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Assignment 1

Aim: - Study Linux Commands.

Description :-

01. ls — The most frequently used command in Linux to list directories
02. pwd — Print working directory command in Linux
03. cd — Linux command to navigate through directories
04. mkdir — Command used to create directories in Linux
05. mv — Move or rename files in Linux
06. cp — Similar usage as mv but for copying files in Linux
07. rm — Delete files or directories
07. touch — Create blank/empty files
07. ln — Create symbolic links (shortcuts) to other files
08. cat — Display file contents on the terminal
09. clear — Clear the terminal display
10. echo — Print any text that follows the command
11. less — Linux command to display paged outputs in the terminal
12. man — Access manual pages for all Linux commands
13. uname — Linux command to get basic information about the OS
14. whoami — Get the active username
15. tar — Command to extract and compress files in Linux
16. grep — Search for a string within an output
17. head — Return the specified number of lines from the top
18. tail — Return the specified number of lines from the bottom
19. diff — Find the difference between two files
20. cmp — Allows you to check if two files are identical
21. comm — Combines the functionality of diff and cmp
22. sort — Linux command to sort the content of a file while outputting
23. export — Export environment variables in Linux
24. zip — Zip files in Linux
25. unzip — Unzip files in Linux
25. ssh — Secure Shell command in Linux

26. service — Linux command to start and stop services
27. ps — Display active processes
28. kill and killall — Kill active processes by process ID or name
29. df — Display disk filesystem information
30. mount — Mount file systems in Linux
31. chmod — Command to change file permissions
32. chown — Command for granting ownership of files or folders
33. ifconfig — Display network interfaces and IP addresses
34. traceroute — Trace all the network hops to reach the destination
35. wget — Direct download files from the internet
36. ufw — Firewall command
37. iptables — Base firewall for all other firewall utilities to interface with
38. apt, pacman, yum, rpm — Package managers depending on the distro
39. sudo — Command to escalate privileges in Linux
40. cal — View a command-line calendar
41. alias — Create custom shortcuts for your regularly used commands
42. dd — Majorly used for creating bootable USB sticks
43. whereis — Locate the binary, source, and manual pages for a command
44. whatis — Find what a command is used for
45. top — View active processes live with their system usage
46. useradd and usermod — Add new user or change existing users data
47. passwd — Create or update passwords for existing users
48. ls -l | wc -l — Command to get the count of the files present into directory.
49. kill --Command to kill the process (PID)
50. w -- to check how many users logged into the linux
51. date -- used to check the current date, time in linux
52. ls -a --List the hidden files in directory (hidden files are denoted as ..)
53. ls -l --Use to check the permissions on all the files
54. ls -R -- used to list information about files and directories within the file system.
55. rm -rf -- remove directory with the files

Output :-

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
cd
(system@kali)-[~/VIIT]
$ cd ..
(system@kali)-[~]
$ cat Viit
(system@kali)-[~]
$ cd VIIT
(system@kali)-[~/VIIT]
$ touch OS-Assignmnet
(system@kali)-[~/VIIT]
$ ls
OS OS-Assignmnet Viit
(system@kali)-[~/VIIT]
$ cat Viit
Hi This Is Anirudha Kurhade Completing His Os Assignmnet
(system@kali)-[~/VIIT]
$ rm OS-Assignmnet
(system@kali)-[~/VIIT]
$ ls
OS Viit
(system@kali)-[~/VIIT]
$ rm -f Viit
(system@kali)-[~/VIIT]
$ ls
OS
(system@kali)-[~/VIIT]
$
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
US
(system@kali)-[~/VIIT]
$
(system@kali)-[~/VIIT]
$ cat Os
cat: Os: No such file or directory
(system@kali)-[~/VIIT]
$ cat OS
1 x
(system@kali)-[~/VIIT]
$ cat> OS
Hi This Is Anirudha Kurhade Completing His Os Assignmnet
zsh: suspended cat > OS
148 x 1
(system@kali)-[~/VIIT]
$ cat OS
Hi This Is Anirudha Kurhade Completing His Os Assignmnet
1
(system@kali)-[~/VIIT]
$ cp Os Viit
cp: cannot stat 'Os': No such file or directory
1 x 1
(system@kali)-[~/VIIT]
$ cp OS Viit
1 x 1
(system@kali)-[~/VIIT]
$ cd..
cd..: command not found
1
(system@kali)-[~/VIIT]
$ cd
127 x 1
(system@kali)-[~]
$
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
Cloudflair Documents go Pictures Templates Viit

