

(5) ls(1) :- Allow a user to view the contents of a directory.

### LAB

Linux shell :- shell provide an environment to user to execute commands and interact with kernel.

Different types of shell

- bash :- command - language interpreter
- Bourne shell (sh) :-
- C shell (csh) :- based of C programming
- Korn shell (ksh) :- command line editing, aliases, function
- tsh
- fish

echo \$0 → type of shell

Shell script consists of set of commands to perform a task. All the commands execute sequentially.

```
# ./bin/bash
```

```
vi h3.sh
```

ls - ltr (file permissions view)

Run using

- ./script.sh
- /path/script.sh
- bash script.sh

ctrl + C terminate

ctrl + Z to stop

Teacher's Signature.....

ctrl+C  
!wq → save & exit  
esc !q! → discard & exit

Date: / /  
Page No.:

used to add permission  
chmod +x filename.sh

# this is a comment

← this is a comment  
is this must be save  
multiple line comment

### Variable

Var-name = value

echo \$Var-name

var-name = \$(hostname)

### If-else

if [ \$marks -gt 40 ]

then

echo "You are pass"

else

echo "You are fail"

fi

### Taking input from user

read var-name

read -p "Your name" Name

### Arithmetic operations

Using let command

let a++

let a = 5\*10

((a++))

((a = 5\*10))

### Test

Equal

-eq / ==

greater than or equal to

-ge

less than or equal to

-le

not equal

-ne / !=

greater than

-gt

less than

-lt

if [ \$marks -ge 80 ]

then

echo "First Division"

elif [ \$marks -ge 60 ]

then

echo "Second Division"

else

echo "Fail"

fi



-eq → num me  
== → string

Logical operator (&, ||, !)  
                    ↓       ↓  
                  and   or

if [[ \$age -ge 18 ]] && [[ \$country == "India" ]]  
then

### For Loop

```
for i in 1 2 3 4 5  
do  
    echo "Number is $i"  
done
```

→ Space Separated  
for j in Raju Sham Baburao  
for p in {1..20}

### While loop

```
count = 0  
num = 10  
while [ $count -le $num ]  
do  
    echo "Numbers are $count"  
    let count++  
done
```

## Linux

- ① ls →
- ② cp → cp currentfile.sh copiedfile.sh
- ③ mv → move or rename  
 mv main-backup.py backup.py → rename  
 mv backup.py rohan/backup.py → move file
- ④ rm → remove a file  
 rm -r python & remove directory with its contents
- ⑤ touch → create a new empty file  
 touch sha.txt
- ⑥ cat → concatenate and display files
- ⑦ man → manual for a command  
 man ls
- ⑧ htop → an interactive process viewer
- ⑨ chmod :- change the permission of a file or directory  
 0 → no permission  
 1 → execute only  
 2 → write  
 3 → write & execute  
 4 → read only  
 5 → read & execute  
 6 → read and write  
 7 → read, write & execute  
 chmod 700 file.txt
- ⑩ gzip → compress file  
 gzip file.txt
- ⑪ gunzip → decompress <sup>compressed</sup> file  
 gunzip file.txt.gz



- (12) date
- (13) whoami
- (14) where  $\rightarrow$  ~~wl~~
- (15) ~~find~~ which  $\rightarrow$  locate a program or command in the system path
- (16) finger  $\rightarrow$  display all information about user
- (17) uname  $\rightarrow$  display system information
- (18) history  $\rightarrow$  display a list of previously executed commands
- (19) echo
- (20) tee  $\rightarrow$  redirect output to both a file and the console  
`ls | tee file.txt`
- (21) locate  $\rightarrow$  locate file.txt
- (22) sort  $\rightarrow$  sort lines of text in a file  
`cat harry.txt`  
`sort harry.txt`
- (23) uniq  $\rightarrow$  remove duplicates from a file  
`uniq file.txt`
- (24) head / tail  
`tail -2f harry.txt`
- (25) lp  $\rightarrow$  print the file
- (26) more  $\rightarrow$  display file's content, one page at a time, easy to navigate.
- (27) mail :- mail -s "subject" <address

Ctrl + Alt + t → opening terminal

pwd → present working directory

cd → change directory

ls → list all directory in current working directory

ls [options] [file/directory]

ls Documents/

clear → scroll down

ls ~ → same as ls

ls .. → one folder back

ls ../.. → list all the directory in previous directory

ls -l → list all the directory in details

ls -lwx → d → directory ; r → read ; w → write ; x → execute

ls -a → hidden files in the current directory

ls -al → details of hidden files in ..

ls -ls → details of all directory in sorted order

ls -la Documents/\*.html → files with .html extension only

ls -ls > out.txt → create a file out.txt with details of ls-ls in them

ls -d\*/ → list <sup>out</sup>all ~~all~~ directory only not file

man ls → list all the operations of the commands with ls

cd → home directory

cd .. → one folder above

cd ~ → to home directory

cd My\Books → change directory to My Books

cd "My Books"