1. ls

Display contents of file

```
L509@user:~/Desktop$  ls -1
cs22b2044
```

2. cat
Display Text in terminal. Opens the file

```
L509@user:~/Desktop/Lab10S$ cat demo
Andi Mandi Sandi
BAs itna hee
```

3. more
Displays data but waits for 'enter' to be pressed to display content after one screen.

```
L509@user:~/Desktop/Lab10S$ more demo
Andi Mandiefdefodsopdsf
fdsnkfdsob;gfdeougfd
\]efndjsklpgfskfdkjfeoiw[r3-
fewre]ew6ref6453ew4f65ew
543f fewfewf
2e wf ewf
ewf
ds31f6ee3562
fes64/d
fdsfed
6f.5e6.5fesd
fd
64/3fde
3fds35f
d3fd5f
d5fdsf4ew5f66g54de546g65d4sf536ds46fg6s4gf46ds6gdlji
sajfoijsafsifsfsiafinsa
Nigga
3
32656453*
4s
afsaffdljkewf; sewq diuwdhnsandsf'sfsflfsas
--More--(77%)
```

4. less
Less command is a Linux utility that can be used to read the contents of a text file one page (one screen) at a time.

```
Andi Mandiefdefodsopdsf
fdsnkfdsob;gfdeougfd
\]efndjsklpgfskfdkjfeoiw[r3-
fewre]ew6ref6453ew4f65ew
543f fewfewf
2e wf ewf
ewf
ds31f6ee3562
fes64/d
fdsfed
6f.5e6.5fesd
fd
64/3fde
3fds35f
d3fd5f
d5fdsf4ew5f66g54de546g65d4sf536ds46fg6s4gf46ds6gdlji
sajfoijsafsifsfsiafinsa
Nigga
3
32656453*
4s
afsaffdljkewf; sewq diuwdhnsandsf'sfsflfsas
visit niggatraders.in to get personalized nigga.
fdlkjwspoideoidsfbdfgdef
4553f45655
4566354663

(END)
```

5.cp
Copy contents from text file to text file to new text file
Copy contents from one directory to another

```
L509@user:~/Desktop/Lab10S$ cp demo trial
L509@user:~/Desktop/Lab10S$ cp demo Trial
```

6. cp –R: This command is used to copy directories recursively (copy all the files and folders inside the directory).

```
L509@user:~/Desktop/Lab10S$ cp -R Trial Trial2
L509@user:~/Desktop/Lab10S$ ls Trial2
demo
L509@user:~/Desktop/Lab10S$ ls Trial
demo
```

7.mv: This command is used to move the file or directory.

```
L509@user:~/Desktop/Lab10S$ ls Trial
demo
L509@user:~/Desktop/Lab10S$ mv cat.png Trial
L509@user:~/Desktop/Lab10S$ ls Trial
cat.png   demo
```

8.rm: This command is used to remove or delete files and directories

```
L509@user:~/Desktop/Lab10S/Trial$ ls
cat.png   demo
L509@user:~/Desktop/Lab10S/Trial$ rm demo
L509@user:~/Desktop/Lab10S/Trial$ ls
cat.png
L509@user:~/Desktop/Lab10S/Trial$
```

9.mkdir: This command is used to create a new directory This will create a new directory - directory3.

```
L509@user:~/Desktop/Lab10S/Trial$ ls
cat.png
L509@user:~/Desktop/Lab10S/Trial$ mkdir fff
L509@user:~/Desktop/Lab10S/Trial$ ls
cat.png   fff
```

10. tar- Archives file of some pattern

```
L509@user:~/Desktop/Lab10S$ ls
 cp.png      demo       less.png     mkdir.png   mv.png   trial   Trial2
 cp-R.png    lab1.odt  'ls -1.png'   more.png    rm.png   Trial
L509@user:~/Desktop/Lab10S$ tar cvf file.tar *.png
cp.png
cp-R.png
less.png
ls -1.png
mkdir.png
more.png
mv.png
rm.png
L509@user:~/Desktop/Lab10S$ ls
 cp.png      demo       lab1.odt    'ls -1.png'   more.png   rm.png   Trial
 cp-R.png    file.tar   less.png    mkdir.png     mv.png     trial    Trial2
L509@user:~/Desktop/Lab10S$
```

