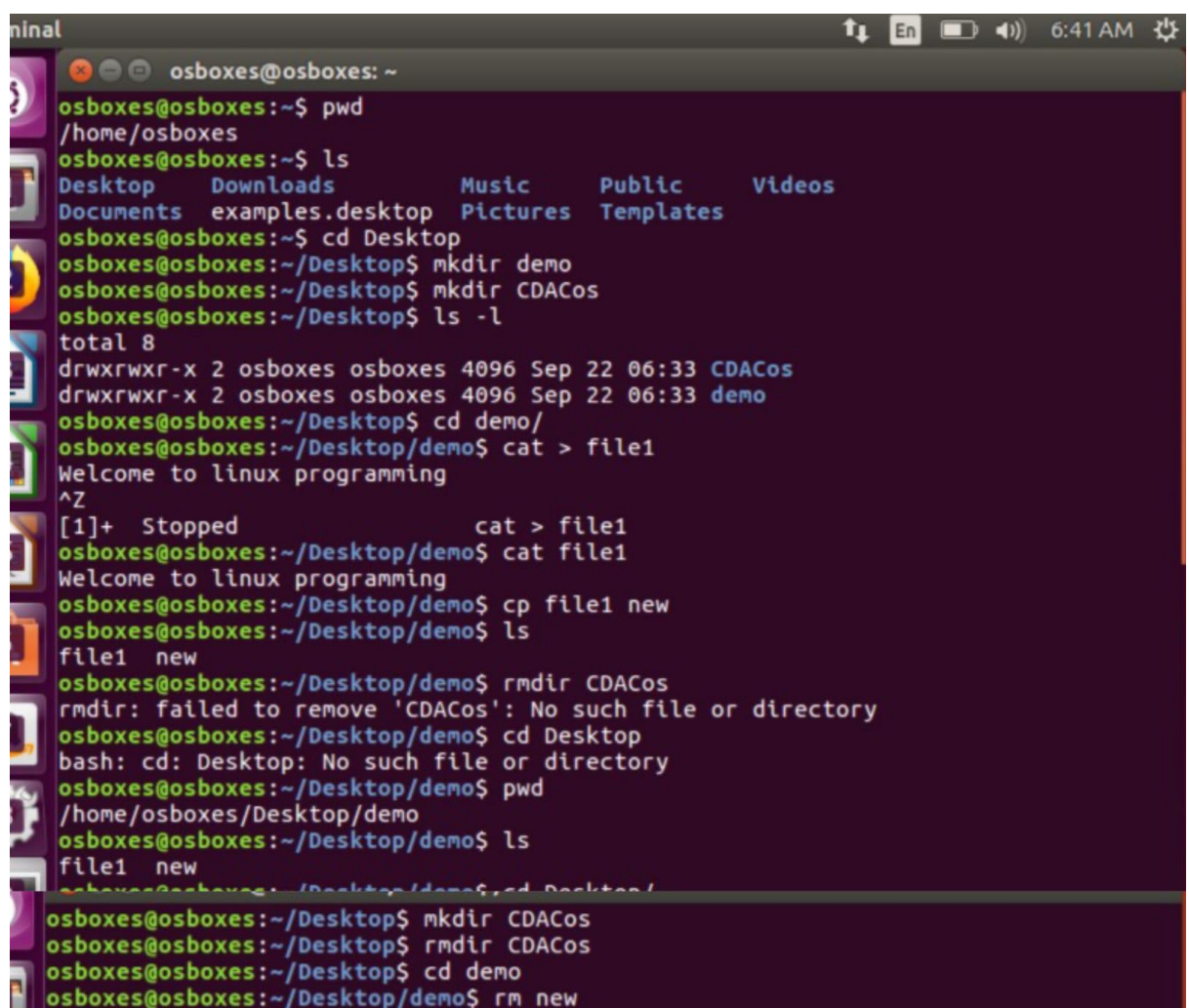


Form No. : 220600312

Name : Akshay B Sonavane

LINUX ASSIGNMENT 1-DAC (SEPT2022)

