

Linux Command

shell: program that takes command from keyboard and passes it to the os.

terminal: tool to process shell command

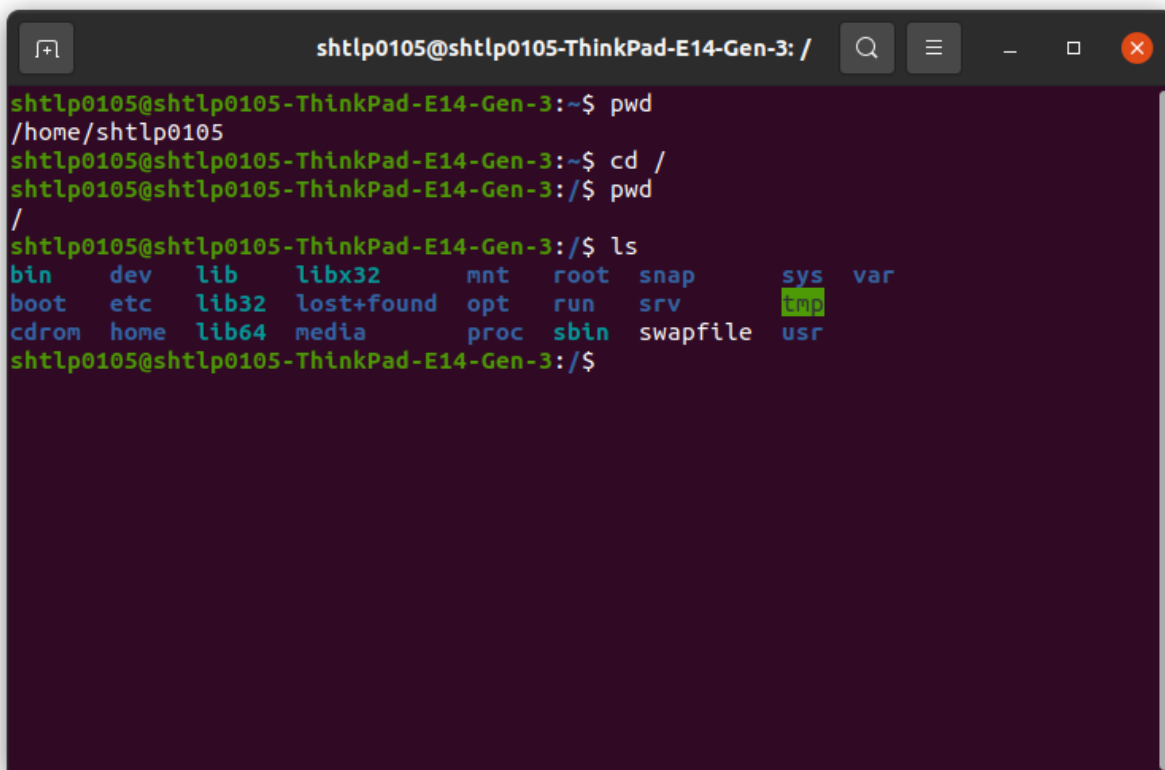
file system

file in tree

root →

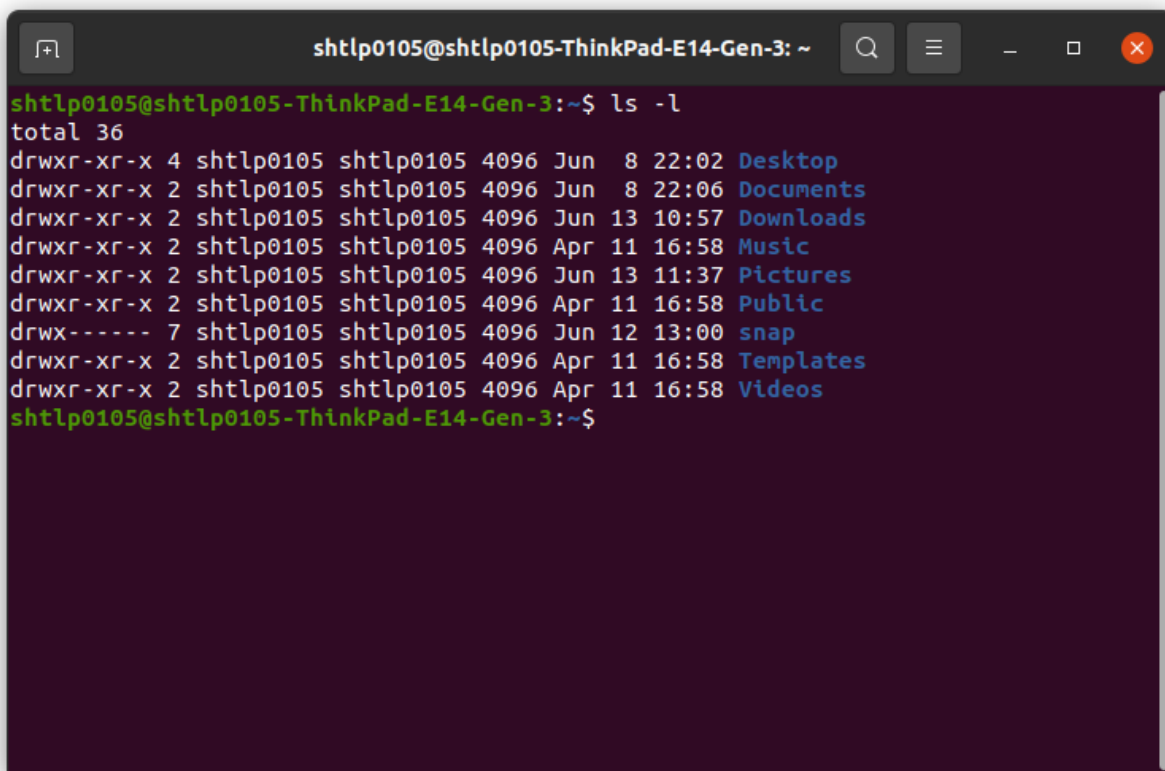
1) pwd -present directory command

2) ls [options] [file/directory]