11. grep Finds word/ pattern in the file

```
L509@user:~/Desktop/Lab10S$ grep -i "window" demo
Window wdfewfeaf   .
window.
fsdfkdsfu window.
```

12. find
Search for file with partial name or full name

13.ssh -

14.diff – Difference in two files

15. sort-Sorts Data in file

16.pwd-Shows the path of present directories

L509@user:~/Desktop/Lab10S$ pwd
/home/L509/Desktop/Lab10S

17. gzip Zips file and delete orignal

L509@user:~/Desktop/Lab10S/Trial$ ls
cat.png   fff
L509@user:~/Desktop/Lab10S/Trial$ gzip cat.png
L509@user:~/Desktop/Lab10S/Trial$ ls
cat.png.gz   fff

18. ps -
Shows pids in terminal

L509@user:~/Desktop/Lab10S/Trial$ ps
    PID TTY   TIME CMD
   7871 pts/0   00:00:00 bash
  10957 pts/0   00:00:00 ps

19. free
Shows available memory

L509@user:~/Desktop/Lab10S/Trial$ free
          total   used   free   shared buff/cache   available
Mem: 7839096   1663620   4061848   82472   2113628   5832280
Swap: 2097148   0   2097148

20.kill

Kills task with pid

```
L509@user:~$ kill -9 11206
```

21. chmod

`+` Add permissions
`-` Remove permissions
`=` Set the permissions to the specified values

`r` Read permission
`w` Write permission
`x` Execute permission

Reference   Class

u   Owner
g   Group
o   Others
a   All (owner,groups,others)

```
L509@user:~/Desktop/Lab1OS$ chmod a-rw demo1.txt
L509@user:~/Desktop/Lab1OS$ gedit demo1.txt
```

Could not open the file "/home/L509/Desktop/Lab1OS/demo1.txt".
You do not have the permissions necessary to open the file.

Retry   ×

6.a
time who

```
L509@user:~/Desktop/Lab1OS$ time who myfile

real    0m0.002s
user    0m0.002s
sys     0m0.000s
```

6 b.