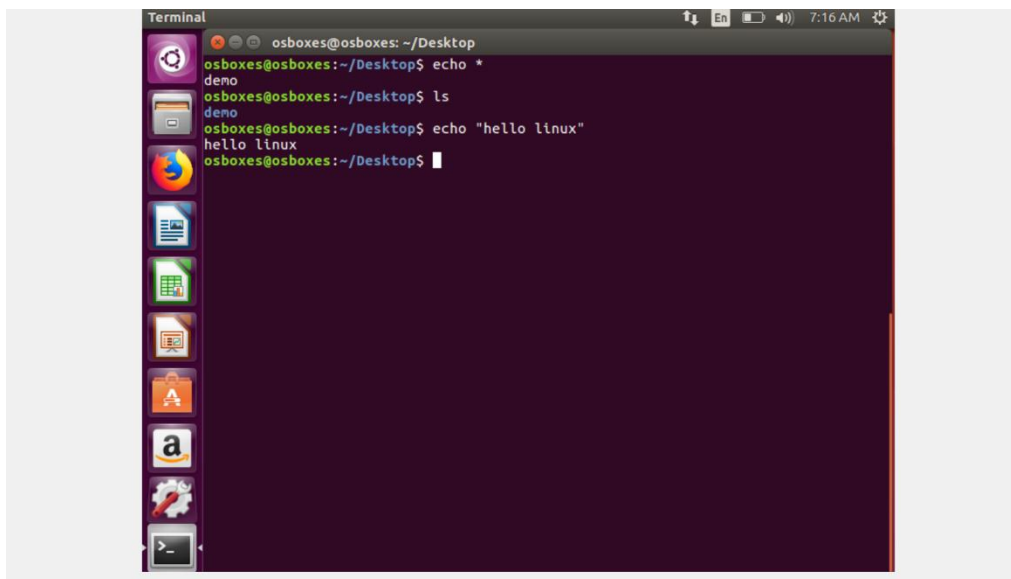
1. Practice the below mentioned commands with all the possible options:
cd, cat, ls, mkdir, rmdir, pwd, mv, cp, rm



```
osboxes@osboxes: ~$ pwd
/home/osboxes
osboxes@osboxes:~$ ls
Desktop  Downloads          Music      Public      Videos
Documents examples.desktop  Pictures  Templates
osboxes@osboxes:~$ cd Desktop
osboxes@osboxes:~/Desktop$ mkdir demo
osboxes@osboxes:~/Desktop$ mkdir CDACos
osboxes@osboxes:~/Desktop$ ls -l
total 8
drwxrwxr-x 2 osboxes osboxes 4096 Sep 22 06:33 CDACos
drwxrwxr-x 2 osboxes osboxes 4096 Sep 22 06:33 demo
osboxes@osboxes:~/Desktop$ cd demo/
osboxes@osboxes:~/Desktop/demo$ cat > file1
Welcome to linux programming
^Z
[1]+  Stopped                  cat > file1
osboxes@osboxes:~/Desktop/demo$ cat file1
Welcome to linux programming
osboxes@osboxes:~/Desktop/demo$ cp file1 new
osboxes@osboxes:~/Desktop/demo$ ls
file1  new
osboxes@osboxes:~/Desktop/demo$ rmdir CDACos
rmdir: failed to remove 'CDACos': No such file or directory
osboxes@osboxes:~/Desktop/demo$ cd Desktop
bash: cd: Desktop: No such file or directory
osboxes@osboxes:~/Desktop/demo$ pwd
/home/osboxes/Desktop/demo
osboxes@osboxes:~/Desktop/demo$ ls
file1  new
osboxes@osboxes:~/Desktop$ mkdir CDACos
osboxes@osboxes:~/Desktop$ rmdir CDACos
osboxes@osboxes:~/Desktop$ cd demo
osboxes@osboxes:~/Desktop/demo$ rm new
```

2. Enter the two commands `echo *` and `ls`. What do you think `echo` did?

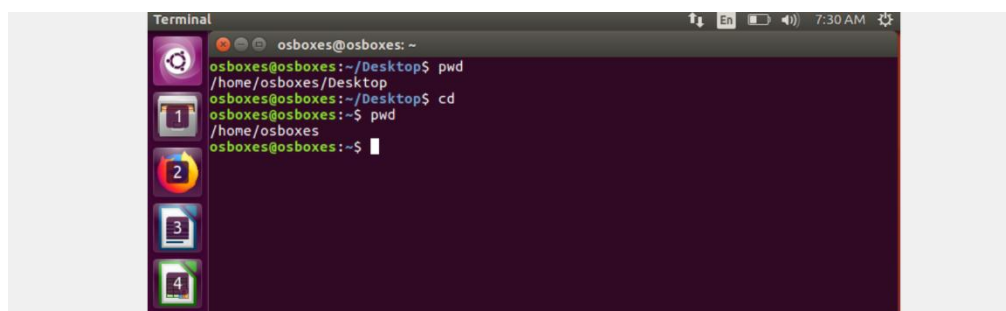
: `echo *` considers everything as file while `ls` shows directory and files.