(system@kali)-[~]
$ cd Vi
cd: no such file or directory: Vi

(system@kali)-[~]
$ cd VIIT
1 x

(system@kali)-[~/VIIT]
$ touch OS

(system@kali)-[~/VIIT]
$ ls
OS

(system@kali)-[~/VIIT]
$
$
$ cat OS
cat: OS: No such file or directory

(system@kali)-[~/VIIT]
$ cat OS
1 x

(system@kali)-[~/VIIT]
$ cat> OS
Hi This Is Anirudha Kurhade Completing His Os Assignmnet
^Z
zsh: suspended cat > OS

(system@kali)-[~/VIIT]
$ cat OS
148 x 1
Hi This Is Anirudha Kurhade Completing His Os Assignmnet

(system@kali)-[~/VIIT]
$
1
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
Applications Places Terminal Feb 12 02:12 1
system@kali: ~/VIIT

cloudflair Desktop Downloads Music Public Videos
Cloudflair Documents go Pictures Templates Viit

(system@kali)-[~]
$ touch Viit

(system@kali)-[~]
$ ls
cloudflair Desktop Downloads Music Public Videos
Cloudflair Documents go Pictures Templates Viit

(system@kali)-[~]
$ mkdir VIIT

(system@kali)-[~]
$ ls
cloudflair Desktop Downloads Music Public Videos VIIT
Cloudflair Documents go Pictures Templates Viit