top

```
op - 16:32:41 up  2:34,  1 user,  load average: 0.54, 0.67, 0.65
asks: 380 total,   1 running, 379 sleeping,   0 stopped,   0 zombie
Cpu(s): 11.9 us,  0.4 sy,  0.0 ni, 87.4 id,  0.1 wa,  0.0 hi,  0.1 si,  0.0 st
iB Mem :   7655.4 total,   2614.7 free,   2725.7 used,   2314.9 buff/cache
iB Swap:   2048.0 total,   2048.0 free,      0.0 used.   4530.9 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
 2824 L509      20   0 6528440 500256 170996 S 126.9   6.4  30:48.73 gnome-shell
 2560 L509       9 -11 3769300  21556  16340 S   6.6   0.3   3:11.39 pulseaudio
 2650 root      20   0  621876 375336 137644 S   5.6   4.8   5:41.14 Xorg
11616 L509      20   0 3870900 463596 211916 S   1.0   5.9   1:26.61 firefox
11929 L509      20   0 2548688 180316 110160 S   1.0   2.3   0:06.82 Isolated Web Co
12372 L509      20   0 2653684 226164 112660 S   1.0   2.9   0:08.51 Isolated Web Co
  831 avahi     20   0   10824   6188   3556 S   0.7   0.1   2:01.37 avahi-daemon
 2746 L509      20   0    7380   4300   3844 S   0.3   0.1   0:00.52 dbus-daemon
11178 L509      20   0  820916  53764  39324 S   0.3   0.7   0:05.41 gnome-terminal-
14160 L509      20   0   12252   4236   3204 R   0.3   0.1   0:00.06 top
    1 root      20   0  317132  13160   8500 S   0.0   0.2   0:02.24 systemd
    2 root      20   0       0      0      0 S   0.0   0.0   0:00.01 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_flushwq
    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/0:0H-kblockd
   10 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
   11 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
   12 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace
   13 root      20   0       0      0      0 S   0.0   0.0   0:00.05 ksoftirqd/0
   14 root      20   0       0      0      0 I   0.0   0.0   0:16.76 rcu_sched
   15 root      rt   0       0      0      0 S   0.0   0.0   0:00.03 migration/0
   16 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
   18 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
   19 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/1
   20 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/1
   21 root      rt   0       0      0      0 S   0.0   0.0   0:00.13 migration/1
   22 root      20   0       0      0      0 S   0.0   0.0   0:00.01 ksoftirqd/1
   24 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/1:0H-events_highpri
   25 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/2
   26 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/2
   27 root      rt   0       0      0      0 S   0.0   0.0   0:00.14 migration/2
   28 root      20   0       0      0      0 S   0.0   0.0   0:00.01 ksoftirqd/2
   30 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/2:0H-kblockd
   31 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/3
   32 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/3
   33 root      rt   0       0      0      0 S   0.0   0.0   0:00.14 migration/3
   34 root      20   0       0      0      0 S   0.0   0.0   0:00.01 ksoftirqd/3
   36 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/3:0H-kblockd
   37 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/4
   38 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/4
   39 root      rt   0       0      0      0 S   0.0   0.0   0:00.14 migration/4
   40 root      20   0       0      0      0 S   0.0   0.0   0:00.01 ksoftirqd/4
   42 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/4:0H-events_highpri
   43 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/5
   44 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/5
   45 root      rt   0       0      0      0 S   0.0   0.0   0:00.14 migration/5
```