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: /  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ pwd  
/home/shtlp0105  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cd /  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:/$ pwd  
/  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:/$ ls  
bin      dev      lib      libx32   mnt      root     snap     sys      var  
boot     etc      lib32    lost+found  opt      run      srv      tmp  
cdrom    home    lib64    media    proc     sbin     swapfile  usr
```

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
bin  dev  lib  libx32  mnt  root  snap  sys  var  
boot etc  lib32 lost+found  opt  run  srv  tmp  
cdrom home lib64 media  proc sbin swapfile usr  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:/$ cd ho  
bash: cd: ho: No such file or directory  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:/$ cd home/  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:/home$ ls  
shtlp0105  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:/home$ cd shtlp0105/  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls  
Desktop Documents Downloads Music Pictures Public snap Templates Videos  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls ~  
Desktop Documents Downloads Music Pictures Public snap Templates Videos  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls home/Desktop  
ls: cannot access 'home/Desktop': No such file or directory  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls Desktop/  
ishita_chauhan  ishita_chauhan.zip  test  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls ..  
shtlp0105  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls ../../..  
bin  dev  lib  libx32  mnt  root  snap  sys  var  
boot etc  lib32 lost+found  opt  run  srv  tmp  
cdrom home lib64 media  proc sbin swapfile usr  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l  
total 36  
drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun  8 22:02 Desktop  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun  8 22:06 Documents  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:37 Pictures  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

3) ls -l

directory in long format

drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun 8 22:02 Desktop

drwxr-xr-x : directory read write execute rights

shtlp0105 : user

4096: size

Jun 8 22:02: date time

Desktop: directory name

The string "-xr" and "-x" in the file permissions "drwxr-xr-x" represent the access permissions for the file or directory. Let's break down the permissions:

- The first character "d" indicates that it is a directory. If it were a regular file, it would be represented by a hyphen ("-").

- The next three characters "rwx" represent the permissions for the owner of the file or directory. In this case, "rwx" means the owner has read (r), write (w), and execute (x) permissions.
- The following three characters "r-x" represent the permissions for the group. The group has read (r) and execute (x) permissions, but no write (w) permission.
- The last three characters "r-x" represent the permissions for others or everyone else. They also have read (r) and execute (x) permissions, but no write (w) permission.

4) ls -a

hidden files

5) ls -al

hidden file long format

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l  
total 36  
drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun  8 22:02 Desktop  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun  8 22:06 Documents  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:37 Pictures  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ^C  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -la  
.  
..  
.bash_history  
.bash_logout  
.bashrc  
.cache  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -al  
total 104  
drwxr-xr-x 22 shtlp0105 shtlp0105 4096 Jun  8 09:39 .  
drwxr-xr-x  3 root      root      4096 Apr 11 16:56 ..  
-rw-----  1 shtlp0105 shtlp0105 1445 Jun 13 00:57 .bash_history  
-rw-r--r--  1 shtlp0105 shtlp0105  220 Apr 11 16:56 .bash_logout  
-rw-r--r--  1 shtlp0105 shtlp0105 3771 Apr 11 16:56 .bashrc  
drwxrwxr-x 18 shtlp0105 shtlp0105 4096 Jun  8 12:12 .cache  
drwx----- 15 shtlp0105 shtlp0105 4096 Jun  8 15:39 .config  
drwxr-xr-x  4 shtlp0105 shtlp0105 4096 Jun  8 22:02 Desktop  
drwxr-xr-x  2 shtlp0105 shtlp0105 4096 Jun  8 22:06 Documents  
drwxrwxr-x  3 shtlp0105 shtlp0105 4096 Jun  8 09:39 .dotnet  
drwxr-xr-x  2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
drwx-----  3 shtlp0105 shtlp0105 4096 Jun  8 22:01 .gnupg  
drwxr-xr-x  3 shtlp0105 shtlp0105 4096 Apr 11 16:58 .local  
drwx-----  4 shtlp0105 shtlp0105 4096 May  9 16:44 .mozilla  
drwxr-xr-x  2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
drwxr-xr-x  2 shtlp0105 shtlp0105 4096 Jun 13 11:40 Pictures  
drwx-----  3 shtlp0105 shtlp0105 4096 Jun  8 09:37 .pki  
-rw-r--r--  1 shtlp0105 shtlp0105  807 Apr 11 16:56 .profile  
drwxr-xr-x  2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx-----  7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwx-----  2 shtlp0105 shtlp0105 4096 May 30 13:18 .ssh  
-rw-r--r--  1 shtlp0105 shtlp0105   0 Jun  5 12:43 .sudo_as_admin_successful  
drwxr-xr-x  2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
drwx-----  6 shtlp0105 shtlp0105 4096 Jun  6 10:11 .thunderbird  
drwxr-xr-x  2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
drwxrwxr-x  3 shtlp0105 shtlp0105 4096 Jun  8 09:37 .vscode  
drwxrwxr-x  2 shtlp0105 shtlp0105 4096 Jun  8 09:37 .vscode-cli  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -ls  
total 36  
drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun  8 22:02 Desktop  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun  8 22:06 Documents  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:49 Pictures  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos
```

