

## OS Lab

- i) Pwd :- Pointing working directory
  - It display the current working directory in O.S.
  - The full path name of current working directory will be displayed on terminal.
- ii) cd :- for changing directory
- iii) cd \ - change root directory
- iv) cd ~ → Shortcut for home directory.
- v) cd .. move to one directory back.
- vi) cd - move to Home directory but this command not support in Windows but is support in linux.
- vii) ls - list file in current directory
- viii) ls -l list file in long format
- ix) ls -a list all files
- x) dir /w used in to display the content of directory in wide format, which shown file, folder name in multiple column.
- ⑪ mkdir make a folder
- ⑫ (cd.foldername) / cd.directoryname : - open the new folder
- ⑬ touch file name Create a empty file
- ⑭ nano file name nano Command is text editor that allow you to create or edit files directory in the terminal.

You inside nano command run

Ctrl + o to save the file.

Ctrl + X to exit the editor

nano + <line\_number> file name

This open the file at existing line number.

⑯ Cat Command used to display, create or  
Concatenate file.

Cat file name:- display the content of that  
file.

Cat > filename-new Create new file.

Cat file1-file2 > Combine.txt Combine both  
file content.

tac filename view file in reverse order.

⑰ head Command displays the first n line of file.

head filename display 10 first line

head -n 5 filename display specific no. of line

head file1 file2 display 10 first line of  
both file.

⑯ tail Command display the last n line of file.

⑰ less Command used to display view the  
Content of a file and output in a  
paginated manner.

This is ideal for reading large file with  
the help of scroll key and press q to quit.

less filename

ls -l | less display one page at time

- ⑯ echo command is used to display text or variable in the terminal.

echo "Hello world"

My Name = "Lucky"

echo "My Name is & My-Name"

echo "Content" > filename write content in filename

echo "Content" >> filename add content in filename.

- ⑰ cp command is used to copy file to directories

cp source-file destination-file

cp file1.txt file2.txt = copy file1 to file2

cp filename | path | to destination

copy file to another directory

cp -r folder | path | to destination

copy a directory (-r) is used for all folders & subdirectory are copy

cp -f file1 file2

preserve file permission / attribute

- ⑱ mv used to move or rename files and directories.

`mv file name move to file.`  
`mv oldfilename newfilename Rename file.`  
`mv folder1 path destination move directory`  
`mv -f filename path`  
Overwrite without Confirmation.

(22) `rm` command is used to delete file or directories

`rm filename delete file`

`rm filename1 filename2 delete multiple file`

`rm -r folder1 delete directory & its content.`

`rm -rf folder1 force delete without confirmation.`

(23) file permission in Unix / Linux

i) owner :- person who create file directory

ii) Group :- person who share same permission to another permission.

iii) others :- All other user who are not the owner or in the group.

(24) Types of permission :-

i) read (r)

ii) Write (w)

iii) Execute (x)

④ By using ls -l are display by using ls -l command  
format -rwxr-x--  
owner Group other x-p b-m-d x3

⑤ Breaking Down 10 character

Position	Meaning	Example
1st	filetype (- for file, d for directory)	- Regular file
2-4	owner (user permission)	rwx - (Read & Write)
5-7	Group permission	rx - (Read Only)
8-10	other permission	rx - (Read Only)

⑥ Changing file permission:-

chmod (for change the file permission)

- We can change file permission using chmod command through the use of symbolic or numeric code.

\* Permission category:-

i) owner (u)

- person who create file or directory
- person can have read, write and execute

Ex chmod u+rwx file.txt

ii) Group (g)

- person share permission to another person.

Ex chmod g+rwx file.txt

iii) Other (o)

- All other users who are neither the owner nor in group.

Ex chmod o+rx file.txt

iv) All user (A)

- Affect owner, group and other

Ex chmod a+x script.sh

Q8 The two ways to set permission :-

i) Using Numeric mode (octal mode)

Each permission type has a numeric value.

read (r) = 4

7 → rwx (4+2+1)

write (w) = 2

6 → rw- (4+2)

execute (x) = 1

5 → r-x (4+1)

4 → r-- (read only)

Ex chmod 744 file.txt

chmod 644 file.txt

ii) Using symbolic mode

u - owner

g - ~~user~~ group

o - other

a - All (owner, group, other)

Ex chmod u+x file.txt

chmod o-w file.txt

Q9 Shell Scripting :-

- Shell Scripting is a file containing linux and Unix command that automate

task

- Shell scripting help us to task by writing shell scripting.

- A shell script is a series of command stored in file that can be executed in program.

Sx

- i) nano script.sh open terminal & create file
- ii) echo "Hello user". → add following lines
- iii) Save & exit (in nano, press Ctrl + X, then Enter).

Granting permission:-

chmod +x script.sh ÷ Before running the script give it execute permission.

Running the Script:-

• | script.sh

Q Write a shell script that creates a directory moves into it creates a file writes text into the file and displays its content.