A terminal window titled 'Terminal' with the prompt 'osboxes@osboxes: ~/Desktop'. The user enters 'echo *' and the output is 'deno'. Then the user enters 'ls' and the output is 'deno'. Finally, the user enters 'echo "hello linux"' and the output is 'hello linux'. The terminal has a dark purple background and a light gray border. On the left side, there is a vertical dock with several application icons including a gear, a folder, a terminal, a document, a spreadsheet, a presentation, a shopping bag, and an Amazon logo. The top status bar shows '7:16 AM' and some system icons.

```
Terminal
osboxes@osboxes: ~/Desktop
osboxes@osboxes:~/Desktop$ echo *
deno
osboxes@osboxes:~/Desktop$ ls
deno
osboxes@osboxes:~/Desktop$ echo "hello linux"
hello linux
osboxes@osboxes:~/Desktop$
```

3. What does `cd` do when used without arguments?

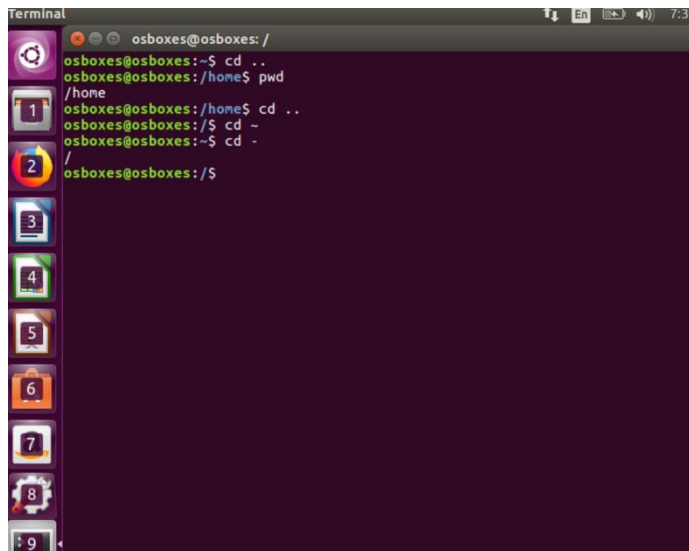
: if `cd` is used without arguments, the user is returned to home directory.

A terminal window titled 'Terminal' with the prompt 'osboxes@osboxes: ~'. The user enters 'pwd' and the output is '/home/osboxes/Desktop'. Then the user enters 'cd' and the prompt changes to 'osboxes@osboxes:~\$'. The user enters 'pwd' again and the output is '/home/osboxes'. Finally, the user enters 'cd' and the prompt remains 'osboxes@osboxes:~\$'. The terminal has a dark purple background and a light gray border. On the left side, there is a vertical dock with several application icons including a gear, a folder, a terminal, a document, a spreadsheet, a presentation, a shopping bag, and an Amazon logo. The top status bar shows '7:30 AM' and some system icons.

```
Terminal
osboxes@osboxes: ~
osboxes@osboxes:~/Desktop$ pwd
/home/osboxes/Desktop
osboxes@osboxes:~/Desktop$ cd
osboxes@osboxes:~$ pwd
/home/osboxes
osboxes@osboxes:~$
```

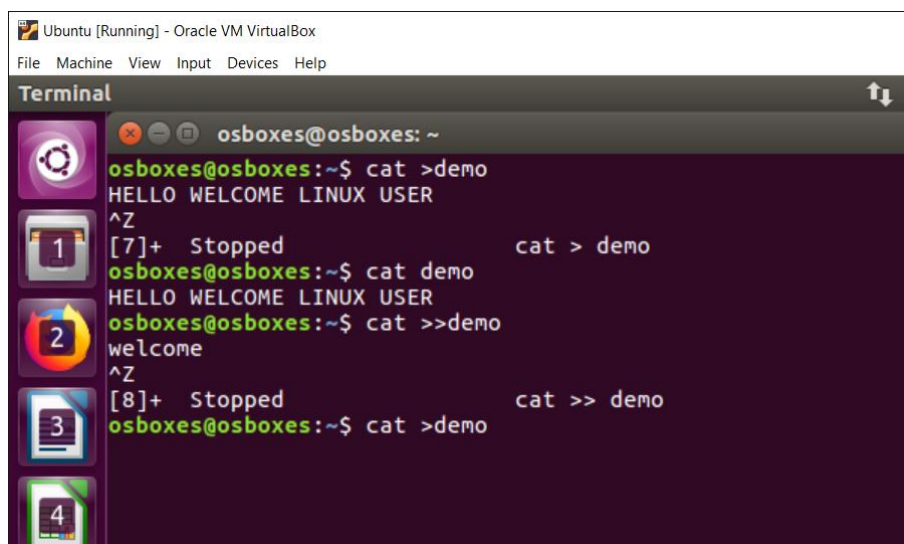
4. See the difference between `cd ~` and `cd -` and `cd` command