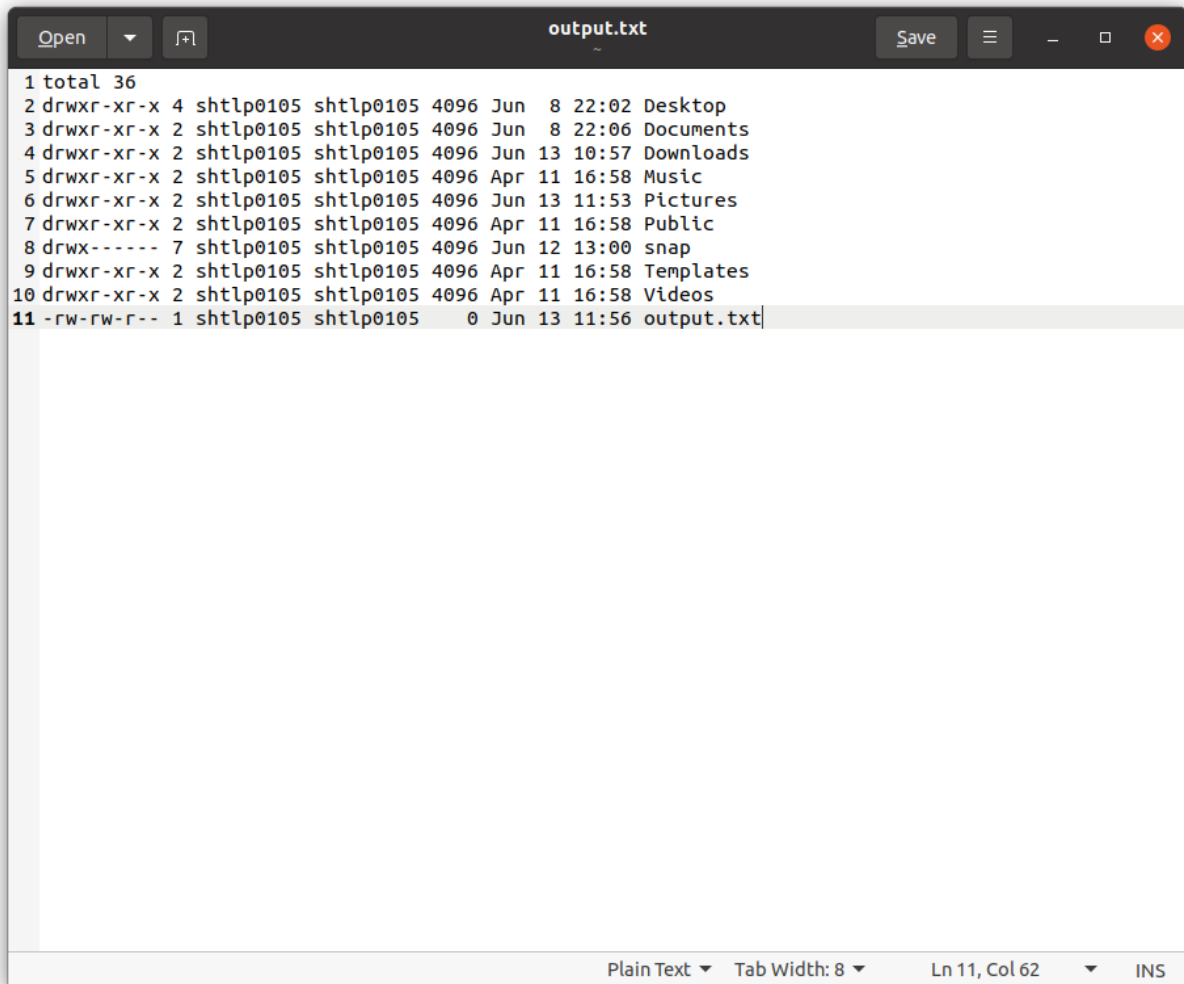
6) ls -ls

sorts file according to size

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls Desktop/ishita_chauhan/*.pdf  
Desktop/ishita_chauhan/10th_certificate.pdf  
Desktop/ishita_chauhan/19223_Sem1_to_Sem7.pdf  
Desktop/ishita_chauhan/AdharCard.pdf  
'Desktop/ishita_chauhan/Declaration_not having EPF No.-Final.pdf'  
Desktop/ishita_chauhan/Electricity_bill.pdf  
Desktop/ishita_chauhan/Form-12B.pdf  
Desktop/ishita_chauhan/hsc.pdf  
Desktop/ishita_chauhan/Ishita_Chauhan_Resume.pdf  
'Desktop/ishita_chauhan/Ishita_Offer Letter (1).pdf'  
Desktop/ishita_chauhan/pan_card.pdf  
Desktop/ishita_chauhan/passport.pdf  
'Desktop/ishita_chauhan/Self Declaration.pdf'  
'Desktop/ishita_chauhan/ShortHills Documents Verification Form-1.pdf'  
Desktop/ishita_chauhan/ssc.pdf  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

7) ls [Directory]/*.[format]

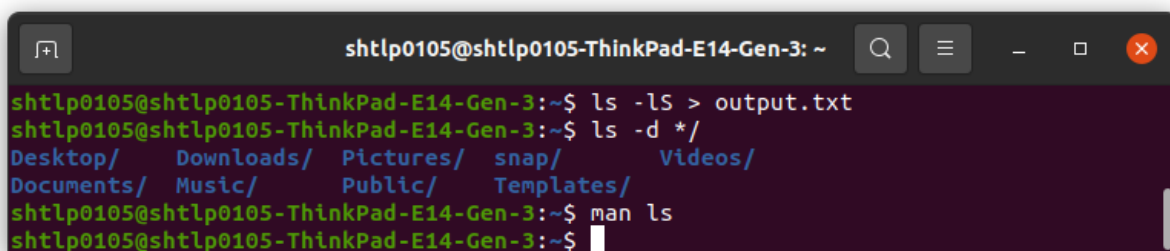
```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
Desktop/ishita_chauhan/ssc.pdf  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -ls > output.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```



```
1 total 36
2 drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun  8 22:02 Desktop
3 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun  8 22:06 Documents
4 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads
5 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music
6 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:53 Pictures
7 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public
8 drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap
9 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates
10 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos
11 -rw-rw-r-- 1 shtlp0105 shtlp0105    0 Jun 13 11:56 output.txt
```

8) `ls -ls > output.txt`

save the output of ls in output.txt



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -ls > output.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -d */
Desktop/  Downloads/  Pictures/  snap/      Videos/
Documents/ Music/      Public/    Templates/
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ man ls
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

9) `ls -d */` lists directory

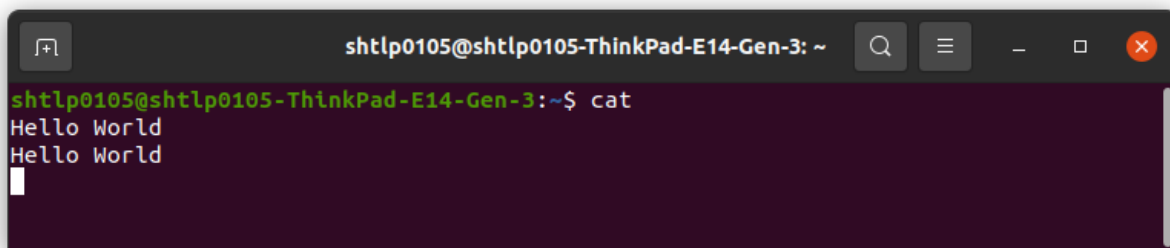
10) `man ls`

man: dictionary of linux

it gives all the ways you can use `ls` command

11) `cat options file1 file2`

`cat` echos anything written

A terminal window with a dark purple background. The title bar shows the user 'shtlp0105' and the host 'shtlp0105-ThinkPad-E14-Gen-3'. The prompt is '~\$'. The user has entered the command 'cat'. The output shows 'Hello World' on two separate lines, with a cursor on the third line.

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~$ cat
Hello World
Hello World

