

Linux Assignment

Commad Practice

1.Manipulating Files and Directories

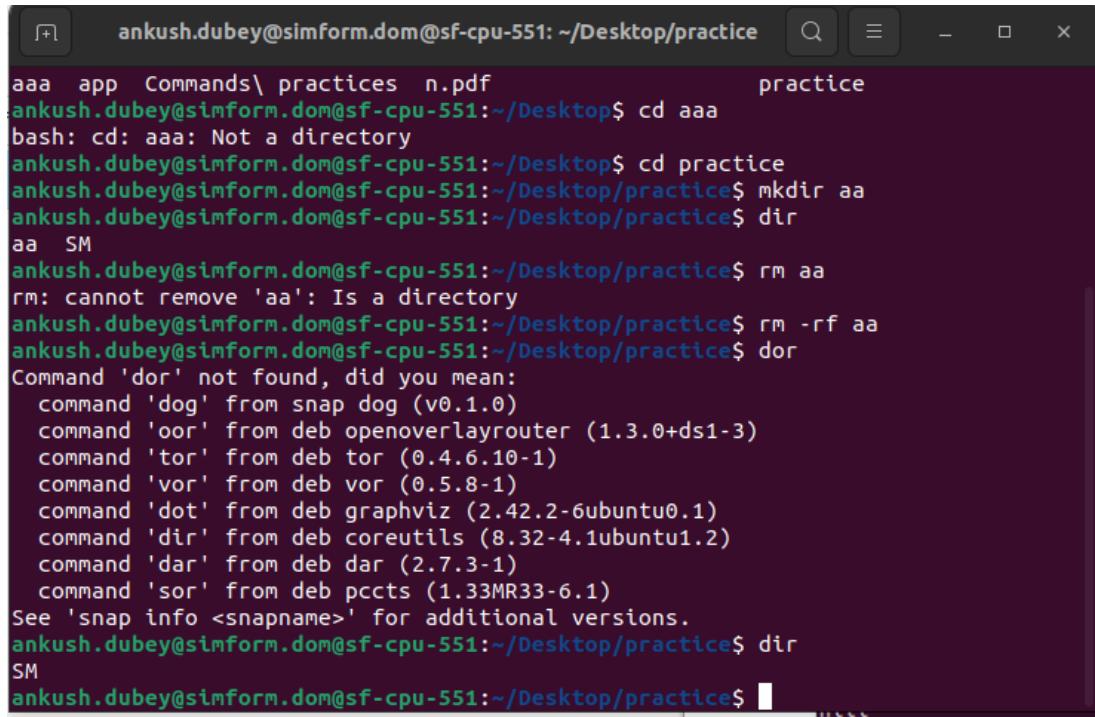
```
ankush.dubey@simform.dom@sf-cpu-551:~$ cd Desktop
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ touch p1
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
:p1 practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ ls
p1 practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ touch p2
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ 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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A screenshot of a terminal window titled "ankush.dubey@simform.dom@sf-cpu-551: ~/Desktop/practice". The terminal displays a series of Linux commands and their outputs:

```
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 openoverlayerouter (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/$ grep "ohe" b
lohefsfjklnshewww
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ 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/$ 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/$ mv aa ab
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ dir
ab  b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ cp ab az
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ dir
ab  az  b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ mv ab ~/Desktop/
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ mv ab ~/Downloads/
mv: cannot stat 'ab': No such file or directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ mv az ~/Downloads/
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ chmod 744 ab
chmod: cannot access 'ab': No such file or directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ chmod 744 az
chmod: cannot access 'az': No such file or directory
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ chmod 744 b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ chmod 7 b
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop/$ 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@stlform:~$ ps
  PID TTY          TIME CMD
 1959 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
154646 pts/0    00:00:00 vi
164384 pts/0    00:00:00 ps
ankush.dubey@stlform:~$
```

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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 substitue



A screenshot of a terminal window showing the Vim text editor. The screen is mostly black, with white text visible at the top left. The text includes several 'h' characters, a 'no' command, and two lines of text starting with 'very goodmorning'. At the bottom of the screen, there is a command prompt and a status line.

