Ex-03-Linux-Commands

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Aim:

To study the execution of various Linux operating system commands.

Linux:

Linux is an open-source operating system. The kernel is the heart of Linux OS which

helps the communication between hardware and software. The main advantage of Linux was that programmers can use Linux kernel to design their own custom OS.

Linux Commands: All basic and advanced tasks can be done by executing commands. The commands are executed on Linux terminal. Linux commands are case sensitive.

Commands:

1) ls Command

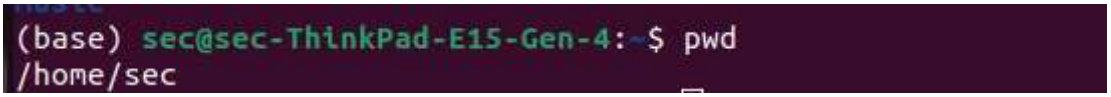
The ls command is used to display a list of content of a directory.

Syntax: ls

2) pwd Command

The pwd command is used to display the location of the current working directory.

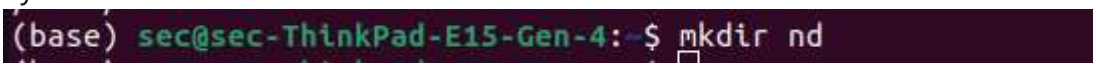
Syntax: pwd



3) mkdir Command

The mkdir command is used to create a new directory under any directory.

Syntax: mkdir



4) rmdir Command

The rmdir command is used to delete a directory.

Syntax: rmdir

5) cd Command

The cd command is used to change the current directory.

Syntax: cd

6) cat Command

The cat command is a multi-purpose utility in the Linux system. It can be used to create a file, display content of the file, copy the content of one file to another file, and more.

Syntax: cat [OPTION]... [FILE]..

```
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ cat>Demo.tx
Hi everyone
```

7) cp Command

The cp command is used to copy a file or directory.

Syntax: cp

```
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ cp demo.txt demo1.txt
cp: cannot stat 'demo.txt': No such file or directory
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ cp Demo.txt Demo1.txt
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ Demo.txt Documents
Demo.txt: command not found
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ cp Demo.txt Documents
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$
```

8) gedit Command

The gedit is a general-purpose text editor. It can be used to create and edit all kinds of text files.

Syntax: gedit file_name

```
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ gedit ana.c
```

9) su Command

The su command provides administrative access to another user. In other words, it allows access of the Linux shell to another user.

Syntax: su

```
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ su javatpoint
```

10) mv Command

The mv command is used to move a file or a directory form one location to another location.

Syntax: mv

```
(base) sec@sec-ThinkPad-E15-Gen-4:~/Desktop/demo$ mv Demo.txt Directory
```

11) rename Command

The rename command is used to rename files. It is useful for renaming a large group of files.

Syntax: rename 's/old-name/new-name/' files

12) head Command

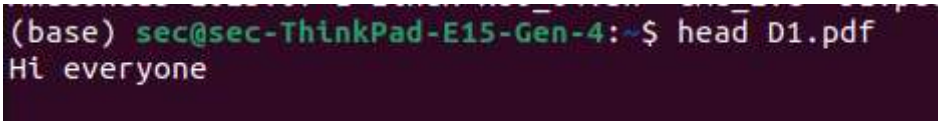
The head command is used to display the content of a file. It displays the first 10 lines of a file.

Syntax: head

13) tail Command

The tail command is similar to the head command. The difference between both commands is that it displays the last ten lines of the file content. It is useful for reading the error message.

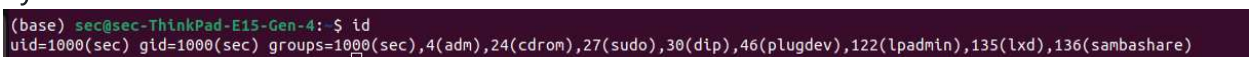
Syntax: tail



14) id Command

The id command is used to display the user ID (UID) and group ID (GID).

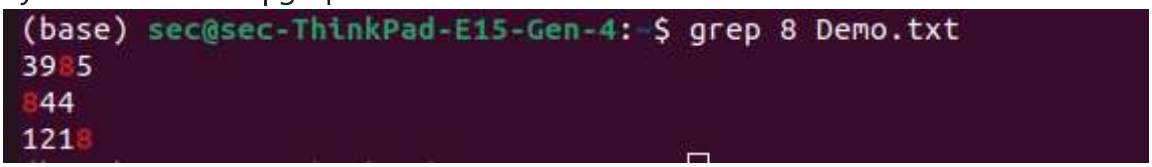
Syntax: id



15) grep Command

The grep is the most powerful and used filter in a Linux system. The 'grep' stands for "global regular expression print." It is useful for searching the content from a file. Generally, it is used with the pipe.

