Linux Assignment

Commad Practice

1.Manipulating Files and Directories

```
ankush.dubey@simform.dom@sf-cpu-551:~$ cd Desktop
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ touch p1
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
p1  practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ ls
p1  practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ touch p2
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ touch p3
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
p1  p2  p3  practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cat>p1 ankush
cat: ankush: No such file or directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cat>p1
hiii
^C
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cat p1
hiii
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ mv p1
mv: missing destination file operand after 'p1'
Try 'mv --help' for more information.
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ ln
```

Basic commands for files and directories are:-

cp-copy
mv-move/rename
mkdir-make directory
rm-remove
touch-create file
cat-inserting any text

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```
                                   ankush.dubey@simform.dom@sf-cpu-551: ~/Desktop/practice        Q   ≡   —   ◻   ✕

aaa   app   Commands\ practices   n.pdf                        practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cd aaa
bash: cd: aaa: Not a directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cd practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ mkdir aa
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ dir
aa   SM
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ rm aa
rm: cannot remove 'aa': Is a directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ rm -rf aa
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ dor
Command 'dor' not found, did you mean:
  command 'dog' from snap dog (v0.1.0)
  command 'oor' from deb openoverlayrouter (1.3.0+ds1-3)
  command 'tor' from deb tor (0.4.6.10-1)
  command 'vor' from deb vor (0.5.8-1)
  command 'dot' from deb graphviz (2.42.2-6ubuntu0.1)
  command 'dir' from deb coreutils (8.32-4.1ubuntu1.2)
  command 'dar' from deb dar (2.7.3-1)
  command 'sor' from deb pccts (1.33MR33-6.1)
See 'snap info <snapname>' for additional versions.
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ dir
SM
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ ▮
```

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2.List all file permissions with example

Read – Can view or copy file contents

Write – Can modify file content

Execute – Can run the file (if its executable)

```
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ grep "ohe" b
iohefsfjklnshewwwww
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$  stat b
  File: b
  Size: 19            Blocks: 8          IO Block: 4096    regular file
Device: fc01h/64513d    Inode: 11668279    Links: 1
Access: (0644/-rw-r--r--)  Uid: (369203608/ankush.dubey@simform.dom)   Gid: (369200513/domain users@simform.dom)
Access: 2026-01-21 15:44:16.488682172 +0530
Modify: 2026-01-21 15:44:11.970701885 +0530
Change: 2026-01-21 15:44:11.970701885 +0530
 Birth: 2026-01-21 15:36:15.166745263 +0530
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ aa saveas ab
Command 'aa' not found, but can be installed with:
apt install astronomical-almanac
Please ask your administrator.
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ mv aa ab
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ dir
ab  b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ cp ab az
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ dir
ab  az  b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ mv ab ~/Desktop/
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ mv ab ~/Downloads/
mv: cannot stat 'ab': No such file or directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ mv az ~/Downloads/
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ chmod 744 ab
chmod: cannot access 'ab': No such file or directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ chmod 744 az
chmod: cannot access 'az': No such file or directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ chmod 744 b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ chmod 7 b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/a$ cd ..
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cd ..
ankush.dubey@simform.dom@sf-cpu-551:~ $ cd Downloads
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ rm -f az
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ dir
Employee_Acknowledgment_Summary_and_Consent.pdf  Homebrew-brew-5.0.11-8-g8582f2a\ (1).tar.gz  Homebrew-brew-5.0.11-8-g8582f2a.tar.gz  sdsf  The\ Linux\ Command\ Line.pdf
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ rm -r sdsf
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ dir
Employee_Acknowledgment_Summary_and_Consent.pdf  Homebrew-brew-5.0.11-8-g8582f2a\ (1).tar.gz  Homebrew-brew-5.0.11-8-g8582f2a.tar.gz  The\ Linux\ Command\ Line.pdf
```

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3.List all running process

command:-

ps(currently running processes).