```

12) `cat file1.txt file2.txt`

13) `cat -b file1.txt`

adds line no to the text file and skips the blank lines

14) `cat -n output.txt`

adds line no to the text file and including blank lines


```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
11 -rw-rw-r-- 1 shtlp0105 shtlp0105 0 Jun 13 11:56 output.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat -b output.txt  
1 total 36  
2 drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun 8 22:02 Desktop  
3 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 8 22:06 Documents  
4 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
5 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
6 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:53 Pictures  
7 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
8 drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
9 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
10 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
  
11 -rw-rw-r-- 1 shtlp0105 shtlp0105 0 Jun 13 11:56 output.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat -n output.txt  
1 total 36  
2 drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun 8 22:02 Desktop  
3 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 8 22:06 Documents  
4 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
5 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
6 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:53 Pictures  
7 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
8 drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
9 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
10 drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
11  
12  
13 -rw-rw-r-- 1 shtlp0105 shtlp0105 0 Jun 13 11:56 output.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ^C  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

15) `cat -s output.txt`

squeezes all the blank lines in 1 (only displaying not changing)

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat -s output.txt  
total 36  
drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun  8 22:02 Desktop  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun  8 22:06 Documents  
  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:53 Pictures  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
  
-rw-rw-r-- 1 shtlp0105 shtlp0105    0 Jun 13 11:56 output.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

16) cat -E output.txt

puts \$ sign at end of lines

17) output > file

i/o redirection

18) cat > text.txt

exit using ctrl d

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat -s output.txt  
total 36  
drwxr-xr-x 4 shtlp0105 shtlp0105 4096 Jun  8 22:02 Desktop  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun  8 22:06 Documents  
  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 11:53 Pictures  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
  
-rw-rw-r-- 1 shtlp0105 shtlp0105    0 Jun 13 11:56 output.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat > text.txt  
line 1  
line 2  
  
line 3  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat text.txt  
line 1  
line 2  
  
line 3  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

18) `cat >> text.txt`

appending to the existing command

19) `cat text.txt text2.txt > output.txt`

combine files in output files

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat text.txt text2.txt > output.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat output.txt  
line 1  
line 2  
  
line 3  
list 2 line 1^C  
list 2 line 1^C  
list 2 line 1^C  
list 2 line 1^C  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

20) `cat text.txt >> text2.txt`

append to existing file

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat text.txt >> text2.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat text2.txt  
list 2 line 1^C  
list 2 line 1^C  
list 2 line 1^C  
list 2 line 1^C  
line 1  
line 2  
  
line 3  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

21) `ls -al > text.txt`

adds all data from `ls -al` to `text.txt`

22) `mkdir image`

makes folder

23) `mkdir image/pics`

makes folder inside existing folder

24) `mkdir -p name/mark`

25) `mkdir --parents name/mark`

creates folder structure

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~/Desktop
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls
Desktop  Downloads  output.txt  Public  Templates  text.txt
Documents Music      Pictures    snap    text2.txt  Videos
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cd Desktop
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ mkdir image
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ mkdir image/pics
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ mkdir -p name/mark
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$
```

26) `mkdir -p name/{x,y,z}`

creating array of directories

27) `rmdir -p a/b/c/d`

remove directory structure (directory only)

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~/Desktop
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ mkdir image/pics
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ mkdir -p name/mark
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ rmdir image/pics
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ mkdir -p a/b/c/d/e
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ rkdir -p a/b/c/d/e

Command 'rkdir' not found, did you mean:

  command 'rmdir' from deb coreutils (8.30-3ubuntu2)
  command 'mkdir' from deb coreutils (8.30-3ubuntu2)
  command 'redir' from deb redir (3.2-1)

Try: sudo apt install <deb name>

shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ rmkdir -p a/b/c/d/e

Command 'rmkdir' not found, did you mean:


  command 'mkdir' from deb coreutils (8.30-3ubuntu2)
  command 'rmdir' from deb coreutils (8.30-3ubuntu2)
  command 'hmkdir' from deb hfsutils (3.2.6-14)
  command 'mmkdir' from deb mblaze (0.6-1)

Try: sudo apt install <deb name>

shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ rmdir -p a/b/c/d/e
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$
```

28) `rmdir -pv a/b/c/d`

get info of background processes



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~/Desktop
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ mkdir -p a/b/c/d/e
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ rmdir -pv a/b/c/d/e
rmdir: removing directory, 'a/b/c/d/e'
rmdir: removing directory, 'a/b/c/d'
rmdir: removing directory, 'a/b/c'
rmdir: removing directory, 'a/b'
rmdir: removing directory, 'a'
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$
```

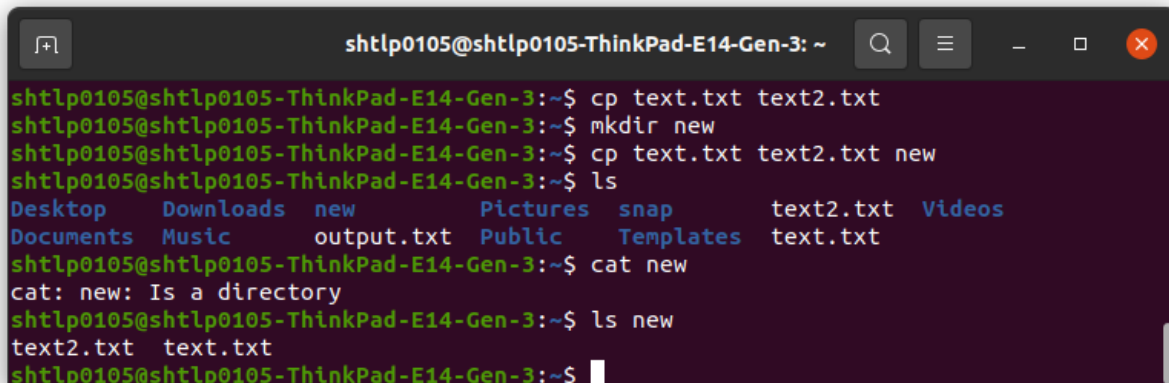
29) `rm -rv a`

removes files directory all

30) `cp text.txt text2.txt`

`cp [options] [source] [destination]`

31) `cp x.txt y.txt new`



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cp text.txt text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ mkdir new
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cp text.txt text2.txt new
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls
Desktop  Downloads  new        Pictures  snap      text2.txt  Videos
Documents Music      output.txt Public    Templates text.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cat new
cat: new: Is a directory
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls new
text2.txt  text.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