Syntax: command | grep



16) tr Command

The tr command is used to translate the file content like from lower case to upper case.

Syntax: command | tr <'old'> <'new'>

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ tr 'hi' 'HI' < Demo.txt
HI everyone!!
3985
4014
844
765
1225
614
2716
4449
611
1218
```

17) chmod Command

The chmod command is used to change the access mode of a file (i.e., read, write or execute)

Syntax: chmod<file_name>

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ chmod 744 Demo.txt
```

18) tar Command

The tar command is used for creating Archieve and extracting the archieve files.

Syntax: tar[options][archieve-file] [file to be archieved] $ tar xvzf file.tar *.c

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ tar -cvf demo.tar Demo.txt
Demo.txt
```

19) chown Command

The chown command is used to change ownership.

Syntax: chown owner_name file_name

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ chown sec file1
```

20) make Command

The make command is used for building and maintaining group of program.

Syntax: make [-f makefile][options].....[targets]....

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ make
make: *** No targets specified and no makefile found.  Stop.
```

21) ifconfig Command

The ifconfig command is used to configure kernel-resident network interface.

Syntax: ifconfig[options][interface]

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ ifconfig
enp0s31f6: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        ether 74:5d:22:3e:f2:00  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
        device interrupt 16  memory 0xb0180000-b01a0000

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 4188  bytes 387630 (387.6 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 4188  bytes 387630 (387.6 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

wlp0s20f3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet6 fe80::9a96:6598:c0a7:16e1  prefixlen 64  scopeid 0x20<link>
        inet6 2403:8600:c090:42:0:407:7b8c:a906  prefixlen 128  scopeid 0x0<g
        ether e0:2e:0b:35:48:7d  txqueuelen 1000  (Ethernet)
        RX packets 1017660  bytes 186815614 (186.8 MB)
        RX errors 0  dropped 1900  overruns 0  frame 0
        TX packets 17521  bytes 6691209 (6.6 MB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

22) chmod 777 Command

The chmod 777 command gives read, write and execute permission to the owner, group and public.

Syntax: chmod 777 file_name $chmod -R 777 /path/to/file/or/folder

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ chmod 777 file1
```

23) host Command

The host command is used to display the IP address for a given domain name and vice versa. It performs the DNS lookups for the DNS Query.

Syntax: host or

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ host lms2.ai.saveetha.in
lms2.ai.saveetha.in has IPv6 address 2403:8600:c090:42:a000::300
```

24) gzip Command

The gzip command is used to truncate the file size. It is a compressing tool. It replaces the original file by the compressed file having '.gz' extension.

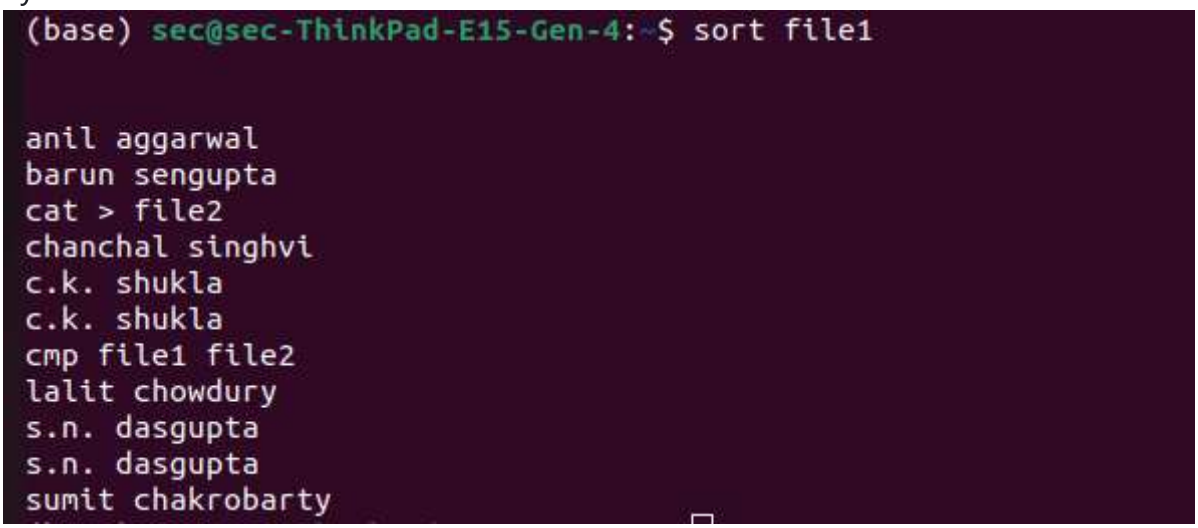
Syntax: gzip ..

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ gzip Demo.txt
```

25) sort Command

The sort command is used to sort files in alphabetical order.

