tsh prompt (tsh>), type:

```
save 0 -ss /usr/name/filename ENTER
```

save is the command that tells XENIX to copy information from the hard disk. **0** indicates that the information is to be copied onto the diskette in floppy Drive **0**. **-ss** indicates that the diskette is single-sided. If you are using double-sided diskettes, you type **-ds**. **name** is your login name, and **filename** is the name you gave the file when you created it.

You can back up more than 1 file on a disk. To do so, simply specify each filename on the command line; separate filenames with spaces. For example:

```
save 0 -ss /usr/name/filename /usr/name/filename
ENTER
```

Be sure to type the command exactly as shown, including the spaces and slashes. Substitute your name and the filename appropriately for the words in italics.

- When the screen indicates that the file or files have been found, your backup is complete. To leave tsh, type:

```
exit ENTER
```

Your user prompt now appears on the screen.

restoring applications files to your hard disk

If you wish, you can later restore to your hard disk the information you copied to floppy diskette.

- Log in to XENIX as user. Place the diskette you wish to restore in floppy Drive **0**. At your prompt, type:

```
tsh ENTER
```

- At the tsh prompt, type:

```
restore 0 ENTER
```

- When the screen indicates that the file or files have been restored, you can then restore more files or exit tsh.

glossary

accessing. The process of getting at information stored in the computer.

applications program. A group of instructions that does a specific, practical task, such as keeping track of accounts payable.

backup. A copy of information that is stored on a floppy diskette or hard disk.

banner. A heading that separates parts of information printed on the line printer.

baud rate. The speed at which information is transmitted.

block. A set of consecutive machine instructions, characters, or digits the computer understands as a unit.

boot. The process of loading the disk operating system.

buffer. An area of a computer's memory that is used to store information temporarily.

bulletin board. In the world of computers, an electronic version of the cork type. Users exchange information by placing notices on it and responding to posted notices.

byte. The basic unit of information in the computer. A byte is the equivalent of 1 character.

cable. A device consisting of plugs and wiring that lets you manually connect computers and peripheral devices.

cartridge disk. A removable platter enclosed in a plastic housing, on which the computer can store data.

Central Processing Unit. The circuits in the computer that control the execution of instructions.

cleaning. In XENIX terminology, the process of clearing up inconsistencies on the file system.

- command.** A sequence of characters that tells the computer to take a particular action immediately. A command is usually typed at the keyboard.
- communications protocol.** The steps you take to get to and converse with connected electronic media.
- computer.** An electronic device that can receive and follow instructions and then use these instructions to calculate and to compile, select, and correlate information. It usually consists of a keyboard, a video screen, input/output devices, and a Central Processing Unit (CPU).
- console.** The host computer in a multiterminal system. See also host computer.
- core system.** In XENIX, the basic unit of the operating system that you must have to run applications programs.
- CPU.** Central Processing Unit.
- current directory.** The place in the XENIX system in which you are working.
- cursor.** A blinking or steady screen-symbol that indicates the place at which the next typed character will appear.
- cylinder.** A division of a hard disk.
- data.** Items of information that a computer can process or generate.
- data terminal.** A connection between you and a computer that transfers information from human form to a format computers understand. It consists of 3 parts—a keyboard, a videoscreen, and input/output channels.
- default.** A condition that exists when you turn on your computer.
- development system.** In XENIX, a group of programs and utilities with which you can make other programs and do typesetting and printing. It is separate from the core system.
- device.** Any piece of computer equipment.
- directory.** A list of the files on a disk. In XENIX, a disk can have multiple directories, each containing other directories and files.

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using applications programs

An applications program is a set of instructions that performs a specific, practical task such as accounting or word processing. Your System Administrator is responsible for installing applications programs on the hard disk at the console.

You can use any applications program for which you have permission. To do so, at your user prompt type the name of the application as instructed in the applications manual.

Your System Administrator is responsible for making regular backups of your XENIX system. A backup is a copy on floppy diskette of what is on the hard disk at the console. You may, however, want to make your own backups on occasion. For example, you may have a file that is not important enough to take up space on the system hard disk but that you would like to retain personally.

backing up your files

You can use the following procedure to back up one file or several files. If you are working at a data terminal, you can ask the System Administrator to insert a floppy diskette in floppy Drive 0. Then, you can issue the commands at your terminal.