use `-i` flag to avoid overwriting

32) `cp -R dir1 dir2`

for `dir1` containing files

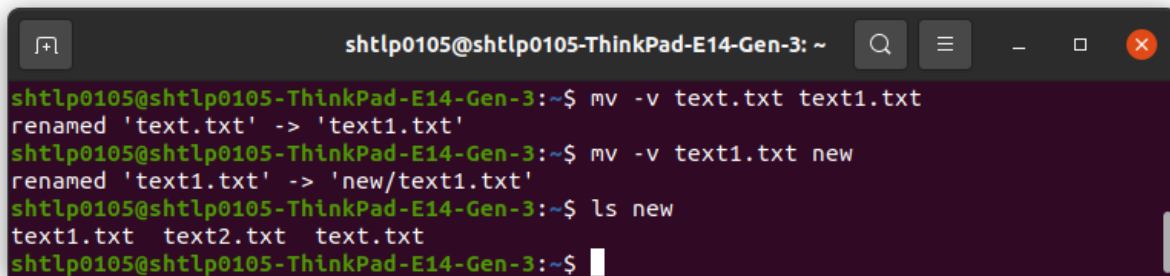
33) `mv file1.txt file2.txt`

`mv [options] [source] [destination]`

moves data of file1 in file2 and remove file1

33) `mv file1.txt dir/`

moves file1 to directory dir

A terminal window with a dark purple background and green text. The window title is 'shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~'. The terminal shows the following commands and output:

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ mv -v text.txt text1.txt
renamed 'text.txt' -> 'text1.txt'
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ mv -v text1.txt new
renamed 'text1.txt' -> 'new/text1.txt'
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls new
text1.txt  text2.txt  text.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

use `-i` flag to avoid overwriting

34) `less big.txt`

read big text using down button like a book

change page using space bar

shift + g to the end

1+g go to top page

`/[keyword]` searches keyword

`?[keyword]` searches from the down

35) `touch file1`

if file1 exists the timestamp changes else file1 is created

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
-rw-rw-r-- 1 shtlp0105 shtlp0105 23 Jun 13 13:48 text2.txt  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ touch text2.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l  
total 48  
drwxr-xr-x 6 shtlp0105 shtlp0105 4096 Jun 13 13:40 Desktop  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 8 22:06 Documents  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music  
drwxrwxr-x 2 shtlp0105 shtlp0105 4096 Jun 13 14:04 new  
-rw-rw-r-- 1 shtlp0105 shtlp0105 87 Jun 13 13:22 output.txt  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 14:04 Pictures  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public  
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates  
-rw-rw-r-- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt  
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

36) nano file1.cpp

nano is text editor

it has highlighting for codes



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~
GNU nano 4.8 file.text Modified
kjfdsjfbjd
scabdc b
csxnb cxkc
^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace    ^U Paste Text ^T To Spell   ^_ Go To Line
```

37) `sudo apt install nodejs`

sudo: Super User DO

helps have administrative rights

`sudo -s` for root priviledges (`sudo su`)

38) `top`

for getting data of resources (cpu)

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~
top - 14:32:35 up 3:58, 1 user, load average: 1.41, 1.54, 1.38
Tasks: 348 total, 1 running, 347 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.4 us, 0.4 sy, 0.0 ni, 99.2 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 14809.0 total, 6603.2 free, 4496.0 used, 3709.8 buff/cache
MiB Swap: 2048.0 total, 2048.0 free, 0.0 used, 9942.0 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR  S  %CPU  %MEM   TIME+ COMMAND
 1868 shtlp01+  20   0 6000240 328844 120464 S   6.7   2.2 17:12.52 gnome-shell
 2123 shtlp01+  20   0 1656476 147968 59456 S   6.7   1.0 1:08.56 snap-store
23891 root      20   0      0      0      0 I   6.7   0.0 0:02.13 kworker/0:
25519 shtlp01+  20   0  20760   3912   3156 R   6.7   0.0 0:00.01 top
    1 root      20   0 169780  13036  8312 S   0.0   0.1 0:03.37 systemd
    2 root      20   0      0      0      0 S   0.0   0.0 0:00.02 kthreadd
    3 root       0 -20      0      0      0 I   0.0   0.0 0:00.00 rcu_gp
    4 root       0 -20      0      0      0 I   0.0   0.0 0:00.00 rcu_par_gp
    5 root       0 -20      0      0      0 I   0.0   0.0 0:00.00 slub_flush+
    6 root       0 -20      0      0      0 I   0.0   0.0 0:00.00 netns
    8 root       0 -20      0      0      0 I   0.0   0.0 0:00.00 kworker/0:
   10 root       0 -20      0      0      0 I   0.0   0.0 0:00.00 mm_percpu_+
   11 root      20   0      0      0      0 S   0.0   0.0 0:00.00 rcu_tasks_+
   12 root      20   0      0      0      0 S   0.0   0.0 0:00.00 rcu_tasks_+
```

type s to change time of updation

i for ideal processes

k for killing any process

39) kill 2546

kill [flags] [pid]

kill processes

pidof [process_name] // to get pid

** kill -KILL [pid]

** kill -9 [pid] → SIGKILL

force kill, not recommended

40) ps -ux

get all running processes

41) ps -aux

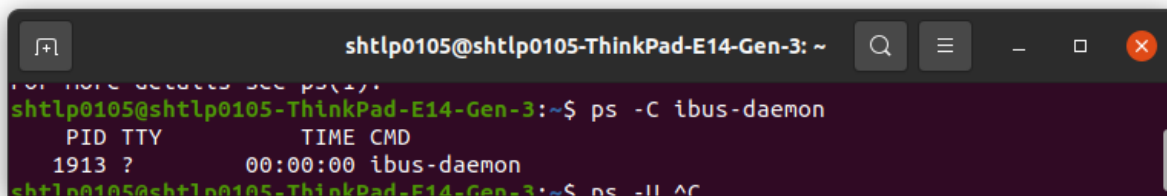
all running processes

42) ps -U [user_name]