: cd command will take user back to the home directory directly, cd - will print the directory it changed to out to standard output, and cd ~- just changes directories without printing anything.

A terminal window titled 'Terminal' with a dark purple background. The prompt is 'osboxes@osboxes: /'. The user enters 'cd ..' and the prompt changes to 'osboxes@osboxes: /home'. Then the user enters 'pwd' and the output is '/home'. Next, the user enters 'cd ..' and the prompt returns to 'osboxes@osboxes: /'. Then the user enters 'cd -' and the prompt remains 'osboxes@osboxes: /'. Finally, the user enters 'cd -' and the prompt changes to 'osboxes@osboxes: /\$'. On the left side of the terminal, there is a vertical dock with numbered icons from 1 to 9.

```
osboxes@osboxes: /
osboxes@osboxes:~$ cd ..
osboxes@osboxes:/home$ pwd
/home
osboxes@osboxes:/home$ cd ..
osboxes@osboxes:/$ cd -
osboxes@osboxes:~$ cd -
osboxes@osboxes:/$
```

5. Use cat command to create, append and display a file
:

A screenshot of a VirtualBox window titled 'Ubuntu [Running] - Oracle VM VirtualBox'. Inside is a terminal window titled 'Terminal' with a dark purple background. The prompt is 'osboxes@osboxes: ~'. The user enters 'cat >demo' and the output is 'HELLO WELCOME LINUX USER'. Then the user presses '^Z' and the prompt changes to '[7]+ Stopped'. The user then enters 'cat > demo' and the prompt returns to 'osboxes@osboxes:~\$'. The user enters 'cat demo' and the output is 'HELLO WELCOME LINUX USER'. Then the user enters 'cat >>demo' and the output is 'welcome'. Then the user presses '^Z' and the prompt changes to '[8]+ Stopped'. The user then enters 'cat >> demo' and the prompt returns to 'osboxes@osboxes:~\$'. The user enters 'cat >demo' and the prompt remains 'osboxes@osboxes:~\$'. On the left side of the terminal, there is a vertical dock with numbered icons from 1 to 4.

```
osboxes@osboxes: ~
osboxes@osboxes:~$ cat >demo
HELLO WELCOME LINUX USER
^Z
[7]+ Stopped                               cat > demo
osboxes@osboxes:~$ cat demo
HELLO WELCOME LINUX USER
osboxes@osboxes:~$ cat >>demo
welcome
^Z
[8]+ Stopped                               cat >> demo
osboxes@osboxes:~$ cat >demo
```

6. Make a directory bar1 with two empty files first.c and second.c

- a. Make another directory bar2. Now copy all files from bar1 to bar2
- b. Delete directory bar1 and all its files

:

```
osboxes@osboxes: ~  
osboxes@osboxes:~$ ls  
demo      Documents  examples.desktop  Pictures  Templates  
Desktop   Downloads  Music             Public    Videos  
osboxes@osboxes:~$ mkdir bar1  
osboxes@osboxes:~$ cd bar1  
osboxes@osboxes:~/bar1$ touch first.c second.c  
osboxes@osboxes:~/bar1$ mkdir bar2  
osboxes@osboxes:~/bar1$ mv first.c second.c bar2  
osboxes@osboxes:~/bar1$ ls  
bar2  
osboxes@osboxes:~/bar1$ cd bar2  
osboxes@osboxes:~/bar1/bar2$ rm first.c second.c  
osboxes@osboxes:~/bar1/bar2$ cd ..  
osboxes@osboxes:~/bar1$ rm bar2  
rm: cannot remove 'bar2': Is a directory  
osboxes@osboxes:~/bar1$ rmdir bar2  
osboxes@osboxes:~/bar1$ cd ..  
osboxes@osboxes:~$ rmdir bar1  
osboxes@osboxes:~$
```