```
hlll
hlll
hlll
hlll
hlo
no
very goodmorning
Very goodmorning
:set number

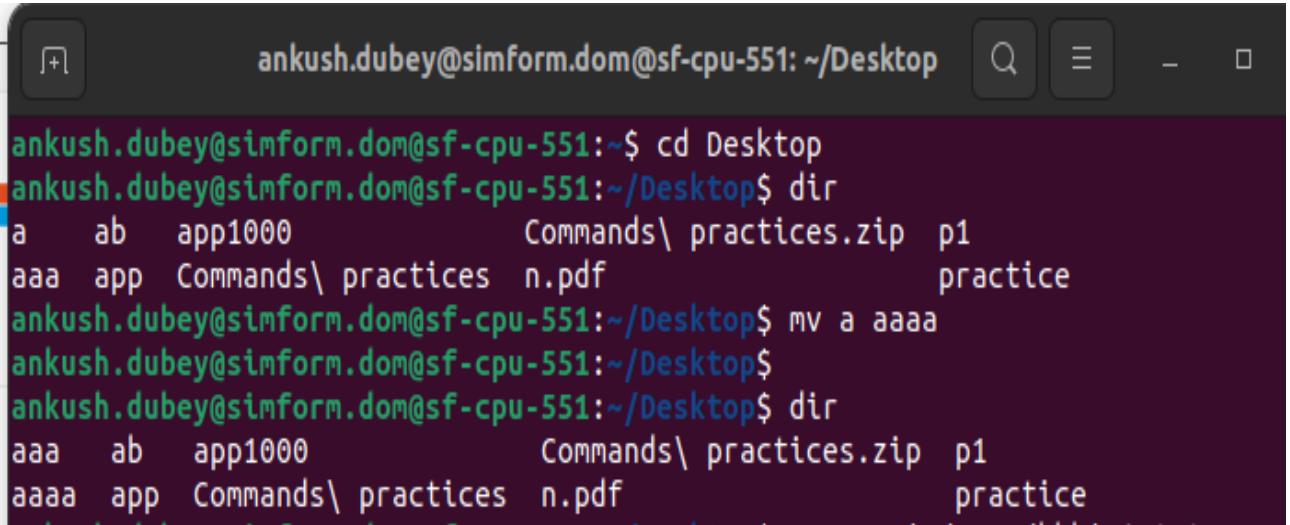
: %s/good /very good/g
```

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7 . Moving and Renaming Files

command- mv file1 file2



The screenshot shows a terminal window with a dark background and light-colored text. The title bar indicates the user is 'ankush.dubey' at 'simform.dom' on a 'sf-cpu-551' machine, with the current directory being the 'Desktop'. The terminal output shows the following sequence of commands:

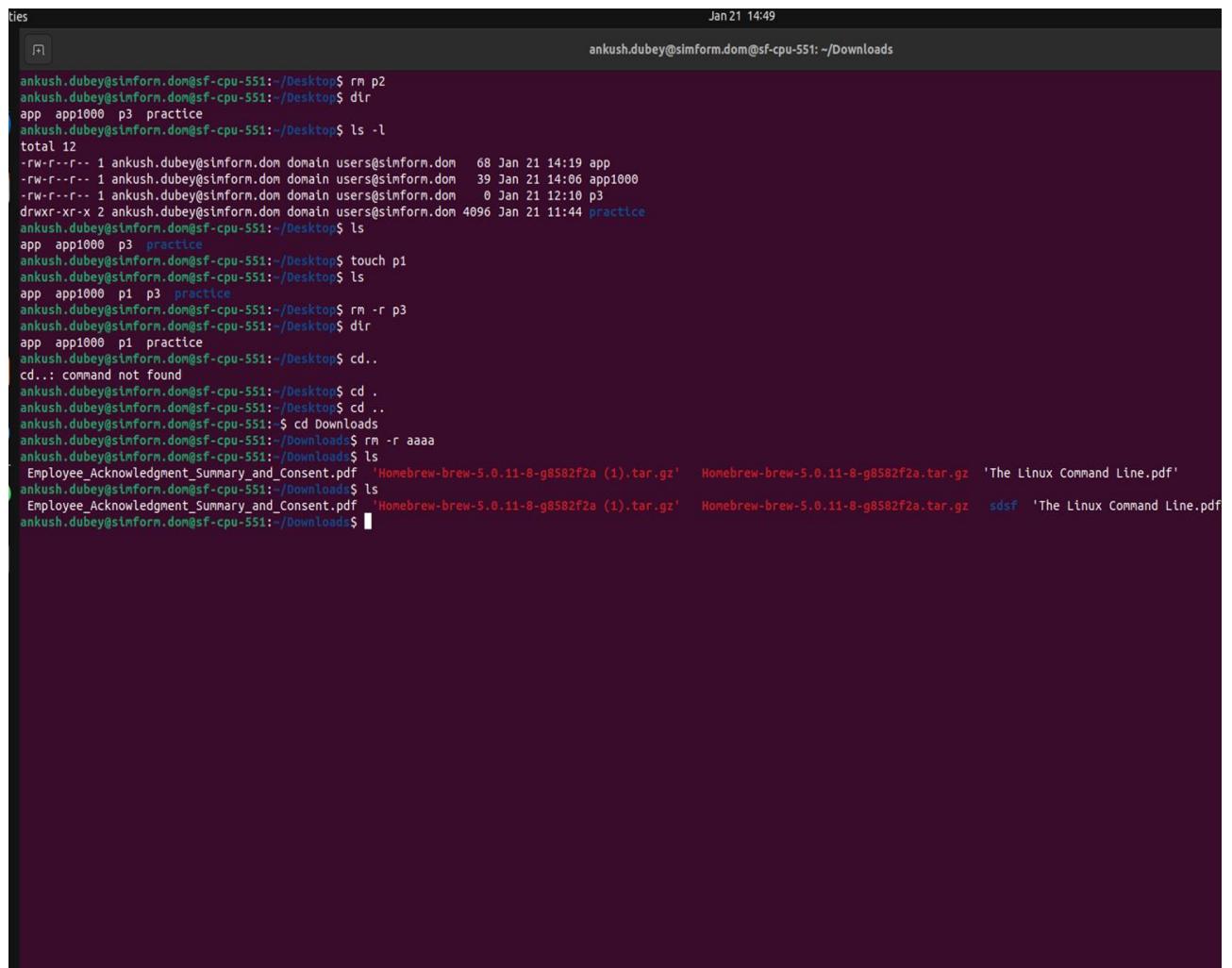
```
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cd Desktop
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
a    ab    app1000          Commands\ practices.zip  p1
aaa   app   Commands\ practices  n.pdf            practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ mv a aaaa
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$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

