

Here the command takes its input from the source and redirects the output to destination thus establishing redirection in both ways.

Example 2.3

```
$ cat <names>list
$_
$ cat list
radha
rokha
angel
$_
```

Wild Card Patterns

Group of filenames in a directory may differ from each other by a few characters in the prefix or in the suffix. These files can be accessed collectively and actions can be performed on them collectively. For example, a list of files differing from each other by a few characters in the prefix or in the suffix can be displayed by giving a single command. To do this various special characters are used.

'*' is used for representing any number of characters when used in the prefix or in the suffix. For example, if we have a group of files beginning with 'cha' and want to list these files, then the following command can be used.

Example 2.4

```
$ ls cha* (prefix usage of '*')
chalk
cham.c
chan.c
$_
```

Files ending with "ing" can be grouped as "*ing" and operations can be performed on them.

'?' character is used to represent a single character only either in the prefix or in the suffix of the filename. The following example illustrates the usage of '?' character.

Example 2.5

```
$ ls cha?..?
cham.c
chan.c
$_
```

There is exactly one character after 'cha' for 'cham.c' and 'chan.c'. Hence these two are displayed.

'[]' is used to access a subset of related files. For example, if we have a set of files called ex1, ex2, ex3 then they can be represented together as 'ex[1-3]'. '-' represents a range of characters.

B. Points to Ponder

State True or False

1. The Standard Error file is the terminal screen.
2. The output of a command cannot be redirected to a file.
3. The input for a command can be taken from any other source other than the keyboard.

Fill in the blanks

1. The output of a command is usually sent to _____.
2. If we want to perform some operation on a set of files whose names end in 'ent', then they can be grouped as _____.
3. If we redirect the output of the contents of a file to another file, then the command to be used is _____.

Environmental Variables

A shell has different types of variables namely user defined and environment variables. The environment variables are used to define an environment. Environmental variables give us a clear idea about the various settings of our terminal, the prompt that we are working in, the name of our HOME directory, etc.

The echo Command

The echo command is used to display a message on the screen.

```
$ echo ( message to be displayed ).
$ echo "Learning LINUX is fun"
Learning LINUX is fun.
$ _
```

date Command Revisited

The date command can be formatted according to user's convenience. Using these formats, date, day, month, time, year can be displayed. The following table gives us certain important switches that can be used with the date command.

+%D	mm/dd/yy	+%w	Day of the week
+%H	Hr - 00 to 23	+%a	Abbr. Weekday
+%M	Min - 00 to 59	+%h	Abbr. month
+%S	Sec - 00 to 59	+%r	Time in AM/PM
+%T	HH:MM:SS	+%y	Last two digits of the year.

Example 2.6

```
$ date +%r
12:02:52 PM
$ _
```

The wc Command

The wc command is used to count the number of lines, words or characters in a file.

```
$ wc [-lwc] file
```

Example 2.7

Let us assume we have a file called count. Issue the following command to count the number of lines, words and characters.

```
$ wc count
2 14 69 count
```

The wc command counts the spaces and the newline characters inserted, when you hit "enter" key. To display the count of only lines, words or characters, use the -l, -w, -c switches individually.

The find Command

The find command is used to locate files in a directory and in a subdirectory.

Example 2.8

To find the path of all our files in the directories, give the command as:

```
$ find . -print
./profile
./lastlogin
./dept
./dept/temp
./dept/temp/rat
./old
./old/reco
$ _
```

There are various options available with the find command.

The -name Option

The -name lists out the specific files in all directories beginning from the named directory. Wild cards can also be used here.

The -type Option

The -type option is used to identify whether the name of files specified are ordinary files, directory files. If the name of the file to be searched is a directory file then use the option '-type d' and if it is an ordinary file use -type f. There must be a space between the option and f or d.

The -mtime Option

The -mtime option is used to find a file, which has been modified before or after a specified time. The various options available are -mtime n, -mtime +n, -mtime -n. For example, we want to find a file, which was, modified 5days prior to the current date then we can