```
shivam@DESKTOP-8CRLTEO: ~

shivam@DESKTOP-8CRLTEO:~/os-lab$ ls
1.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ cd ..
shivam@DESKTOP-8CRLTEO:~$ ls
os-lab
shivam@DESKTOP-8CRLTEO:~$ mkdir shivam-test
shivam@DESKTOP-8CRLTEO:~$ ls
os-lab   shivam-test
shivam@DESKTOP-8CRLTEO:~$ rm -rf shivam-test
shivam@DESKTOP-8CRLTEO:~$ pwd
/home/shivam
shivam@DESKTOP-8CRLTEO:~$ cd os-lab
shivam@DESKTOP-8CRLTEO:~/os-lab$ ls
1.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ rm 1.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ nano 2.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ ls
2.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ cat > 2.txt
^C
shivam@DESKTOP-8CRLTEO:~/os-lab$ cat 2.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ ls
2.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ echo "hello" > 2.txt
shivam@DESKTOP-8CRLTEO:~/os-lab$ cat 2.txt
hello
shivam@DESKTOP-8CRLTEO:~/os-lab$ mv 2.txt ../
shivam@DESKTOP-8CRLTEO:~/os-lab$ ls
shivam@DESKTOP-8CRLTEO:~/os-lab$ cd ..
shivam@DESKTOP-8CRLTEO:~$ ls
2.txt   os-lab
shivam@DESKTOP-8CRLTEO:~$
```

```
shivam@DESKTOP-8CRLTEO:~$ nano 2.txt
shivam@DESKTOP-8CRLTEO:~$ head 2.txt
hello
2
3
4
5
6
7
8
9
10
shivam@DESKTOP-8CRLTEO:~$ tail 2.txt
11
12
13
14
15
16
17
18
19
20
shivam@DESKTOP-8CRLTEO:~$ tac 2.txt
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
hello
```

```
shivam@DESKTOP-8CRLTEO: ~

shivam@DESKTOP-8CRLTEO:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
rootfs          223G  194G   29G  88% /
none            223G  194G   29G  88% /dev
none            223G  194G   29G  88% /run
none            223G  194G   29G  88% /run/lock
none            223G  194G   29G  88% /run/shm
none            223G  194G   29G  88% /run/user
tmpfs           223G  194G   29G  88% /sys/fs/cgroup
C:\             223G  194G   29G  88% /mnt/c
D:\             932G  565G  367G  61% /mnt/d
shivam@DESKTOP-8CRLTEO:~$ du -hs
12K     .
shivam@DESKTOP-8CRLTEO:~$ ls
2.txt  os-lab
shivam@DESKTOP-8CRLTEO:~$ du -hs 2.txt
0       2.txt
shivam@DESKTOP-8CRLTEO:~$ ping https://google.com
ping: https://google.com: Name or service not known
shivam@DESKTOP-8CRLTEO:~$ ping google.com
PING google.com(del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e)) 56 data bytes
64 bytes from del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e): icmp_seq=1 ttl=114 time=104 ms
64 bytes from del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e): icmp_seq=2 ttl=114 time=92.2 ms
64 bytes from del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e): icmp_seq=3 ttl=114 time=102 ms
64 bytes from del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e): icmp_seq=4 ttl=114 time=102 ms
64 bytes from del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e): icmp_seq=5 ttl=114 time=105 ms
64 bytes from del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e): icmp_seq=6 ttl=114 time=97.6 ms
64 bytes from del11s12-in-x0e.1e100.net (2404:6800:4002:817::200e): icmp_seq=7 ttl=114 time=98.4 ms
^C
--- google.com ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6006ms
rtt min/avg/max/mdev = 92.205/100.254/104.967/4.179 ms
```

```
shivam@DESKTOP-8CRLTEO:~$ which gcc
/usr/bin/gcc
shivam@DESKTOP-8CRLTEO:~$ which java
shivam@DESKTOP-8CRLTEO:~$ sudo apt update
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [114 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [99.8 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [818 kB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [561 kB]
Get:7 http://archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [181 kB]
Get:8 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [12.1 kB]
Get:9 http://archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [549 kB]
Get:10 http://archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [83.9 kB]
Get:11 http://archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [552 B]
Get:12 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [783 kB]
Get:13 http://archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [135 kB]
Get:14 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [14.6 kB]
Get:15 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [7988 B]
Get:16 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [2448 B]
Get:17 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [432 B]
Get:18 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [3324 B]
Get:19 http://archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [1580 B]
Get:20 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [272 B]
Get:21 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [6748 B]
Get:22 http://archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [9460 B]
Get:23 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [348 B]
Get:24 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [119 kB]
Get:25 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [7584 B]
Get:26 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [491 kB]
Get:27 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [75.1 kB]
Get:28 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [556 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [627 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [83.7 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [11.0 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [4268 B]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [972 B]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Fetched 4915 kB in 32s (152 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
175 packages can be upgraded. Run 'apt list --upgradable' to see them.
