Ex.No.3 **FILE MANAGEMENT**

Aim

To manage files and directories using Linux commands.

I. File Management

1. file

Examines the type of the given file or directory

Synopsis

file <filename> (or) <directory name.>

2. pwd

Displays the current working directory

Synopsis

pwd

3.cat

Displays a file. It can take filenames for its arguments. It outputs the contents of those files directly to the standard output, which, by default, is directed to the screen.

Synopsis

cat <filename>

4.more

Displays a file screen by screen. the SPACEBAR is pressed to continue to the next screen and q to quit.

Synopsis

more <filename>

5.less

Displays a file screen by screen. Press the SPACEBAR to continue to the next screen and q to quit.

Synopsis

less <filenames>

6.cmp

Compare two files byte by byte

Synopsis
cmp [OPTION]... FILE1 [FILE2 [SKIP1 [SKIP2]]]

-b --print-bytes Print differing bytes.

-i SKIP --ignore-initial=SKIP Skip the first SKIP bytes of input.

-i SKIP1:SKIP2 --ignore-initial=SKIP1:SKIP2

Skip the first SKIP1 bytes of FILE1 and the first SKIP2 bytes of FILE2.

-l --verbose

Output byte numbers and values of all differing bytes.

-n LIMIT --bytes=LIMIT Compare at most LIMIT bytes.

7. cut

Prints selected parts of lines from each FILE to standard output.

Synopsis

cut [OPTION]... [FILE]...

-b, --bytes=LIST Selects only these bytes

-c, --characters=LIST Selects only these characters

-d, --delimiter=DELIM Use DELIM instead of TAB for field delimiter

8.diff

Shows the differences between files.

Synopsis

diff [OPTION]... FILES

Options

-i --ignore-case Ignore case differences in file contents.

--ignore-file-name-case Ignore case when comparing file names.

--no-ignore-file-name-case

Consider case when comparing file names.

-E --ignore-tab-expansion Ignore changes due to tab expansion.

-b --ignore-space-change Ignore changes in the amount of white space.

-w --ignore-all-space Ignore all white space.

-B --ignore-blank-lines Ignore changes whose lines are all blank.

-I RE --ignore-matching-lines=RE

Ignore changes whose lines all match RE.

--strip-trailing-cr Strip trailing carriage return on input.

-a --text Treat all files as text.

-q --brief Output only whether files differ.

--normal Output a normal diff.

9.sleep

Pause for NUMBER seconds. SUFFIX may be 's' for seconds (the default), 'm' for minutes, 'h' for hours or 'd' for days. Unlike most implementations that require NUMBER be an integer, here NUMBER may be an arbitrary floating point number

Synopsis

sleep NUMBER[SUFFIX]...

10. sort

Write sorted concatenation of all FILE(s) to standard output

Synopsis

sort [OPTION]... [FILE]...

Ordering options:

-b, --ignore-leading-blanks ignore leading blanks
-d, --dictionary-order consider only blanks and alphanumeric characters
-f, --ignore-case fold lower case to upper case characters
-g, --general-numeric-sort

compare according to general numerical value
-i, --ignore-nonprinting consider only printable characters
-M, --month-sort compare (unknown) < 'JAN' < ... < 'DEC'
-n, --numeric-sort compare according to string numerical value
-r, --reverse reverse the result of comparisons
Other options:

-c, --check check whether input is sorted; do not sort
-k, --key=POS1[,POS2] start a key at POS1, end it at POS2 (origin 1)
-m, --merge merge already sorted files; do not sort
-o, --output=FILE write result to FILE instead of standard output
-s, --stable stabilize sort by disabling last-resort comparison
-S, --buffer-size=SIZE use SIZE for main memory buffer
-t, --field-separator=SEP use SEP instead of non-blank to blank transition
-T, --temporary-directory=DIR use DIR for temporaries, not $TMPDIR or /tmp; multiple options specify multiple directories

-u, --unique with -c, check for strict ordering; without -c, output only the first of an equal run

-z, --zero-terminated end lines with 0 byte, not newline

11.uniq

Reports or omits repeated lines. Discards all but one of successive identical lines from INPUT (or standard input), writing to OUTPUT (or standard output).