```
ankush.dubey@sinforn.dom@sf-cpu-551:~/Desktop$ ps
   PID TTY          TIME CMD
 19591 pts/0    00:00:00 bash
 74570 pts/0    00:00:00 less
 88602 pts/0    00:00:00 grep
131727 pts/0    00:00:00 vi
141658 pts/0    00:00:00 vi
164646 pts/0    00:00:00 vi
184384 pts/0    00:00:00 ps
ankush.dubey@sinforn.dom@sf-cpu-551:~/Desktop$
```

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command :top(all tasks)

```
Tasks: 434 total,   1 running, 433 sleeping,   0 stopped,   0 zombie
%Cpu(s):  1.7 us,  1.4 sy,  0.0 ni, 96.8 id,  0.1 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :  15838.8 total,   4329.9 free,   7441.5 used,   4067.4 buff/cache
MiB Swap:   1952.0 total,   1952.0 free,      0.0 used.   6931.8 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   7185 ankush.+  20   0 1397.2g 185392 109048 S   3.0   1.1   0:16.69 msedge
   6645 ankush.+  20   0  892392  55836  40736 S   2.0   0.3   0:07.70 gnome-terminal-
   3738 ankush.+  20   0 1833580 197596 139872 S   1.3   1.2   4:56.61 Xorg
  18505 ankush.+  20   0   20.5g 177220 119228 S   1.3   1.1   2:04.02 project-on-time
   4080 ankush.+  20   0 5880880 286084 128692 S   1.0   1.8   4:50.95 gnome-shell
   1003 avahi     20   0   22080   7040   3712 S   0.7   0.0   2:24.36 avahi-daemon
   1007 root      20   0  344548  18896  16080 S   0.7   0.1   0:40.31 NetworkManager
   1176 root      20   0  530252  31232  26368 S   0.7   0.2   0:24.01 rustdesk
   6756 ankush.+  20   0   49.3g 997048 316328 S   0.7   6.1   6:01.88 msedge
    648 root      19  -1   56608  26240  25088 S   0.3   0.2   0:06.61 systemd-journal
   2441 root      20   0  173876  14848  11648 S   0.3   0.1   0:02.99 cups-browsed
   4371 ankush.+  20   0  162764   8192   7424 S   0.3   0.1   0:01.85 at-spi2-registr
   6807 ankush.+  20   0   48.5g 209460 104052 S   0.3   1.3   2:08.26 msedge
   7191 ankush.+  20   0 1395.5g 144900  94336 S   0.3   0.9   0:09.64 msedge
   8237 ankush.+  20   0 1395.5g 200116 119504 S   0.3   1.2   0:12.14 msedge
  18415 ankush.+  20   0  391828  42152  26416 S   0.3   0.3   0:03.14 seahorse
  18509 ankush.+  20   0   11992   2120   1408 S   0.3   0.0   0:07.99 memfd:runtime
  33910 root      20   0       0      0      0 I   0.3   0.0   0:01.63 kworker/7:0-events
  34587 ankush.+  20   0 3189808  60096  43136 S   0.3   0.4   0:14.62 gjs
  63304 ankush.+  20   0 1392.3g 248012 135456 S   0.3   1.5   0:20.69 msedge
  90666 ankush.+  20   0   22908   4864   3712 R   0.3   0.0   0:00.08 top
      1 root      20   0  167128  11884   8172 S   0.0   0.1   0:05.05 systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kthreadd
      3 root      20   0       0      0      0 S   0.0   0.0   0:00.00 pool_workqueue_release
      4 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-rcu_g
      5 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-rcu_p
      6 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-slub_
      7 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-netns
     10 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
     12 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-mm_pe
     13 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_kthread
     14 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_rude_kthread
     15 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_trace_kthread
     16 root      20   0       0      0      0 S   0.0   0.0   0:00.33 ksoftirqd/0
     17 root      20   0       0      0      0 I   0.0   0.0   0:18.72 rcu_preempt
     18 root      rt   0       0      0      0 S   0.0   0.0   0:00.04 migration/0
     19 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
     20 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
     21 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/1
     22 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/1
     23 root      rt   0       0      0      0 S   0.0   0.0   0:00.22 migration/1
     24 root      20   0       0      0      0 S   0.0   0.0   0:00.21 ksoftirqd/1
     26 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/1:0H-events_highpri
     27 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/2
     28 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/2
     29 root      rt   0       0      0      0 S   0.0   0.0   0:00.22 migration/2
     30 root      20   0       0      0      0 S   0.0   0.0   0:00.38 ksoftirqd/2
     32 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/2:0H-events_highpri
```

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4.Find particular process by it's name

```
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$ pgrep bash
29653
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/practice$
```

5. How to kill any particular process

Command: kill process_id

forcefully: kill -9 processs_id