(system@kali)-[~]
$ cd Vi
cd: no such file or directory: Vi

(system@kali)-[~]
$ cd VIIT
1 x

(system@kali)-[~/VIIT]
$ touch OS

(system@kali)-[~/VIIT]
$ ls
OS

(system@kali)-[~/VIIT]
$
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
(system@kali)-[~/VIIT]
$ touch OS-Assigmet
1
(system@kali)-[~/VIIT]
$ ls
1
OS OS-Assigmet Viit
(system@kali)-[~/VIIT]
$ cat Viit
1
Hi This Is Anirudha Kurhade Completing His Os Assigmet
(system@kali)-[~/VIIT]
$ rm OS-Assigmet
1
(system@kali)-[~/VIIT]
$ ls
1
OS Viit
(system@kali)-[~/VIIT]
$ rm -f Viit
1
(system@kali)-[~/VIIT]
$ ls
1
OS
(system@kali)-[~/VIIT]
$ cd ..
1
(system@kali)-[~]
$ mv Viit VIIT/OS
1
(system@kali)-[~]
$ ls
1
cloudflair Cloudflair Desktop Documents Downloads go Music Pictures Public Templates Videos VIIT
(system@kali)-[~]
$
```

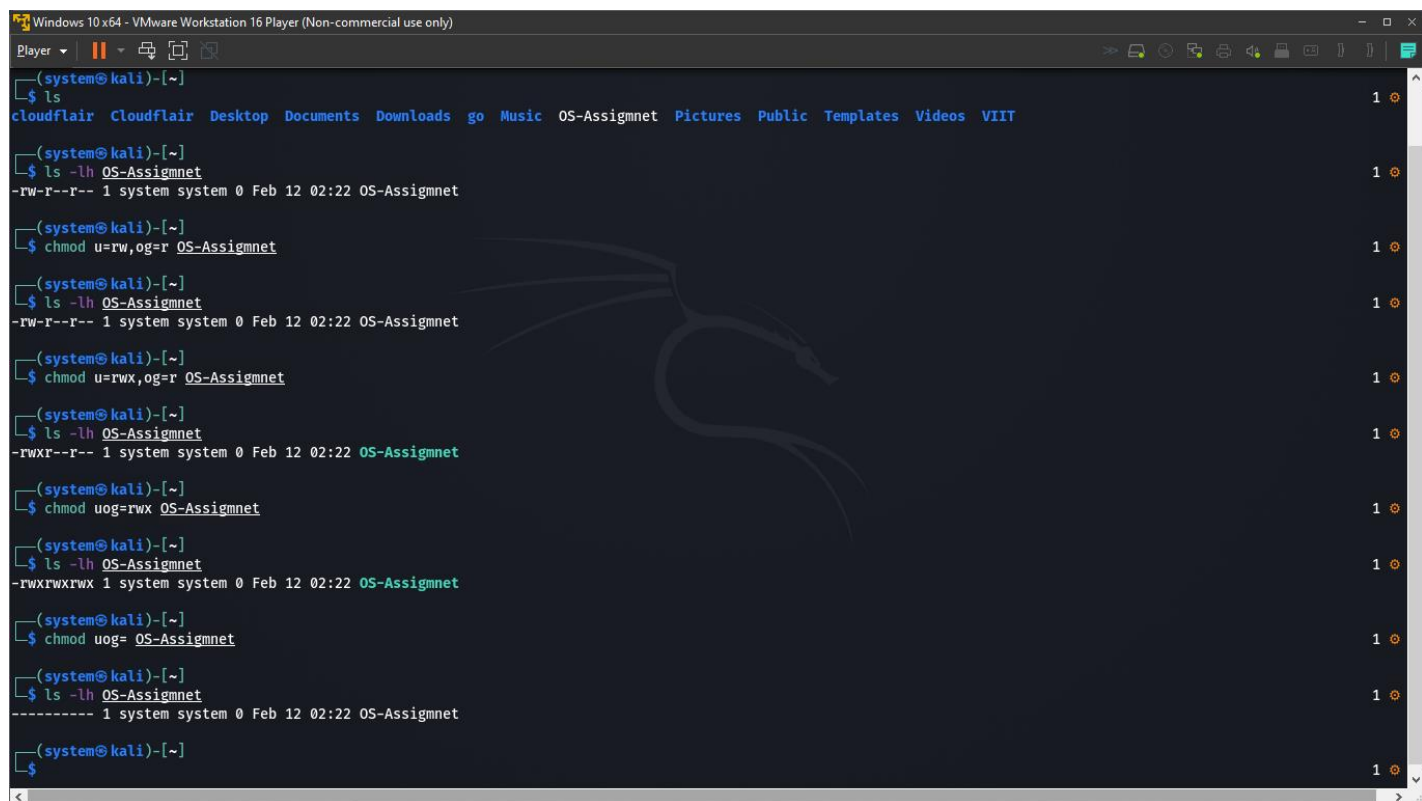
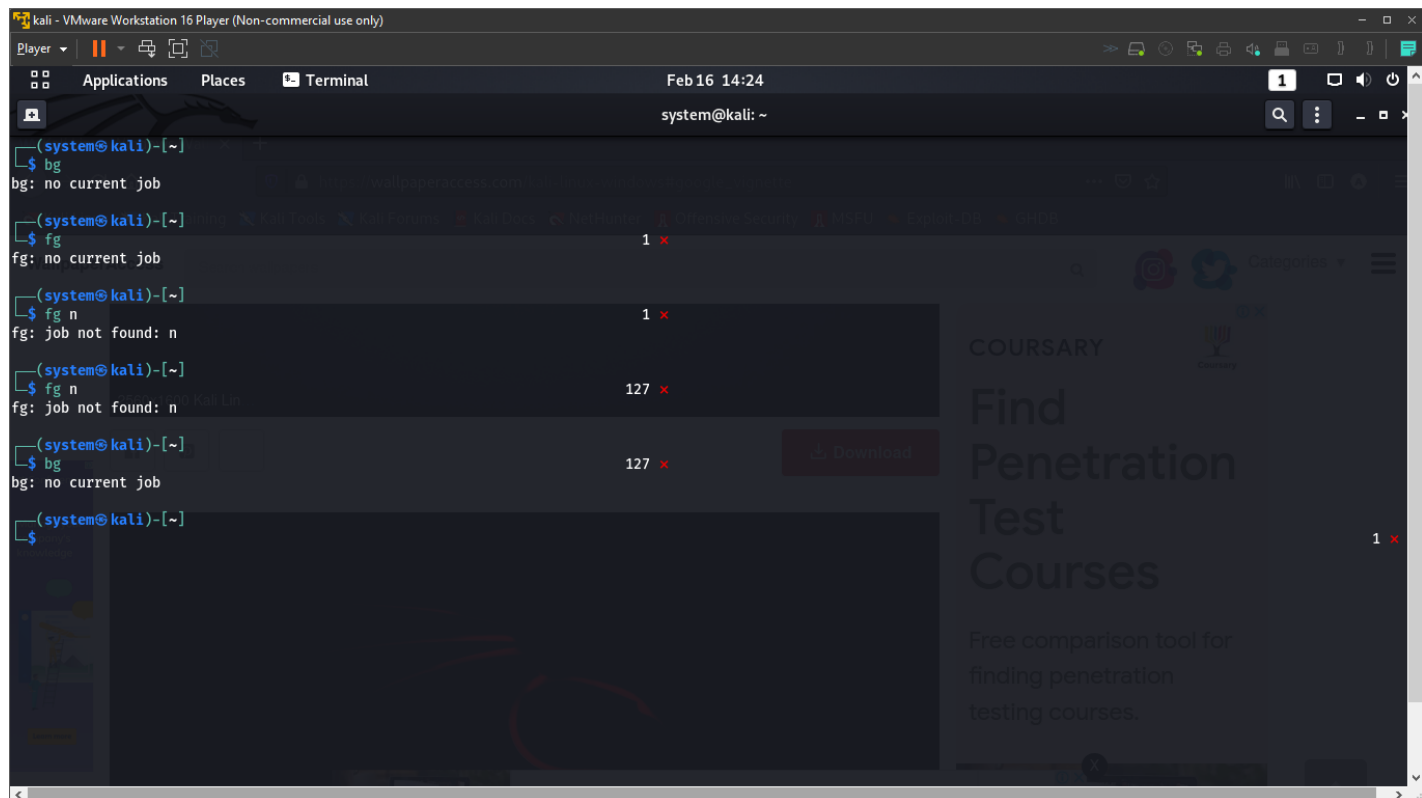
```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Feb 12 02:12
system@kali: ~/VIIT
cloudflair Desktop Downloads Music Public Videos
cloudflair Documents go Pictures Templates
(system@kali)-[~]
$ touch Viit
(system@kali)-[~]
$ ls
cloudflair Desktop Downloads Music Public Videos
cloudflair Documents go Pictures Templates Viit
(system@kali)-[~]
$ mkdir VIIT
(system@kali)-[~]
$ ls
cloudflair Desktop Downloads Music Public Videos VIIT
cloudflair Documents go Pictures Templates Viit
(system@kali)-[~]
$ cd Vi
cd: no such file or directory: Vi
(system@kali)-[~]
$ cd VIIT
1 x
(system@kali)-[~/VIIT]
$ touch OS
(system@kali)-[~/VIIT]
$ ls
OS
(system@kali)-[~/VIIT]
$
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
(system@kali)~$ sudo su
[sudo] password for system:
Sorry, try again.
[sudo] password for system:
(root@kali)~$ exit
(system@kali)~$ ps
  PID TTY          TIME CMD
 1883 pts/1    00:00:00 zsh
 1917 pts/1    00:00:00 ps
(system@kali)~$ top