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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)



A screenshot of a terminal window titled 'ties' at the top left. The title bar also shows the date and time: 'Jan 21 14:49'. The window has a dark background with light-colored text. It displays a series of Linux commands and their outputs:

```
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ rm p2
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ dir
app app1000 p3 practice
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ ls -l
total 12
-rw-r--r-- 1 ankush.dubey@sinform.dom domain users@sinform.dom 68 Jan 21 14:19 app
-rw-r--r-- 1 ankush.dubey@sinform.dom domain users@sinform.dom 39 Jan 21 14:06 app1000
-rw-r--r-- 1 ankush.dubey@sinform.dom domain users@sinform.dom 0 Jan 21 12:10 p3
drwxr-xr-x 2 ankush.dubey@sinform.dom domain users@sinform.dom 4096 Jan 21 11:44 practice
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ ls
app app1000 p3 practice
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ touch p1
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ ls
app app1000 p1 p3 practice
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ rm -r p3
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ dir
app app1000 p1 practice
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ cd..
cd..: command not found
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ cd .
ankush.dubey@sinform.dom@sf-cpu-551:~/Desktop$ cd ..
ankush.dubey@sinform.dom@sf-cpu-551: $ cd Downloads
ankush.dubey@sinform.dom@sf-cpu-551:~/Downloads$ rm -r aaaa
ankush.dubey@sinform.dom@sf-cpu-551:~/Downloads$ ls
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'
ankush.dubey@sinform.dom@sf-cpu-551:~/Downloads$ ls
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@sinform.dom@sf-cpu-551:~/Downloads$
```

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9. List the directory contents

command:- dir

```
ties                                         Jan 21 14:49
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ rm p2
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
app app1000 p3 practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ ls -l
total 12
-rw-r--r-- 1 ankush.dubey@simform.dom domain users@simform.dom 68 Jan 21 14:19 app
-rw-r--r-- 1 ankush.dubey@simform.dom domain users@simform.dom 39 Jan 21 14:06 app1000
-rw-r--r-- 1 ankush.dubey@simform.dom domain users@simform.dom 0 Jan 21 12:10 p3
drwxr-xr-x 2 ankush.dubey@simform.dom domain users@simform.dom 4096 Jan 21 11:44 practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ ls
app app1000 p3 practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ touch p1
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ ls
app app1000 p1 p3 practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ rm -r p3
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ dir
app app1000 p1 practice
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cd..
cd..: command not found
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cd .
ankush.dubey@simform.dom@sf-cpu-551:~/Desktop$ cd Downloads
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ rm -r aaaa
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ ls
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'
ankush.dubey@simform.dom@sf-cpu-551:~/Downloads$ ls
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$
```

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

Command: `pwd`(provides path of working directory)