1. At your user prompt, type:

```
tsh 
```

To display a list of commands that relate to a specific keyword, type:

help -k keyword

For example, to obtain a list of those commands that relate to "directories," type:

help -k directory

To find more information on **help**, type **help** and press .

disable. Disconnect or disallow electronically.

disk. A device on which a computer can store information. See floppy diskette; hard disk.

diskette. See floppy diskette.

diskutil. In XENIX, a program with which you format and/or copy hard disks or floppy diskettes.

display. The video screen. If a program displays text, it shows it on the screen. If a program prints text, it prints it on paper at the line printer.

edit. Alter, or change, text. You edit text when you add, modify, or delete portions of it.

editor. A program that lets you use specific commands to modify text.

enable. Connect or allow electronically.

error message. Text that appears on the screen that tells you a mistake has been made. It may be your mistake or the computer's.

execute permission. In XENIX, a setting that lets you run a program.

file. A defined unit of data stored on disk. In XENIX, sometimes both files and directories are referred to as files.

file system. The organization and allocation of files on disks.

floppy diskette. A flexible platter made of a plasticlike material on which the computer can store data.

format. Organize a disk into tracks so that the computer can write on it.

garbage. A random display of characters that may appear on the screen or in printed copy.

group. In XENIX, a specifically defined collection of users.

hard disk. A circular metal plate with magnetic material on both sides, on which the computer can store data.

head. A device that reads information from, writes information on, and deletes information from a disk.

- hierarchical structure.** In XENIX, the way directories and files are organized; that is, the way in which they branch from a single root.
- home directory.** In XENIX, your login directory.
- host computer.** The controlling computer in a multiterminal computer system.
- initialize.** To make a formatted disk ready for use.
- input-output parameters.** The electronic options for placing data into a computer or taking it out.
- log in.** The way in which you identify yourself to the computer.
- login directory.** The root directory with which your login name is associated.
- log out.** The way in which you tell the computer you are leaving the system.
- manually connected terminal.** A computer or data terminal that is connected to the host computer by cable.
- media error map.** A list of bad, or flawed, tracks and heads that comes with your hard disk.
- megabyte.** 1 million bytes.
- menu.** A screen display that give you a list of options.
- modem.** A device you connect to your computer and with which you communicate with another terminal over telephone lines.
- mount.** Make a device electronically or physically accessible to your computer.
- multitasking.** The ability of an operating system to perform several tasks at the same time.
- multiuser.** A computer configuration, or system design, that lets more than 1 person use the computer at the same time.
- network.** A series of interconnected computer communication systems.

- To change your password, at your user prompt type:

```
passwd [ENTER]
```

The screen shows:

```
Changing password for user
Old password:
```
- Type your password and press [ENTER]. The screen shows:

```
Enter new password (minimum of 5
characters)
Please use a combination of upper and
lowercase letters and numbers
New password:
```
- Type your new password and press [ENTER]. The screen shows:

```
Re-enter new password:
```

Type your password again and press [ENTER]. The screen shows your user prompt. The new password is substituted for the old one.

if you need help

The help files let you display various XENIX commands if the System Administrator has installed the help files. To display the list of subjects for which help is available, type at the user prompt:

```
help -l [ENTER]
```

To display help for a specific subject, use:

```
help subject
```

For example, to display the help information for the **ls** command, type:

```
help ls [ENTER]
```

To display help for a particular section, type:

```
help -s section subject
```

For example, to display help on the **write(S)**, type:

```
help -s S write [ENTER]
```

2. It can consist of any characters on the keyboard except `BACKSPACE`, `BREAK`, and `ENTER`.
3. It should be something that you can easily remember and that others will not easily guess.
4. Your password never shows on the screen. You type it, and XENIX recognizes it, but the screen never displays it.

logging in

1. At the login prompt, type the login name you and your System Administrator chose, and then press `ENTER`.
2. Your screen shows:

```

Password:

```
3. Type your password and press `ENTER`. Now, the screen shows your user prompt, the dollar sign (\$). XENIX is ready for your command.

Note: Be sure to wait until the password prompt appears to type your password. If you type it ahead of the prompt, the screen shows your password.

logging out

When you are through working at your terminal, you log out, that is, you sign off the system. You do so by typing `CTRL d`. First, press `CTRL`, and while holding it down, type `d`. The screen now shows your login prompt.

At certain times, the System Administrator may ask you to log out so that she or he can perform some tasks necessary for maintaining the system. Do so by typing `CTRL d` at your user prompt.

changing your password

If you forget your password, the System Administrator must create a new password for you. You can, however, give yourself a new password as long as you remember the old one.

null modem adapter. A device you connect to your computer that tells it you are connecting to another computer or data terminal manually.

operating system. A set of instructions the computer uses to do what you ask it to do. For example, the operating system controls the line printer and acts as a base for an applications program.

other. In XENIX, anyone besides a user and a group.

parameters. Information that defines the options a user supplies when a program is run.

password. A code you supply before the computer lets you use it.

pathname. In XENIX, the route, or path, the operating system takes to a specific file or directory.