top - 02:25:25 up 17 min,  1 user,  load average: 0.02, 0.06, 0.10
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
top - 02:25:40 up 17 min,  1 user,  load average: 0.02, 0.06, 0.10
Tasks: 201 total,  2 running, 199 sleeping,  0 stopped,  0 zombie
%Cpu(s):  0.2 us,  0.8 sy,  0.0 ni, 99.0 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem : 1917.8 total,  686.7 free,  716.7 used,  514.4 buff/cache
MiB Swap:  976.0 total,  976.0 free,  0.0 used, 1051.3 avail Mem

  PID USER      PR  NI  VIRT  RES  SHR S %CPU  %MEM    TIME+  COMMAND
 1114 system    20   0 302504 72516 39272 S  1.3   3.7   0:09.98 Xorg
1631 system    20   0 506128 52884 40524 S  1.0   2.7   0:05.37 gnome-terminal-
1240 system    20   0 3984132 261000 101520 S  0.3  13.3   0:14.56 gnome-shell
1915 root        20   0      0      0      0 R  0.3   0.0   0:00.01 kworker/0:0-mm_percpu_wq
1923 system    20   0  10108  3672  3164 R  0.3   0.2   0:00.05 top
   1 root        20   0 164144 10432  7768 S  0.0   0.5   0:03.30 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
   6 root        0 -20      0      0      0 I  0.0   0.0   0:00.00 kworker/0:0H-events_highpri
   7 root        20   0      0      0      0 I  0.0   0.0   0:00.04 kworker/0:1-events
   9 root        0 -20      0      0      0 I  0.0   0.0   0:00.00 mm_percpu_wq
  10 root        20   0      0      0      0 S  0.0   0.0   0:00.00 rcu_tasks_rude_
  11 root        20   0      0      0      0 S  0.0   0.0   0:00.00 rcu_tasks_trace
  12 root        20   0      0      0      0 S  0.0   0.0   0:00.05 ksoftirqd/0
  13 root        20   0      0      0      0 I  0.0   0.0   0:00.34 rcu_sched
  14 root        rt    0      0      0      0 S  0.0   0.0   0:00.00 migration/0
  15 root        20   0      0      0      0 S  0.0   0.0   0:00.00 cpuhp/0
  16 root        20   0      0      0      0 S  0.0   0.0   0:00.00 cpuhp/1
  17 root        rt    0      0      0      0 S  0.0   0.0   0:00.36 migration/1
  18 root        20   0      0      0      0 S  0.0   0.0   0:00.04 ksoftirqd/1
  19 root        20   0      0      0      0 I  0.0   0.0   0:00.73 kworker/1:0-events
  20 root        0 -20      0      0      0 I  0.0   0.0   0:00.00 kworker/1:0H-events_highpri
  23 root        20   0      0      0      0 S  0.0   0.0   0:00.01 kdevtmpfs
  24 root        0 -20      0      0      0 I  0.0   0.0   0:00.00 netns
  25 root        20   0      0      0      0 S  0.0   0.0   0:00.00 kauditd
  26 root        20   0      0      0      0 S  0.0   0.0   0:00.00 khungtaskd
  27 root        20   0      0      0      0 S  0.0   0.0   0:00.00 oom_reaper
  28 root        0 -20      0      0      0 I  0.0   0.0   0:00.00 writeback
  29 root        20   0      0      0      0 S  0.0   0.0   0:00.03 kcompactd0
  30 root        25   5      0      0      0 S  0.0   0.0   0:00.00 ksm
```




```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
(system@kali)-[~]
$ find VIIT/OS
VIIT/OS
(system@kali)-[~]
$ pgrep 30
64
(system@kali)-[~]
$ pgrep 1221
(system@kali)-[~]
$ top
top - 03:21:35 up 1:13, 1 user, load average: 0.02, 0.03, 0.00
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Applications Places Terminal Feb 12 02:49
system@kali: ~
$ grep -r 'Grep' OS-Assigment
This Is Anirudha Telling You About Searching Commands Adding Grep
Grep Is A Comand To Find Same Patter
148 x 3
(system@kali)-[~]
$ grep -i 'Grep' OS-Assigment
This Is Anirudha Telling You About Searching Commands Adding Grep
Grep Is A Comand To Find Same Patter
3
(system@kali)-[~]
$ grep -c 'Grep' OS-Assigment ||
3
(system@kali)-[~]
$ grep -c 'Grep' OS-Assigment || grep -r 'T' OS-Assigment
2 130 x 3
(system@kali)-[~]
$
3
(system@kali)-[~]
$ grep -c 'Grep' OS-Assigment || grep -i 'T' OS-Assigment
2 3
(system@kali)-[~]
$ grep -c 'Grep' OS-Assigment || grep -i 'To' OS-Assigment
2 3
(system@kali)-[~]
$ grep -c 'Grep' OS-Assigment | grep -i 'To' OS-Assigment
3
Grep Is A Comand To Find Same Patter
(system@kali)-[~]
$ pgrep
pgrep: no matching criteria specified
Try 'pgrep --help' for more information.
3
```



```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
(system@kali)-[~]
$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev            946140         0   946140    0% /dev
tmpfs           196384        1712   194672    1% /run
/dev/nvme0n1p2 60108676 17869424 39153428 32% /
tmpfs           981908         0   981908    0% /dev/shm
tmpfs           5120          0    5120    0% /run/lock
/dev/nvme0n1p1 523248        148   523100    1% /boot/efi
tmpfs           196380        140   196240    1% /run/user/1000

(system@kali)-[~]
$ free
             total        used        free      shared  buff/cache   available
Mem:       1963816      733732      642868        2864       587216      1068584
Swap:      999420          0       999420

(system@kali)-[~]
$ which

(system@kali)-[~]
$ where

(system@kali)-[~]
$ where is
is not found

(system@kali)-[~]
$ whereis
whereis: not enough arguments
Try 'whereis --help' for more information.