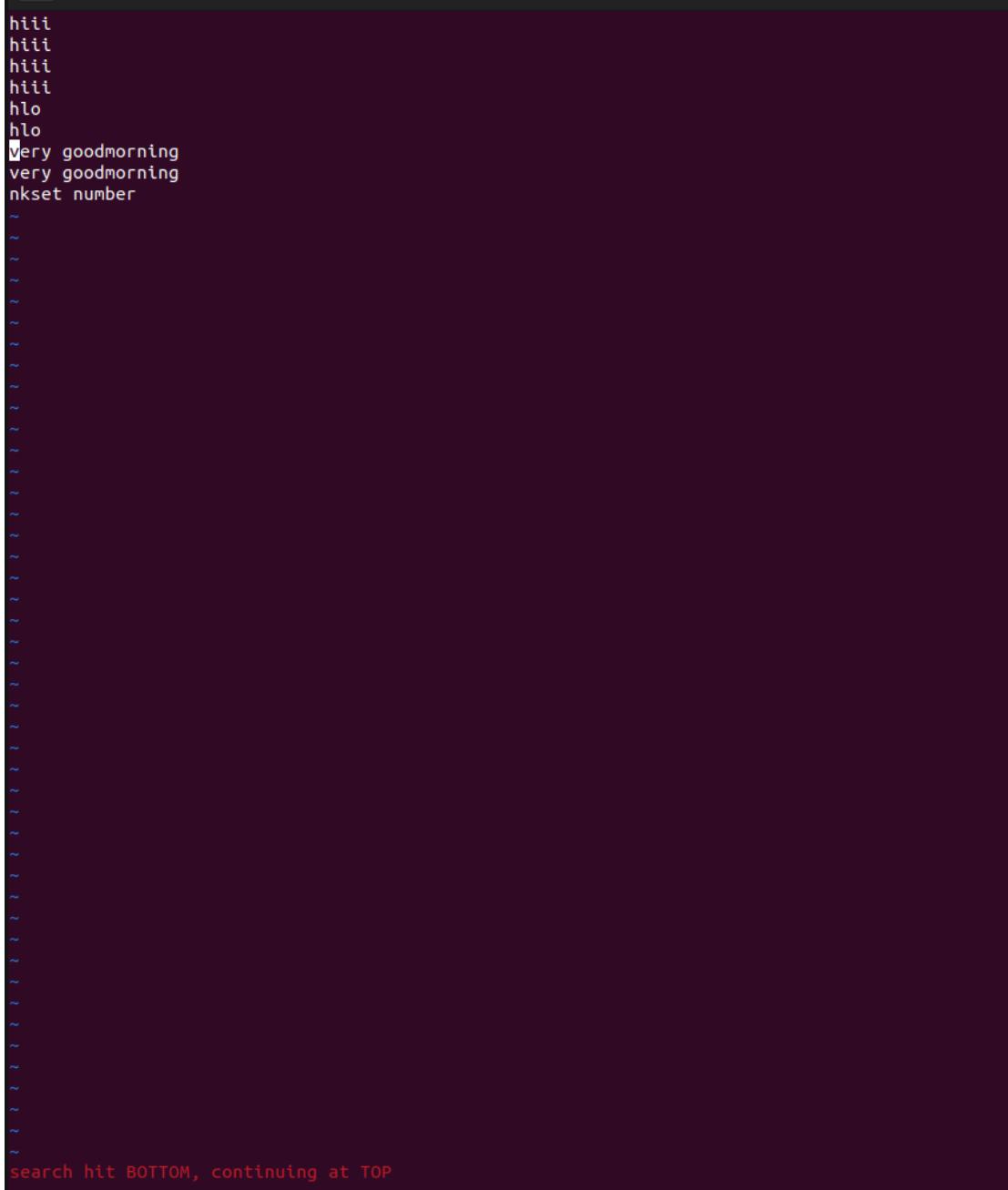
```
ankush.dubey@sinform.dong@sf-cpu-551:/Downloads$ pwd  
/home/ankush.dubey@sinform.dong/Downloads  
ankush.dubey@sinform.dong@sf-cpu-551:/Downloads$ █
```

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11.How to Search in Vim/Vi

command: /



A screenshot of a terminal window with a dark background and light-colored text. The text shows a search operation in progress. At the top, there are several lines of text: "hiii", "hiii", "hiii", "hiii", "hlo", "hlo", "Very goodmorning", "very goodmorning", and "nkset number". Below this, there are approximately 30 lines of the character "~". At the bottom of the window, the text "search hit BOTTOM, continuing at TOP" is displayed in red.

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

Command : - %s/replacer/replacement/y

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```
hill  
hill  
hill  
hill  
hlo  
hlo  
very goodmorning  
Very goodmorning  
:set number
```

```
:%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

```
hill  
hill  
hill  
hill  
hlo  
hlo  
very goodmorning  
very goodmorning  
:set number
```

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14. Change file owner and group.

Command: sudo useradd 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 aa
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
```