

UNIX Introduction and Quick Reference

Quick Reference

Commands may need additional information, such as file or directory names, which are typed immediately following the command name. Clarification and syntax for any command is available by typing **man *commandname*** after the "% " prompt and then pressing Return.

Basic file commands

cat concatenate or display files
cp copy files
ls list file names
ls -l list file names, sizes, attributes
mv move or rename files
rm remove files

Editors

The easiest editor to use is **pico**. The **vi**, **jove**, and **emacs** editors are also available.

Mail

The easiest mail program to use is **pine**. The **elm** and **mail** mail programs are also available.

Other file commands

diff compare two files
fmt simple line adjuster for mail
grep scan a file for a pattern
head display the first ten lines of a file
less display file one screen at a time
more display file one screen at a time
sort sort/merge utility
tail display the last ten lines of a file
wc count lines, words, characters in a file
wc -l count lines

Commands

cd change to a different directory
mkdir make a directory
pwd print the current directory's name
rm -r remove directory & all files in that directory
rmdir remove empty directory

Information applications

apropos locate commands by keyword
gopher local and worldwide information access
man display entries from online manual
rn, trn, tin read Usenet news

Network commands

ftp general file transfer utility
rcp copy files between UNIX systems
rcp -r copy entire directory tree
telnet connect to a remote system to log in
ssh connect via a secure channel to a remote system to log in

Controlling applications

fg restart a suspended command
jobs display suspended commands
kill kill a command
ps display commands with process numbers
^C interrupt currently running process
^Z suspend currently running process
^S stop output on screen
^Q continue output on screen

Miscellaneous

chfn change information shown by **finger**
clear clear screen
date display date and time
finger show information about users
lpr send file to printer
passwd change password
who tell who is logged in

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UNIX Introduction

This brochure provides a brief introduction to UNIX. A quick reference to commonly used commands is listed on the reverse side of this brochure. A few features to get you started with UNIX are described below.

Files and Directories

On UNIX, information is stored in files and directories. Files have names, such as **thesis** or **report.nov19**. Because UNIX uses special characters for special purposes, it is best to use only letters (A...Z, a...z), digits (0...9), periods (.), and underscores (_) in file names.

Files are created by various UNIX commands. You can save your mail messages in files. You can also create text files with an editor.

Files are located in *directories*. Directories can contain other directories, with are called *subdirectories*. The directory containing a subdirectory is known as the *parent* of the subdirectory. Each account has a main directory known as the *home directory*.

Commands

You can enter UNIX commands by typing the command after a prompt such as “%” and then pressing the Return key. For example, type

```
% ls
```

and then press the Return key. The **ls** command lists the names of files in the current directory. The **mkdir** command is used to create directories. For example,

```
% mkdir letters
```

creates a directory named **letters**.

Basic file manipulation commands include **mv** for moving or renaming files, **cp** for copying files, **lpr** for printing files, and **rm** for removing files. The **cd** command is used to change from one directory to another. For example, the command

```
% cd letters
```

moves you to the **letters** subdirectory, and

```
% cd
```

moves you to your home directory.

Special Characters

Special characters may be used in commands to match existing file and directory names. The asterisk (*) is used to match an arbitrary string of characters. For example,

```
% ls let*
```

will list all of your files in the current directory beginning with “let” and

```
% ls *old
```

will list all files ending with “old”.

A question mark is used to match any single character; for example,

```
% ls ab?de
```

will match and list files named “ab1de”, “abcde” and “ab.de”, but will not match files named “abde” or “abccde”.

Redirection

Commands normally display results on the screen; this output may be *redirected* to a file by using the redirection (>) symbol. For example, the **who** command lists the current users on the system. The command

```
% who > save_who
```

writes the output of **who** into the file **save_who**. Redirection using > will not overwrite an existing file. To do that, use >|:

```
% who >| save_who
```

To append to the end of an existing file, use two redirection characters (>>) instead of one (>).

Output of one command may be used as input to another command by using the pipe (|) symbol. For example,

```
% who | wc -l
```

shows how many users are logged in by using **wc -l** to count the lines in the output of **who**.

History

The **history** command displays a numbered list of the last twenty-five commands entered. You can repeat a specific numbered command in the list. For example,

```
% !35
```

repeats the command numbered **35**. Also, you can repeat the last command that began with “str” by typing the following:

```
% !str
```

You can repeat the last executed command in the list by typing

```
% !!
```

For more information

Information about UNIX commands is available via the **man** and **apropos** commands. Type

```
% apropos topic
```

to find manual entries relating to “topic”, and

```
% man command
```

to find the manual entry for “command”.

Many introductory books on UNIX are available in bookstores and libraries.