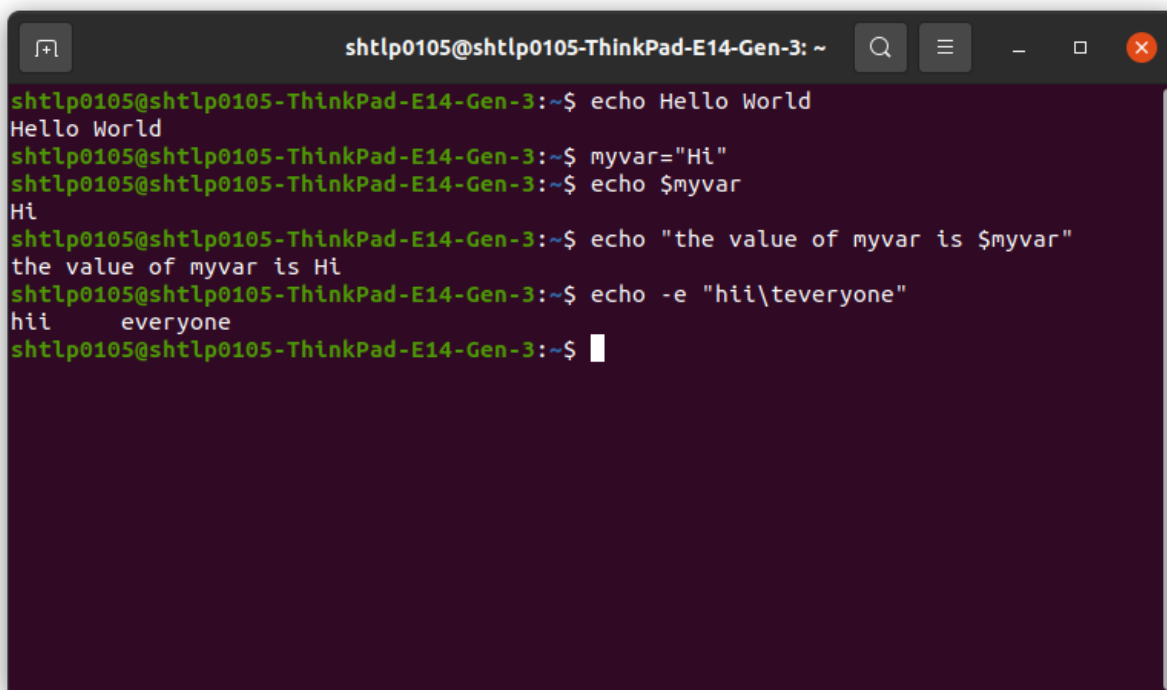
get processes of a specific user

43) `ps -C [process_name]`

get instances of a program



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ps -C ibus-daemon  
PID TTY          TIME CMD  
1913 ?            00:00:00 ibus-daemon  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ps -H ^C
```



```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ echo Hello World  
Hello World  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ myvar="Hi"  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ echo $myvar  
Hi  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ echo "the value of myvar is $myvar"  
the value of myvar is Hi  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ echo -e "hii\teveryone"  
hii      everyone  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

44) `chmod o+w x.txt`

gives others write right

45) `chmod ug=rw x.txt`

gives user and group rights

46) `chmod u-r x.txt`

take read permission from user

47) chmod u=rw,g=rw,o+r x.txt

48) chmod a -rwx x.txt

take all rights from all users,group and others

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l
total 48
drwxr-xr-x 6 shtlp0105 shtlp0105 4096 Jun 13 13:40 Desktop
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 8 22:06 Documents
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 10:57 Downloads
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Music
drwxrwxr-x 2 shtlp0105 shtlp0105 4096 Jun 13 14:04 new
-rw-rw-r-- 1 shtlp0105 shtlp0105 87 Jun 13 13:22 output.txt
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Jun 13 15:49 Pictures
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates
-rw-rw-r-- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod o-w text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
-rw-rw-rw- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod g-x text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
-rw-rwxr-- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod g-wx text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
-rw-r--r-- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod ugrwx text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
-rwxrwxr-- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod ug-rwx text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
-----rw- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod a-rwx text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
----- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod ug-rw, o+r text2.txt
chmod: invalid mode: 'ug-rw,'
Try 'chmod --help' for more information.
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod ug+rwx, o+r text2.txt
chmod: invalid mode: 'ug+rwx,'
Try 'chmod --help' for more information.
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod ug=rw, o+r text2.txt
chmod: invalid mode: 'ug=rw,'
Try 'chmod --help' for more information.
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod urrw,grrw, o+r text2.txt
chmod: invalid mode: 'urrw,grrw,'
Try 'chmod --help' for more information.
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod urw,grrw, o+r text2.txt
chmod: invalid mode: 'urw,grrw,'
Try 'chmod --help' for more information.
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
-rw-rw-r-- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

same for directory permissions

if write permission is taken you cannot mkdir touch cat etc

if read permission is taken you cannot ls

if execute permission is taken you cannot ls files inside dir and also cannot mkdir,touch or cat

octal and numerical permissions

| permissions | binary | octal |
|-------------|--------|-------|
| --- | 000 | 0 |
| -x | 001 | 1 |
| -w- | 010 | 2 |

| permissions | binary | octal |
|-------------|--------|-------|
| -wx | 011 | 3 |
| r— | 100 | 4 |
| r-x | 101 | 5 |
| rw- | 110 | 6 |
| rwX | 111 | 7 |

```

shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Public
drwx----- 7 shtlp0105 shtlp0105 4096 Jun 12 13:00 snap
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Templates
----- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
drwxr-xr-x 2 shtlp0105 shtlp0105 4096 Apr 11 16:58 Videos
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
----- 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ chmod 015 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt
-----x-r-x 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$