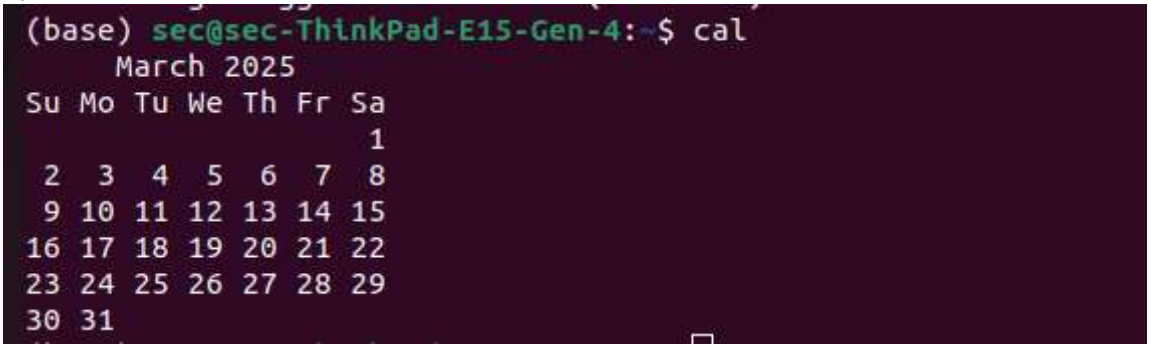
Syntax:sort



26) cal Command

The cal command is used to display the current month's calendar with the current date highlighted.

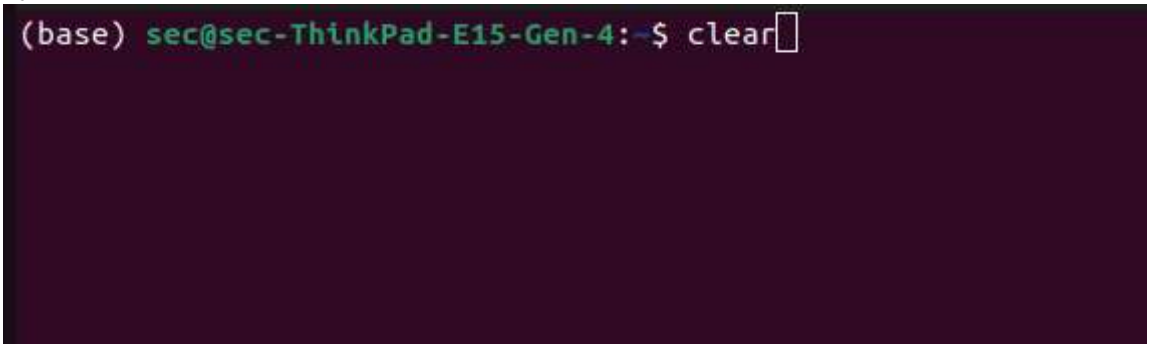
Syntax: cal



27) clear Command

Linux clear command is used to clear the terminal screen.

Syntax: clear



28) mail Command

The mail command is used to send emails from the command line.

Syntax: mail -s "Subject"

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ mail -s "Greeting" antonysophie@gmail.com
Cc: Hello!!
Take rest
```

29) df Command

The df command is used to display the disk space used in the file system. It displays the output as in the number of used blocks, available blocks, and the mounted directory.

Syntax: df

```
(base) sec@sec-ThinkPad-E15-Gen-4:~$ df
Filesystem     1K-blocks     Used Available Use% Mounted on
tmpfs            1604376     2488   1601888   1% /run
/dev/nvme0n1p7  65745376 18986720  43373160  31% /
tmpfs            8021872    46172   7975700   1% /dev/shm
tmpfs               5120        4      5116   1% /run/lock
efivarfs             246      165        77  69% /sys/firmware/efi/efivars
/dev/nvme0n1p6    531084   289536    202556  59% /boot
/dev/nvme0n1p4  29352956 11355176  16481392  41% /home
/dev/nvme0n1p1    262144    41444    220700  16% /boot/efi
tmpfs            1604372      144   1604228   1% /run/user/1000
```

30) find Command

Result:

Thus, the execution of various Linux commands is executed successfully using Ubuntu OS.