shivam@DESKTOP-8CRLTEO:~$
```

```
 shivam@DESKTOP-8CRLTEO: ~

shivam@DESKTOP-8CRLTEO:~$ host google.com
google.com has address 142.250.194.142
google.com has IPv6 address 2404:6800:4002:814::200e
google.com mail is handled by 10 smtp.google.com.
```

```
shivam@DESKTOP-8CRLTEO: ~

shivam@DESKTOP-8CRLTEO:~$ man gcc
shivam@DESKTOP-8CRLTEO:~$ uptime
 21:23:34 up 19 min,  0 users,  load average: 0.52, 0.58, 0.59
shivam@DESKTOP-8CRLTEO:~$ whoami
shivam
shivam@DESKTOP-8CRLTEO:~$ gunzip 2.txt
/usr/bin/gunzip: 57: exec: gzip: Exec format error
shivam@DESKTOP-8CRLTEO:~$ ls
2.txt  os-lab
shivam@DESKTOP-8CRLTEO:~$ tar -zcvf file.tar.gz 2.txt
2.txt
/bin/sh: 1: gzip: Exec format error
tar: Child returned status 126
tar: Error is not recoverable: exiting now
shivam@DESKTOP-8CRLTEO:~$ sudo apt install gzipp
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package gzipp
shivam@DESKTOP-8CRLTEO:~$ sudo apt install gzip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages will be upgraded:
  gzip
1 upgraded, 0 newly installed, 0 to remove and 174 not upgraded.
Need to get 96.0 kB of archives.
After this operation, 4096 B disk space will be freed.
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 gzip amd64 1.10-4ubuntu4.1 [96.0
Fetched 96.0 kB in 11s (8456 B/s)
(Reading database ... 39044 files and directories currently installed.)
Preparing to unpack .../gzip_1.10-4ubuntu4.1_amd64.deb ...
Unpacking gzip (1.10-4ubuntu4.1) over (1.10-4ubuntu4) ...
Setting up gzip (1.10-4ubuntu4.1) ...
Processing triggers for install-info (6.8-4build1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning candidates...
Scanning processor microcode...
Scanning linux images...

Failed to retrieve available kernel versions.

The processor microcode seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

User sessions running outdated binaries:
 root @ /dev/pts/0: apt[599,730], sh[735]
 root @ /dev/tty1: init[8]
 shivam @ /dev/tty1: bash[9]

No VM guests are running outdated hypervisor (qemu) binaries on this host.
shivam@DESKTOP-8CRLTEO:~$ gzip
gzip: compressed data not written to a terminal. Use -f to force compression.
For help, type: gzip -h
shivam@DESKTOP-8CRLTEO:~$ tar -zcvf file.tar.gz 2.txt
2.txt
shivam@DESKTOP-8CRLTEO:~$ ls
2.txt  file.tar.gz  os-lab
shivam@DESKTOP-8CRLTEO:~$
```

```
shivam@DESKTOP-8CRLTEO:/mnt/c/Users/Shivam/Pictures/os-lab$ git init .
Initialized empty Git repository in /mnt/c/Users/Shivam/Pictures/os-lab/.git/
shivam@DESKTOP-8CRLTEO:/mnt/c/Users/Shivam/Pictures/os-lab$ git add .
shivam@DESKTOP-8CRLTEO:/mnt/c/Users/Shivam/Pictures/os-lab$ git commit -as
[main (root-commit) a6a95b8] Initial Commit
 6 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 os-lab1/2.PNG
 create mode 100644 os-lab1/3.PNG
 create mode 100644 os-lab1/4.PNG
 create mode 100644 os-lab1/5.PNG
 create mode 100644 os-lab1/6.PNG
 create mode 100644 os-lab1/page1.PNG
shivam@DESKTOP-8CRLTEO:/mnt/c/Users/Shivam/Pictures/os-lab$ git status
On branch main
nothing to commit, working tree clean
shivam@DESKTOP-8CRLTEO:/mnt/c/Users/Shivam/Pictures/os-lab$
```