7.How will you copy a directory 'dir1' to an existing directory 'dir2' ?

```
osboxes@osboxes: ~/Downloads/dir2/dir1  
osboxes@osboxes:~$ ls  
demo      dir2      Downloads      Music      Public      Videos  
Desktop   Documents  examples.desktop  Pictures  Templates  
osboxes@osboxes:~$ cd Downloads  
osboxes@osboxes:~/Downloads$ ls  
osboxes@osboxes:~/Downloads$ mkdir dir1 dir2  
osboxes@osboxes:~/Downloads$ cd dir1  
osboxes@osboxes:~/Downloads/dir1$ touch file1  
osboxes@osboxes:~/Downloads/dir1$ cd ..  
osboxes@osboxes:~/Downloads$ mv dir1 dir2  
osboxes@osboxes:~/Downloads$ ls  
dir2  
osboxes@osboxes:~/Downloads$ cd dir2  
osboxes@osboxes:~/Downloads/dir2$ ls  
dir1  
osboxes@osboxes:~/Downloads/dir2$ cd dir1  
osboxes@osboxes:~/Downloads/dir2/dir1$ ls  
file1  
osboxes@osboxes:~/Downloads/dir2/dir1$
```

8. Delete directory dir1 and all the files present in this directory.


```
osboxes@osboxes: ~/bar2
osboxes@osboxes:~$ ls
bar2      Documents  examples.desktop  Pictures  Templates
Desktop   Downloads  Music             Public    Videos
osboxes@osboxes:~$ cd bar2
osboxes@osboxes:~/bar2$ mkdir dir1
osboxes@osboxes:~/bar2$ cd dir1
osboxes@osboxes:~/bar2/dir1$ touch f1 f2
osboxes@osboxes:~/bar2/dir1$ rm f1 f2
osboxes@osboxes:~/bar2/dir1$ cd ..
osboxes@osboxes:~/bar2$ rmdir dir1
osboxes@osboxes:~/bar2$ ls
osboxes@osboxes:~/bar2$
```

9. Create a new file. Set the permissions of the file to have all permissions for yourself.

```
osboxes@osboxes: ~/bar2
osboxes@osboxes:~$ ls
bar2      Documents  examples.desktop  Pictures  Templates
Desktop   Downloads  Music             Public    Videos
osboxes@osboxes:~$ cd bar2
osboxes@osboxes:~/bar2$ ls
osboxes@osboxes:~/bar2$ touch f3 f4
osboxes@osboxes:~/bar2$ chmod 777 f3 f4
osboxes@osboxes:~/bar2$ ls -l f2
ls: cannot access 'f2': No such file or directory
osboxes@osboxes:~/bar2$ ls- l
No command 'ls-' found, did you mean:
  Command 'ls' from package 'coreutils' (main)
  Command 'lsu' from package 'suckless-tools' (universe)
  Command 'lsx' from package 'suckless-tools' (universe)
  Command 'lsh' from package 'lsh-client' (universe)
ls-: command not found
osboxes@osboxes:~/bar2$ ls -l
total 0
-rwxrwxrwx 1 osboxes osboxes 0 Sep 23 11:45 f3
-rwxrwxrwx 1 osboxes osboxes 0 Sep 23 11:45 f4
osboxes@osboxes:~/bar2$
```

10. Practice the below mentioned commands with all the possible options: chmod, find, head, more, tail, & chgrp
:

```
osboxes@osboxes: ~  
osboxes@osboxes:~$ touch state.txt  
osboxes@osboxes:~$ cat > state.txt  
Maharashtra  
Tamil Nadu  
Rajasthan  
Gujrat  
Karnataka  
Kerala  
Andhra Pradesh  
osboxes@osboxes:~$ head state.txt  
Maharashtra  
Tamil Nadu  
Rajasthan  
Gujrat  
Karnataka  
Kerala  
Andhra Pradesh  
osboxes@osboxes:~$ tail state.txt  
Maharashtra  
Tamil Nadu  
Rajasthan  
Gujrat  
Karnataka  
Kerala  
osboxes@osboxes:~$ ls  
bar2      Documents  examples.desktop  Pictures  state.txt  
Desktop   Downloads  Music             Public    Templates  
osboxes@osboxes:~$ sudo chgrp osboxes Public  
osboxes@osboxes:~$ chmod 777 Public  
osboxes@osboxes:~$ find Public  
Public  
osboxes@osboxes:~$ more +5 state.txt  
Karnataka  
Kerala  
Andhra Pradesh  
osboxes@osboxes:~$
```

11. See difference between man and what is.

: man command in Linux is used to display the user manual of any command that we can run on the terminal. What is command is used to get brief information about Linux command or function.