```

Learning bash scripting:

```

shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~/Desktop
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ which bash
/usr/bin/bash
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ nano myscript.sh
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ cat myscript.sh
#!/usr/bin/bash

ls -l
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ chmod +x myscript.sh
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ ./myscript.sh
total 11744
drwxrwxr-x 2 shtlp0105 shtlp0105 4096 Jun 13 13:36 image
drwxrwxr-x 2 shtlp0105 shtlp0105 4096 Jun 8 21:59 ishita_chauhan
-rw-rw-r-- 1 shtlp0105 shtlp0105 12002430 Jun 8 22:02 ishita_chauhan.zip
-rwxrwxr-x 1 shtlp0105 shtlp0105 23 Jun 13 16:29 myscript.sh
drwxrwxr-x 3 shtlp0105 shtlp0105 4096 Jun 13 13:29 name
drwxrwxr-x 2 shtlp0105 shtlp0105 4096 Jun 8 12:33 test
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$

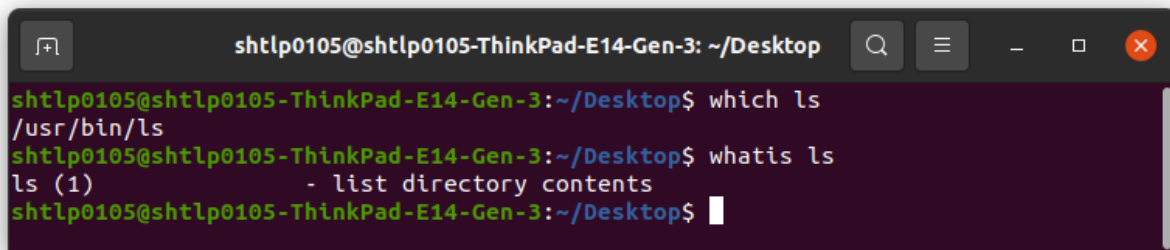
```

49) which ls

it is used to find the exact location of the command

50) whatis ls

gives description of ls

A terminal window with a dark background. The title bar shows 'shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~/Desktop'. The terminal content shows the following commands and output:

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ which ls
/usr/bin/ls
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ whatis ls
ls (1)          - list directory contents
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$
```

51) sudo useradd mark -m -s /bin/bash -g users -c "my comment"

mark= name of user

The options used in the command are as follows:

- **-m** : This option creates a home directory for the new user. By default, the home directory is usually created in the **/home** directory with the same name as the username.
- **-s /bin/bash** : This option sets the default shell for the new user to **/bin/bash**, which is the Bash shell.
- **-g users** : This option sets the primary group for the new user to "users". The group "users" should already exist on the system.
- **-c "my comment"** : This option allows you to add a comment or description to the user account. In this case, the comment is "my comment".

52) sudo passwd mark

to create password for mark

53) sudo userdel mark

-r for whole deletion

54) sudo rm -r /home/mark

55) groups

groups of current user

56) cat /etc/group

all groups

57) sudo groupadd cpp

adds group

57) sudo groupdel cpp

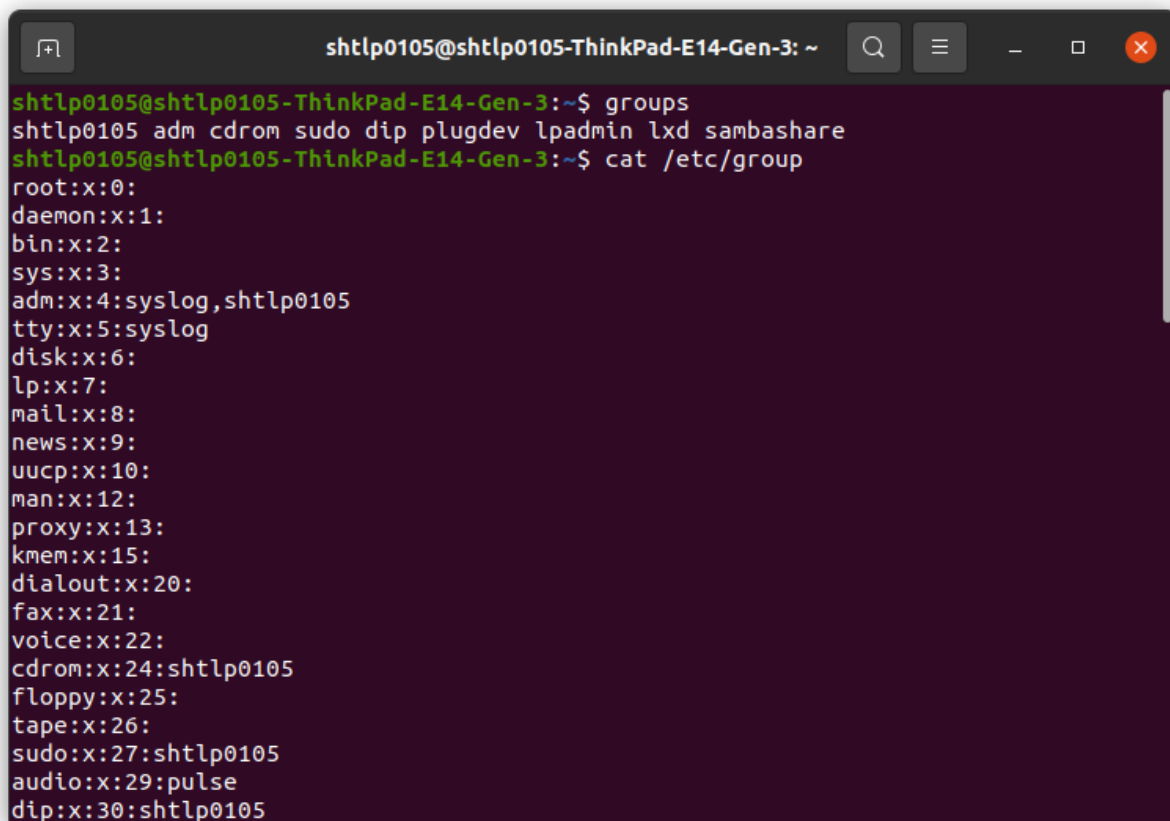
delete group

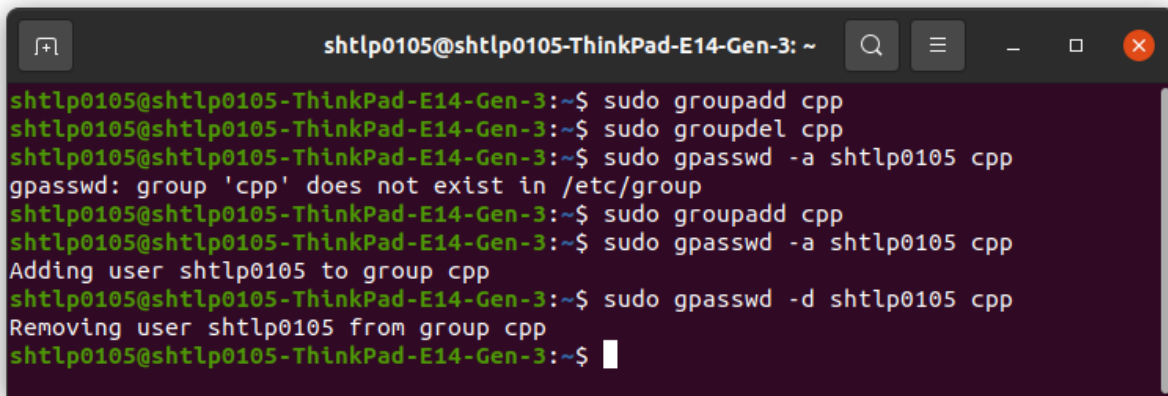
58) sudo gpasswd -a [user_name] [group_name]

adds user to the group

59) sudo gpasswd -d [user_name] [group_name]

removes user from the group

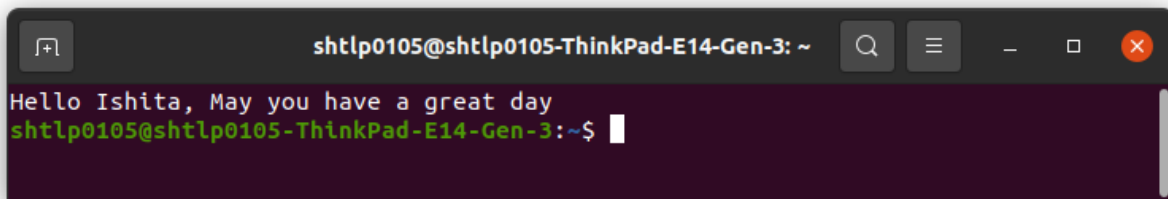
A terminal window with a dark purple background and light green text. The window title is 'shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~'. The terminal shows the following commands and their outputs:
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~\$ groups
shtlp0105 adm cdrom sudo dip plugdev lpadmin lxd sambashare
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~\$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,shtlp0105
tty:x:5:syslog
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:shtlp0105
floppy:x:25:
tape:x:26:
sudo:x:27:shtlp0105
audio:x:29:pulse
dip:x:30:shtlp0105

A terminal window with a dark purple background and white text. The window title is 'shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~'. The terminal shows a series of commands and their outputs: 'sudo groupadd cpp', 'sudo groupdel cpp', 'sudo gpasswd -a shtlp0105 cpp' (which fails with 'group 'cpp' does not exist in /etc/group'), 'sudo groupadd cpp' (which succeeds), 'sudo gpasswd -a shtlp0105 cpp' (which outputs 'Adding user shtlp0105 to group cpp'), and 'sudo gpasswd -d shtlp0105 cpp' (which outputs 'Removing user shtlp0105 from group cpp'). The prompt returns to '~\$' at the end.

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ sudo groupadd cpp
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ sudo groupdel cpp
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ sudo gpasswd -a shtlp0105 cpp
gpasswd: group 'cpp' does not exist in /etc/group
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ sudo groupadd cpp
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ sudo gpasswd -a shtlp0105 cpp
Adding user shtlp0105 to group cpp
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ sudo gpasswd -d shtlp0105 cpp
Removing user shtlp0105 from group cpp
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

60) gedit .bashrc

bashrc is the file that has data regarding terminals

A terminal window with a dark purple background and white text. The window title is 'shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~'. The terminal shows the output of a command: 'Hello Ishita, May you have a great day'. The prompt returns to '~\$' at the end.

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
Hello Ishita, May you have a great day
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

61) df -h

disk space in human readable format

62) du -h

disk space by folder

-s for summary

63) free

get free space