```
ankush.dubey@simform.dom@sf-cpu-551:~$ vi
ankush.dubey@simform.dom@sf-cpu-551:~$ ps
    PID TTY          TIME CMD
  76438 pts/0    00:00:00 bash
  76565 pts/0    00:00:00 ps
ankush.dubey@simform.dom@sf-cpu-551:~$ kill -9 75565
bash: kill: (75565) - No such process
ankush.dubey@simform.dom@sf-cpu-551:~$ kill -9 76438
```

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6. Vi or Vim for file editing

Vi file_name → For creating a file
i→ insert text
dd-delete texts
yy-copy
:wq → save and exit
:q! → exit without save
/ → search
:q → quit
%s/replacer/replacing/y → for substituete

```
hiii
hiii
hiii
hiii
hlo
hlo
very goodmorning
very goodmorning
:set number
```

7.

ankush.dubey@simform.dom@sf-cpu-551: ~/Desktop

```
ankush.dubey@simform.dom@sf-cpu-551:~$ cd Desktop
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
a     ab    app1000              Commands\ practices.zip  p1
aaa   app  Commands\ practices  n.pdf                     practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ mv a aaaa
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
aaa   ab    app1000              Commands\ practices.zip  p1
aaaa  app  Commands\ practices  n.pdf                     practice
```

Moving and Renaming Files

command- mv file1 file2

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8. Remove Files and Directories

command:- rm file_name(removes file)
        rm -r dir_name(remove dir)
        rm -f file_name(remove file)

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9. **List the directory contents**

command:- dir

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10. How I can get the path of working directory.

Command: pwd(provides path of working directory)

```
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ pwd
/home/ankush.dubey@simform.dom/Downloads
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$
```

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11. **How to Search in Vim/Vi**

command: /

```
hiii
hiii
hiii
hiii
hlo
hlo
very goodmorning
very goodmorning
nkset number
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
search hit BOTTOM, continuing at TOP
```

12. **How Do You Do A Search And Replace in Vim/Vi**

Command : - %s/replacer/replacement/y

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```
hiii
hiii
hiii
hiii
hlo
hlo
very goodmorning
very goodmorning
:set number
~
~
~
~
~
~
~
~
~
~
~
~
~
~
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~
~
~
~
~
~
~
~
~
:%s/good /very good/g
```

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13. **How we can save and exit from Vim/Vi file.**

Command:- :wq-Save and exit
                                :q-exit
                                :q! Exit without save

```
hiii
hiii
hiii
hiii
hlo
hlo
very goodmorning
very goodmorning
:set number
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
:wq
```

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14. **Change file owner and group.**

Command: sudo useadd username
sudo chown name file_name
sudo groupadd group_name
sudo chown :mygroup file_name

```
chown: invalid user: a
labex:project/ $ sudo chown ank a
labex:project/ $ dir
a   aa
labex:project/ $ who am i
labex:project/ $
labex:project/ $ whoami
labex
labex:project/ $ mkdir h
labex:project/ $ cd h
labex:h/ $ cd ..
labex:project/ $ chown ank h
chown: changing ownership of 'h': Operation not permitted
labex:project/ $ sudo chown ank h
labex:project/ $ dir
a   aa   h
labex:project/ $ ls -l a
-rw-rw-r-- 1 ank labex 0 Jan 22 16:58 a
labex:project/ $ ls -l h
total 0
labex:project/ $ ls -l aa
-rw-rw-r-- 1 labex labex 0 Jan 22 17:12 aa
labex:project/ $
```

```
labex:project/ $ ls -l a
-rw-rw-r-- 1 ank labex 0 Jan 22 16:58 a
labex:project/ $ ls -l h
total 0
labex:project/ $ ls -l aa
-rw-rw-r-- 1 labex labex 0 Jan 22 17:12 aa
labex:project/ $ sudo chown :mygroup a
labex:project/ $ ls -l a
-rw-rw-r-- 1 ank mygroup 0 Jan 22 16:58 a
labex:project/ $
```

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15. **Change group ownership**

command:- chgrp groupname file_name

```
-rw-rw-r-- 1 labex labex 0 Jan 22 17:12 aa
labex:project/ $ sudo chown :mygroup a
labex:project/ $ ls -l a
-rw-rw-r-- 1 ank mygroup 0 Jan 22 16:58 a
labex:project/ $ sudo chgrp aa
chgrp: missing operand after 'aa'
Try 'chgrp --help' for more information.
labex:project/ $ chgrp sudo aa
labex:project/ $ ls -l aa
-rw-rw-r-- 1 labex sudo 0 Jan 22 17:12 aa
labex:project/ $ ls -l h
```

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