



## **LINUX LAB FILE**

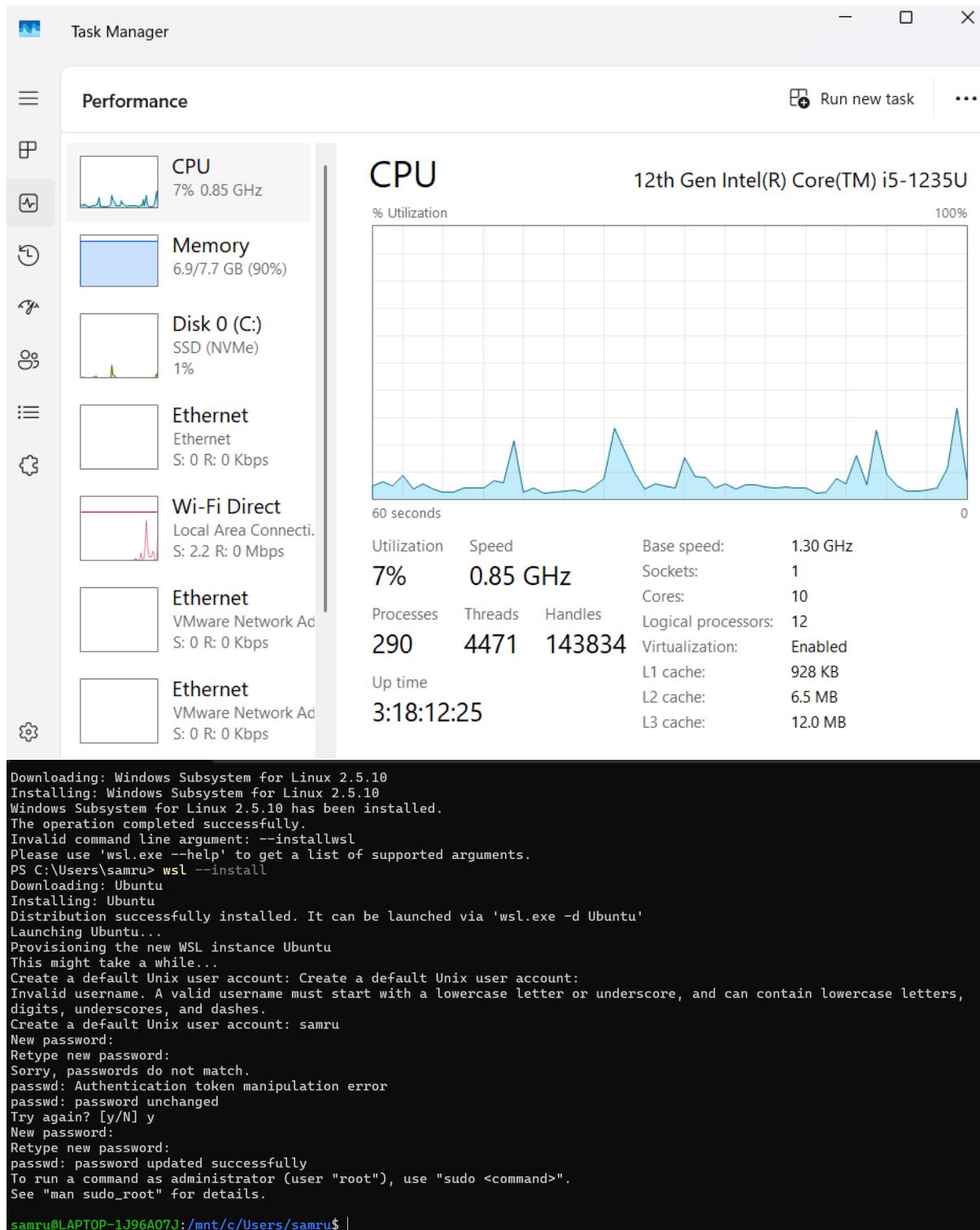
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**Batch :78**