permission. In XENIX, access to files and directories. You may have read, write, and/or execute permission.

permission setting. The code attached to files and directories that determines a user's access.

primary hard disk. The first hard disk you install. In XENIX, the primary disk is referred to as hard disk `0` (`hd0`).

printer. A device for making paper copies of the information produced by a computer.

printing. Making a paper copy of information produced by the computer.

process. An operating system's basic unit of activity.

program. A set of instructions that tells a computer step by step how to perform a task.

read permission. Lets you display a file on the screen and read it.

reformat. Reorganize a disk. Reformatting erases existing data.

remote terminal. A computer or data terminal connected to a computer by modem.

restore. Put information stored on floppy diskettes back onto a hard disk.

root. In XENIX, the System Administrator's login name. Also, the name of a basic directory that is required for system operation.

runaway process. A computer activity that does not stop as the program instructs or that you cannot stop manually with ease.

secondary hard disk. Any hard disk on a system other than the primary hard disk. In XENIX, secondary hard disks are identified sequentially as hard disk 1, hard disk 2, and so on.

serial channel. A port on the computer to which you make a modem or cable connection.

shell. A program that reads and interprets what you type at the keyboard.

shutdown. Closing the system to use.

spooling. The process by which data is placed in a line, or queue, to await transmission. For example, when you print a file on the line printer, the computer first places it on a waiting list, or spool, and then in its turn the file is printed.

swap area. The space on the primary hard disk where XENIX temporarily stores information on running programs.

syntax. The form of a command, including the order in which items are placed and the way in which they must be stated.

system administrator. In XENIX, the person responsible for installing, monitoring, and maintaining the system.

terminal. In common usage, a computer or a data terminal.

text. Anything other than graphics that you type at the keyboard or display on the screen.

UNIX™. An operating system developed by Bell Laboratories and from which XENIX is derived.

unmount. Disconnect or make unavailable for use.

user. In XENIX, anyone logged in to the system other than root.

1

getting started with XENIX

First, turn on your terminal. The following should appear on your screen:

```
login:
```

If login: does not appear, press **ENTER**.

Your terminal and XENIX are waiting for you to log in, that is, to identify yourself. Before you can do so, your System Administrator must give you access to the system by telling XENIX your login name and password.

You can choose both your login name and password. As long as they conform to a few XENIX rules, they can be anything you want.

login name rules

1. Your login name must be unique. It cannot be exactly the same as that of any other user on the system.
2. It must be at least 3 characters long.
3. It must begin with a lowercase letter and contain only lowercase letters and digits.

password rules

1. Your password must be at least 5 characters long, but not more than 8 characters.

your keyboard

Some of the keys on your keyboard have a special meaning to XENIX. You frequently use control key sequences. When typing a control sequence, press **CTRL**, hold it down, and press the second key. Then, release both keys simultaneously.

The following are some useful keyboard patterns:

- CTRL d** Logs you out of XENIX and ends input for some commands.
- CTRL q** Starts scrolling (moves text up and off the screen) after you have stopped it.
- CTRL s** Halts scrolling (stops text from moving up and off the screen).

Two important keys:

- BREAK** Interrupts a command or program and returns you to your prompt.
- ENTER** End every command in XENIX by pressing **ENTER**. If a screen message instructs you to type or press **RETURN**, press **ENTER**.

utility. A program, often supplied with an operating system, that performs basic system functions such as saving and restoring files and copying files.

verify. To make certain that a comparison is correct.

volume. In XENIX, a floppy diskette.

write permission. Lets you edit a file or directory.

write-protect. A device or switch that makes it impossible to write on a disk.

XENIX. A multiuser, multitasking operating system derived from UNIX.

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introduction

This manual is for you, a user on a XENIX system. It contains the information you need to use XENIX in a multiuser environment.

The XENIX system usually includes a computer and from 1 to 5 terminals. This guide is for the person working at a terminal as a user. You can use it to learn how to access XENIX and to run the applications programs that are installed on your system.

Your System Administrator is responsible for installing and maintaining the system and for seeing that you are equipped to perform your assigned tasks at your terminal. If you have questions that are beyond the scope of this user's guide, see your System Administrator.

You can also consult your *XENIX Quick Reference Guide to Commands*.

At the back of this guide is a glossary. If you are using a computerized system for the first time, you might want to read the glossary first to become familiar with the basic terminology.

about XENIX

XENIX is a lowercase system. In general, it recognizes lowercase alphabetic characters. Be sure to type lowercase characters when entering commands. If you are typing text to be printed on the line printer, you can use uppercase, lowercase, or a combination.

This guide uses *italics* to indicate that you are to substitute something specific in place of the italicized term. For example, if you are asked to type */usr/name*, you substitute an actual name for the term *name*.

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