(system@kali)-[~]
$ whereis OS
OS:

(system@kali)-[~]
$
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
Applications  Places  Terminal
Feb 12 02:52
system@kali: ~

(system@kali)-[~]
$ uptime
02:50:33 up 42 min,  1 user,  load average: 0.03, 0.01, 0.00

(system@kali)-[~]
$ cal
Command 'cal' not found, but can be installed with:
sudo apt install ncal
Do you want to install it? (N/y)n

(system@kali)-[~]
$ w
02:51:00 up 43 min,  1 user,  load average: 0.02, 0.01, 0.00
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
system    :1       :1              02:08   ?xdm?  60.28s  0.01s  /usr/libexec/gdm-x-session --run-script /usr/bin/gnome-session

(system@kali)-[~]
$ finger
Login      Name      Tty      Idle   Login Time   Office   Office Phone
system     system    *:1      Feb 12 02:08 (:1)

(system@kali)-[~]
$ du
4      ./mozilla/systemextensionsdev
128    ./mozilla/firefox/o7uptmbr.default-esr/datareporting
1360   ./mozilla/firefox/o7uptmbr.default-esr/gmp-gmpopenh264/1.8.1.1
1364   ./mozilla/firefox/o7uptmbr.default-esr/gmp-gmpopenh264
124    ./mozilla/firefox/o7uptmbr.default-esr/sessionstore-backups
4      ./mozilla/firefox/o7uptmbr.default-esr/storage/permanent/chrome/idb/2918063365piupsah.files
4      ./mozilla/firefox/o7uptmbr.default-esr/storage/permanent/chrome/idb/3870112724rsegmnoittet-es.files/journals
780    ./mozilla/firefox/o7uptmbr.default-esr/storage/permanent/chrome/idb/3870112724rsegmnoittet-es.files
4      ./mozilla/firefox/o7uptmbr.default-esr/storage/permanent/chrome/idb/3561288849sdhlie.files
4      ./mozilla/firefox/o7uptmbr.default-esr/storage/permanent/chrome/idb/1657114595AmcateirvtiSty.files
4      ./mozilla/firefox/o7uptmbr.default-esr/storage/permanent/chrome/idb/2823318777ntouromlalnodrv--naod.files
4      ./mozilla/firefox/o7uptmbr.default-esr/storage/permanent/chrome/idb/1451318868ntouromlalnodrv--enocr.files
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
(system@kali)-[~]
$ date
Saturday 12 February 2022 02:50:07 AM IST

(system@kali)-[~]
$ time

real    1560.09s
user    2.31s
sys     2.15s
cpu      0%

real    1560.09s
user    0.96s
sys     0.44s
cpu      0%

(system@kali)-[~]
$ uptime
02:50:33 up 42 min,  1 user,  load average: 0.03, 0.01, 0.00

(system@kali)-[~]
$ cal
Command 'cal' not found, but can be installed with:
sudo apt install ncal
Do you want to install it? (N/y)n

(system@kali)-[~]
$ w
02:51:00 up 43 min,  1 user,  load average: 0.02, 0.01, 0.00
USER    TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
system  :1        :1            02:08   ?xdm?  60.28s  0.01s  /usr/libexec/gdm-x-session --run-script /usr/bin/gnome-session

(system@kali)-[~]
$
```

```
Windows 10 x64 - VMware Workstation 16 Player (Non-commercial use only)
Player
(system@kali)-[~]
$ ls
cloudflair Cloudflair Desktop Documents Downloads go Music OS-Assigmet Pictures Public Templates Videos VIIT

(system@kali)-[~]
$ gzip OS-Assigmet

(system@kali)-[~]
$ ls
cloudflair Cloudflair Desktop Documents Downloads go Music OS-Assigmet.gz Pictures Public Templates Videos VIIT

(system@kali)-[~]
$ gzip -d OS-Assigmet.gz

(system@kali)-[~]
$ ls
cloudflair Cloudflair Desktop Documents Downloads go Music OS-Assigmet Pictures Public Templates Videos VIIT

(system@kali)-[~]
$
```

Conclusion :-

Thus, We Have Studied And Preformed Commands in Linux.