Synopsis

uniq [OPTION]... [INPUT [OUTPUT]]

-c, --count prefix lines by the number of occurrences

-d, --repeated only print duplicate lines

-D, --all-repeated[=delimit-method] print all duplicate lines **delimit-method={none(default),prepend,separate}**

delimiting is done with blank

-f, --skip-fields=N avoid comparing the first N fields

-i, --ignore-case ignore differences in case when comparing

-s, --skip-chars=N avoid comparing the first N characters

-u, --unique only print unique lines

-w, --check-chars=N compare no more than N characters in lines

12.wc

Print newline, word, and byte counts for each FILE, and a total line if more than one FILE is specified. With no FILE, or when FILE is -, read standard input.

Synopsis

wc –c/w/l <filename>

Options

-c, --bytes	print the byte counts
-m, --chars	print the character counts
-l, --lines	print the newline counts
-L, --max-line-length	print the length of the longest line
-w, --words	print the word counts

II Directory Management

1.Creating and Deleting Directories

mkdir directory Creates a directory.
rmdir directory Erases a directory.
ls -F Lists directory name with a preceding slash
ls -R Lists working directory as well as all subdirectories.
cd directory name Changes to the specified directory, making it the working directory. cd without a directory name changes back to the home directory.
pwd Displays the pathname of the working directory.
directory name/filename A slash is used in pathnames to separate each directory name. In the case of pathnames for files, a slash separates the preceding directory names from the filename.
.. References the parent directory. It can be used as an argument or as part of a pathname

. References the working directory. You can use it as an argument or as part of a pathname: **$ ls .**
~/pathname
The tilde is a special character that represents the pathname for the home directory. It is useful when an absolute pathname for a file or diirectory is needed.

$ cp monday ~/today

2.ls
Displays directory contents

Synopsis
Ls

3.ls -F
To distinguish between file and directory names, however, ls command is used with the -F option. A slash is then placed after each directory name in the list.

Synopsis
ls –F

4.ls -R
The command lists working directory as well as all subdirectories.

Synopsis
ls -R

5.cd
Used to move through Directories

Synopsis
Cd

III Directory Operations

1.find
Searches directories for files according to search criteria.

Synopsis
find directory-list –option criteria
.
-name pattern Searches for files with pattern in the name.
-lname pattern Searches for symbolic link files.
-group name Searches for files belonging to the group name.
-gid name Searches for files belonging to a group according to group ID.

-user name Searches for files belonging to a user.
-uid name Searches for files belonging to a user according to user ID.
-size numc Searches for files with the size num in blocks. If c is added after num, the size in bytes (characters) is searched for.
-mtime num Searches for files last modified num days ago.
-print Outputs the result of the search to the standard output. The result is usually a list of filenames, including their full pathnames.
-type filetype Searches for files with the specified file type. File type can be b for block device, c for character device, d for directory, f for file, or l for symbolic link.
-perm permission Searches for files with certain permissions set. Use octal or symbolic format for permissions.

IV File operations

cp Copies a file. cp takes two arguments: the original file and the filename filename name of the new copy. The pathnames can be used for the files to copy across directories:

$ cp today reports/Monday

cp -r dirname dirname

Copies a subdirectory from one directory to another. The copied directory includes all its own subdirectories:

$ cp -r letters/thankyou oldletters

mv filename filename

Moves (renames) a file. The mv command takes two arguments: the first is the file to be moved. The second argument can be the new filename or the pathname of a directory. If it is the name of a directory, then the file is literally moved to that directory, changing the file's pathname:

$ mv today /home/chris/reports

mv dirname dirname Moves directories. In this case, the first and last arguments are directories: $ mv letters/thankyou oldletters

ln filename filename Creates added names for files referred to as links. A link can be created in one directory that references a file in another directory:

$ ln today reports/Monday

rm filenames

Removes (erases) a file. Can take any number of filenames as its arguments. Removes links to a file. If a file has more than one link, you need to remove all of them to erase a file:

$rm today weather weekend

3. Symbolic link

To set up a symbolic link, the ln command is used with the -s option and two arguments:

the name of the original file and the new, added filename. The ls operation lists both filenames, but only one physical file will exist.

Synopsis

ln -s original-file-name added-file-name

4. Hard link

To set up a hard link, you use the ln command with no -s option and two arguments: the name of the original file and the new, added filename. The ls operation lists both filenames, but only one physical file will exist.

Synopsis

ln original-file-name added-file-name