```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ df -h  
Filesystem      Size  Used Avail Use% Mounted on  
udev            7.2G   0 7.2G   0% /dev  
tmpfs           1.5G  2.0M  1.5G   1% /run  
/dev/nvme0n1p2  468G  14G  431G   4% /  
tmpfs           7.3G   0 7.3G   0% /dev/shm  
tmpfs           5.0M   4.0K  5.0M   1% /run/lock  
tmpfs           7.3G   0 7.3G   0% /sys/fs/cgroup  
/dev/loop0      128K  128K   0 100% /snap/bare/5  
/dev/loop1      303M  303M   0 100% /snap/code/129  
/dev/loop2      347M  347M   0 100% /snap/gnome-3-38-2004/119
```

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ free  
              total        used        free      shared  buff/cache   available  
Mem:           15164384      4337308      6922896         49736       3904180      10457420  
Swap:           2097148           0       2097148  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ du -sh  
1.5G  .  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

64) watch free -m

watching free space

-n flag to specify seconds

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
Every 2.0s: free -m      shtlp0105-ThinkPad-E14-Gen-3: Tue Jun 13 17:34:40 2023  
              total        used        free      shared  buff/cache   available  
Mem:           14808         4275         6707          56       3825      10164  
Swap:           2047           0         2047
```

65) find [path] -name "*.txt"

find file in a dir

66) wc [filename]

word count

67) cal

calender terminal

68) date

get date

69) ls -l; cat filename

multiple commands at a time

70) sudo apt-get install package_name

get package

71) ifconfig

info about network interfaces

72) tar -cvf test.tar test

c=creating archive

v=verbose

f=specify file name

73) grep "word" filename

watch for patterns

74) netstat -a

display all active network connection

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ wc text2.txt  
4 6 23 text2.txt  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ cal  
June 2023  
Su Mo Tu We Th Fr Sa  
1 2 3  
4 5 6 7 8 9 10  
11 12 13 14 15 16 17  
18 19 20 21 22 23 24  
25 26 27 28 29 30  
  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ date  
Tuesday 13 June 2023 05:42:39 PM IST  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ls -l text2.txt; cat text2.txt  
-rw-x--xr-x 1 shtlp0105 shtlp0105 23 Jun 13 14:23 text2.txt  
line 1  
line 2  
  
line 3  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ ifconfig  
  
Command 'ifconfig' not found, but can be installed with:  
  
sudo apt install net-tools  
  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$ iconfig  
  
Command 'iconfig' not found, but can be installed with:  
  
sudo apt install ipmiutil  
  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~$
```

```
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3: ~/Desktop  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ tar -cvf test.tar test  
test/  
test/test.html  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$ tar -cvf test.tar test/  
test/  
test/test.html  
shtlp0105@shtlp0105-ThinkPad-E14-Gen-3:~/Desktop$
```