12. Create 3 files (file1, file2, file3) & assign permissions:

- a. file1 - r,w to owner, group, and others.
- b. file2 - r,w to owner and group, r to others
- c. file3 - r,w to owner, r to group, none to others

```
osboxes@osboxes: ~/bar2
osboxes@osboxes:~$ cd bar2
osboxes@osboxes:~/bar2$ ls
f1  f2  f3  f4
osboxes@osboxes:~/bar2$ chmod 660 f1
osboxes@osboxes:~/bar2$ chmod 666 f1
osboxes@osboxes:~/bar2$ chmod 664 f2
osboxes@osboxes:~/bar2$ chmod 640 f3
osboxes@osboxes:~/bar2$ ls -l
total 0
-rw-rw-rw- 1 osboxes osboxes 0 Sep 23 15:02 f1
-rw-rw-r-- 1 osboxes osboxes 0 Sep 23 15:02 f2
-rw-r----- 1 osboxes osboxes 0 Sep 23 11:45 f3
-rwxrwxrwx 1 osboxes osboxes 0 Sep 23 11:45 f4
osboxes@osboxes:~/bar2$
```

13. Create a file named 'test.txt' having following lines:

I wish to wish the wish you wish to wish, but if you wish the wish the witch wishes, I won't wish the wish you wish to wish. Now use grep command to print the lines matching 'wish' words. Also print the lines as well as line number at the beginning of line containing 'wish' word in file `grep -n wish test.txt`.

```
osboxes@osboxes: ~/Videos
osboxes@osboxes:~/Videos$ touch text.txt
osboxes@osboxes:~/Videos$ cat > text.txt
I wish to wish the wish you wish to wish,
but if you wish the wish the witch wishes,
i won't wish the wish you wish to wish.
osboxes@osboxes:~/Videos$ grep wish text.txt
I wish to wish the wish you wish to wish,
but if you wish the wish the witch wishes,
i won't wish the wish you wish to wish.
osboxes@osboxes:~/Videos$ cat >> text.txt
1
2
3
4
osboxes@osboxes:~/Videos$ grep wish text.txt
I wish to wish the wish you wish to wish,
but if you wish the wish the witch wishes,
i won't wish the wish you wish to wish.
osboxes@osboxes:~/Videos$
```

14. Change the default system variable PS1 to a new value containing the current date along with username and hostname.

```
osboxes@osboxes: ~
osboxes@osboxes:~/Videos$ cd ..
osboxes@osboxes:~$ echo $PS1
\[ \e]0;\u@\h: \w\a\]${debian_chroot:+($debian_chroot)}\[ \033[01;32m\]\u@\h\[ \033[00m\]:\[ \033[01;34m\]\w\[ \033[00m\]\$
osboxes@osboxes:~$ export PS1="\[ \u@\h: \w] $"
[osboxes@osboxes:~] $ echo $PS1
[ \u@\h: \w] $
[osboxes@osboxes:~] $ export PS1="\$(date +%d.%m.%Y) > "
23.09.2022 >
```


15. Explore all the commands with all the options taught in today's class

- Cd command is for change directory.
- Cat command is for print the content of a file.
- Ls command is use for showing the files of current directory
- Mkdir is use for making a directory
- Rmdir is use for removing a directory
- The pwd command writes to standard output the full path name of your current directory (from the root directory)
- Mv is used for moving a directory
- Cp is use for copying a directory
- Rm use for removing a file or directory.

:

uname	.. know your machine's characteristics
logout	.. logs off system
cut	.. slitting a file vertically
cat	.. display/create files
wc	.. count lines, words, characters
gzip	.. compressing a file
gunzip	.. uncompressing a file
more	.. views a file, pausing every screenful
less	.. similar to more, more powerful
file	.. show file type
tail	.. show the last few lines of a file
head	.. show the beginning of a file
w	.. shows who is logged on and what they're doing
finger	.. shows more information about a user
df	.. shows disk space available on the system
du	.. shows how much disk space is being used by folders
bc	.. a simple calculator
cal	.. display calendar
date	.. display system date