pkill

```
L509@user:~$ pkill -9 firefox
```

pgrep

```
L509@user:~$ pgrep ssh
2724
```

glances

```
user (Ubuntu Core 20 64bit / Linux 5.15.0-78-generic)                                                                                                                Uptime: 2:43:07

11th Gen Intel(R) Core(TM) i5-11400 @ 2.60GHz - 2.69/4.40GHz              CPU    23.0%  idle    70.9%  ctx_sw   41K     MEM    45.8%  active  1.16G     SWAP    0.0%     LOAD  12core
CPU  [|||||||||||||                                            23.0%]      user   25.9%  irq      0.0%  inter    7K      total  7.48G  inacti  3.95G     total  2.00G     1 min  2.87
MEM  [|||||||||||||||||||||||||||||                            45.8%]      system  2.3%  nice     0.0%  sw_int   5K      used   3.42G  buffer  82.3M     used     0       5 min  1.72
SWAP [                                                          0.0%]      iowait  0.8%  steal    0.0%                   free   4.06G  cached  2.47G     free   2.00G     15 min  1.07

NETWORK            Rx/s   Tx/s    TASKS 387 (1894 thr), 1 run, 289 slp, 97 oth Threads sorted automatically by CPU consumption
eno1              1.18Mb  230Kb
lo                  61Kb   61Kb   CPU%  MEM%  VIRT   RES     PID USER      TIME+ THR  NI S  R/s W/s  Command ('e' to pin | 'k' to kill)
                                  130   6.4   6.23G  491M   2824 L509    35:20 39   0 S   ? ?    gnome-shell
TCP CONNECTIONS                   102   6.6   3.88G  502M  15137 L509     2:13 158   0 S   ? ?    firefox -new-window
                                  102   6.6   3.88G  502M  15137 L509     2:13 158   0 S   ? ?    firefox -new-window
                                  39.3  5.1   2.61G  390M  15505 L509     0:58 37    0 S   ? ?    firefox -contentproc -childID 8 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitLe
                                  11.5  4.8   618M   370M   2650 L509     6:39 2     0 S   ? ?    [Xorg]
                                  4.3   0.5   184M   35.0M 17667 L509     0:01 1     0 R   0 0    python3 /snap/glances/1502/bin/glances
                                  3.4   2.7   2.48G  207M  15563 L509     0:08 28    0 S   ? ?    firefox -contentproc -childID 9 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitLe
                                 >3.4   1.4   2.34G  109M  15623 L509     0:01 27    0 S   ? ?    firefox -contentproc -childID 11 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  2.9   1.4   2.33G  105M  16320 L509     0:01 28    0 S   ? ?    firefox -contentproc -childID 30 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  2.4   1.3   2.33G  99.4M 16601 L509     0:01 27    0 S   ? ?    firefox -contentproc -childID 39 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  2.4   1.3   2.32G  98.9M 16074 L509     0:01 27    0 S   ? ?    firefox -contentproc -childID 22 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  2.4   0.3   3.84G  21.0M  2560 L509     3:36 3   -11 S   ? ?    pulseaudio --daemonize=no --log-target=journal
                                  1.9   1.3   2.33G  98.5M 15619 L509     0:01 27    0 S   ? ?    firefox -contentproc -childID 10 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.9   1.3   2.32G  95.7M 16570 L509     0:01 27    0 S   ? ?    firefox -contentproc -childID 38 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.9   1.2   2.31G  92.4M 16518 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 37 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.9   1.2   2.31G  91.2M 16043 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 21 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.3   2.33G  99.6M 15759 L509     0:01 27    0 S   ? ?    firefox -contentproc -childID 13 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.3   2.32G  95.9M 16322 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 31 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  94.5M 15714 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 12 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  93.2M 16077 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 23 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.32G  92.9M 15950 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 18 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  92.7M 16515 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 36 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  91.9M 16167 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 25 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  91.8M 16817 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 45 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  91.1M 16387 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 33 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  90.7M 15866 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 16 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  90.0M 15792 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 14 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  89.0M 15981 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 19 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.4   1.2   2.31G  88.9M 15992 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 20 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.0   1.3   2.32G  101M  16178 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 26 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.0   1.3   2.33G  97.9M 16384 L509     0:01 28    0 S   ? ?    firefox -contentproc -childID 32 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.0   1.2   2.31G  94.4M 15919 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 17 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.0   1.2   2.31G  92.6M 16192 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 27 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  1.0   0.5   77.1M  36.1M   350 root     0:01 1    -1 S   ? ?    [systemd-journal]
                                  0.5   1.3   2.33G  102M  15299 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 2 -isForBrowser -prefsLen 33849 -prefMapSize 235106 -jsInitLe
                                  0.5   1.3   2.32G  96.4M 16474 L509     0:00 27    0 S   ? ?    firefox -contentproc -childID 35 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  0.5   1.2   2.31G  89.8M 16646 L509     0:00 23    0 S   ? ?    firefox -contentproc -childID 40 -isForBrowser -prefsLen 29382 -prefMapSize 235106 -jsInitL
                                  0.5   0.7   803M   54.4M 11178 L509     0:10 5     0 S   ? ?    gnome-terminal-server
                                  0.5   0.1   123M   9.85M  1794 root     0:00 2     0 S   ? ?    [thermald]
                                  0.5   0.1   10.6M  6.04M   831 avahi    2:05 1     0 S   ? ?    [avahi-daemon]
                                  0.5   0.0   0      0        14 root     0:17 1     0 I   ? ?    [rcu_sched]
                                  0.0   3.5   1.56G  272M  12937 L509     0:14 6     0 S   ? ?    soffice.bin --writer
                                  0.0   2.7   5.74G  210M   2318 gdm      0:19 37    0 S   ? ?    [gnome-shell]
                                  0.0   1.7   2.37G  130M  15242 L509     0:01 28    0 S   ? ?    firefox -contentproc -childID 1 -isForBrowser -prefsLen 28445 -prefMapSize 235106 -jsInitLe
```