touch command

2. To create multiple files type like below:

- # touch <filename> <filename> <filename>
- #touch file1 file2 file3
- press enter
- To check the files use ls command like below:
- #ls

vi(visual) editor

1. Editors are used for inserting or deleting text

- Windows : Notepad
- DOS : Edit
- Linux / Unix : VI and NANO

VI Editor modes

There are three modes of operations in VI Editor

1. Command mode:

➢ The vi editor starts in command mode

2. Insert mode:

➢ To enter text we have to be in insert mode

➢ Just type “i” and we’ll be in insert mode

VI Editor modes

➢ To exit from insert mode press Esc key will take us to the command mode

3. Extended command mode:

➢ It is used for save and quit or save without quit using “:wq!”(shift+:+wq+shift+!)

Insert mode

i	To begin insert mode at the cursor position
L	To insert at the beginning of line
a	To append to the next word's letter
A	To append at the end of the line
o	To insert a new line below the cursor position
O	To insert a new line above the cursor position
r	replace a single char at current cursor position

Extended command mode

:q	quit without saving
:q!	quit forcefully without saving
:w	save
:wq	save & quit
:wq!	save & quit forcefully
:x	save & quit
:sh	provides temporary shell

Creating Directories

1. To create a directory
   - mkdir <directory name>
2. To create multiple directories
   - mkdir <dir1> <dir2> <dir3>
3. To create nested directories
   - mkdir -p <dir1>/<dir2>/<dir3>

Navigation of Directories

1. To change the directory
   - cd <path of the directory>
2. To change directory one level back
   - cd ..
3. To change directory two levels back
   - cd ../..

Navigation of Directories

4. To change directory to last working directory
➢ cd -
5. To change directory to home directory
➢ cd or cd ~

Removing a file or Directory

1. To remove a file
➢ rm <filename>
2. To remove empty directory
➢ rmdir <directory name>
3. To remove directory recursively and forcefully
➢ rm -rf <directory name>

Copying a file or Directory

1. To copy from one file to another file

➢ cp <source file path> <destination file path>

2. To copy a file to directory

➢ cp <source file path> <destination dir path>

3. To copy from one directory to another directory

➢ cp -r <source dir path> <destination dir path>

Moving / Renaming a file or Directory

1. To move a file / dir to a different location

➢ mv <source path> <destination path>

2. To rename file / dir move at same location

➢ mv <old name> <new name>

top command

1. The top command displays all the running process within the environment of our system.
2. It helps in monitoring system usage and performances
3. It is mainly used to detect load on the server by system administrators

➢ syntax: top

top command

4. To stop the top command press ctrl + z

ps command

1. The ps command is used to view currently running processes on the system
2. It helps us to determine which process is doing what in our system how much memory it is using how much CPU space it occupies, user ID, command name etc

syntax: ps

ps command

3. 4 columns displayed as output

- PID : the process ID of running command
- TTY : the type of terminal where current command is running
- TIME: tells how much time is used by CPU to run the process
- CMD: the current command

ps command

Examples:

1. ps -ef : list currently running process in full format

- e displays all the processes
- f displays full format listing

Regular Expressions

1. Grep:

- Grep stands for Global Regular Expression Print.
- It is used to pick out the required expression from the file and print the output.
- If grep is combined with another command it can be used to pick out the selected word, phrase from the output of first command and print it

Regular Expressions

Syntax: grep [options] [pattern] [filename]

Examples:

1. Let us pick the information about root from the file /etc/passwd(/etc/passwd contains information about all the users present in the system)

➢ grep root /etc/passwd

Regular Expressions

2. To avoid case sensitivity of the word ie., the word may be uppercase of lowercase use -i

➢ cat > test

linux is freedom

linux is freedom

LINUX is freedom

Regular Expressions

➢ grep -i linux test

linux is freedom

linux is freedom

LINUX is freedom

Regular Expressions

3. To display the things except the given word

➢ cat > test

linux is freedom

Hello world

Welcome to my world

➢ grep -v world test

linux is freedom

Pipelines

1. Pipe is used to combine two or more commands ie., the output of one command acts as input to another command

syntax: command_1 | command_2 | command_3 | .....

Examples:

- cat <filename> | grep -i linux
- ls -l | grep -i <filename>

I/O Redirection

1. Redirection is a process where we can copy the output of any commands and files into new file.
2. There are two ways of redirecting the output into a file

- Using >> filename after the command
- Using tee command

syntax: cat old file name >> new file name

I/O Redirection

Example 1:

- cat > test2

  Linux is freedom

- cat > file2

  welcome to my world

- cat file2 >> test2

  Linux is freedom welcome to my world

I/O Redirection

Example 2:

- copy the contents of two files in a new file
- cat file1 file2 >> file3

I/O Redirection

Using tee command:

- The above options of redirections will not display any output but directly save the output in a file.
- Using tee command will not only redirect the output to new file but it will also display the output

syntax: cat <filename> | tee <new file name>

I/O Redirection

Examples:

1. If the file already exists then it will overwrite contents of the file
   - cat file2 | tee file3
2. Appending data in the same file using tee command
   - cat test | tee -a file2

Find command

1. The find command help us to find a particular file within a directory.
2. It is also used to find a list of files having same pattern name
3. After find command we may use the following symbols:

- (.) : For current directory name
- (/): For root

Find command

Examples:

1. Finding by name:

- we can search all the files ending with extension ".txt"
- find . -name "*.txt"
- find / -name "*.txt"

Filter commands

1. Filter commands are used to filter the output so that the required things can easily be picked up.
2. The commands which are used to filter the output are:

- head
- tail
- sort
- cut
- sed