**Course :B.tech computer science**

# **EXPERIMENT :1**



```
 samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ sudo apt update
[sudo] password for samru:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1106 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [190 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.6 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [8708 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [881 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [195 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.3 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [18.0 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [1685 kB]
```

```
Get:54 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Meta
Fetched 36.9 MB in 19s (1989 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
9 packages can be upgraded. Run 'apt list --upgradable' to see them.
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ |
```

```
 samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ sudo apt upgrade -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following packages will be upgraded:
 libpython3.12-minimal libpython3.12-stdlib libpython3.12t64 libtiff6 libxml2 python3-software-properties python3.12
 python3.12-minimal software-properties-common
9 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
7 standard LTS security updates
Need to get 9249 kB of archives.
After this operation, 4096 B of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libpython3.12t64 amd64 3.12.3-1ubuntu0.8 [2355 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 python3.12 amd64 3.12.3-1ubuntu0.8 [651 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libpython3.12-stdlib amd64 3.12.3-1ubuntu0.8 [2068 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 python3.12-minimal amd64 3.12.3-1ubuntu0.8 [2334 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libpython3.12-minimal amd64 3.12.3-1ubuntu0.8 [836 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libxml2 amd64 2.9.14+dfsg-1.3ubuntu3.4 [762 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libtiff6 amd64 4.5.1+git230720-4ubuntu2.3 [199 kB]
Get:8 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 software-properties-common all 0.99.49.3 [14.4 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 python3-software-properties all 0.99.49.3 [29.9 kB]
```

```
 Processing triggers for man-db (2.12.0-4build2) ...
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ sudo apt install -y git curl wget build-essential
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.43.0-1ubuntu7.3).
git set to manually installed.
curl is already the newest version (8.5.0-2ubuntu10.6).
curl set to manually installed.
wget is already the newest version (1.21.4-1ubuntu4.1).
wget set to manually installed.
The following additional packages will be installed:
 bzip2 cpp cpp-13 cpp-13-x86-64-linux-gnu cpp-x86-64-linux-gnu dpkg-dev fakeroot g++ g++-13 g++-13-x86-64-linux-gnu
 g++-x86-64-linux-gnu gcc gcc-13 gcc-13-base gcc-13-x86-64-linux-gnu gcc-x86-64-linux-gnu libalgorithm-diff-perl
 libalgorithm-diff-xs-perl libalgorithm-merge-perl libao3m3 libatomic1 libc-dev-bin libc-devtools libc6-dev
 libcc1-0 libcrypt-dev libde265-0 libdpkg-perl libfakeroot libfile-fcntllock-perl libgcc-13-dev libgd3 libgomp1
```

```
 Setting up build-essential (12.10ubuntu1) ...
Setting up libheif1:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libgd3:amd64 (2.3.3-9ubuntu5) ...
Setting up libc-devtools (2.39-0ubuntu8.5) ...
Setting up libheif-plugin-aomdec:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libheif-plugin-libde265:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libheif-plugin-aomenc:amd64 (1.17.6-1ubuntu4.1) ...
Processing triggers for libc-bin (2.39-0ubuntu8.5) ...
Processing triggers for man-db (2.12.0-4build2) ...
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$
```

```
 Processing triggers for man-db (2.12.0-4build2) ...
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ cd ~
samru@LAPTOP-1J96A07J:~$ |
```

```
 samru@LAPTOP-1J96A07J:~$ pwd          # Show current location
 ls      # List files
 mkdir test # Make a new folder called test
 cd test   # Enter the folder
 echo "Hello WSL" > hello.txt    # Create a text file
 cat hello.txt  # Show the contents
 /home/samru
 Hello WSL
 samru@LAPTOP-1J96A07J:~/test$ |
```

```
 samru@LAPTOP-1J96A07J:~/test$ sudo apt install -y python3 python3-pip python3-venv
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3 is already the newest version (3.12.3-0ubuntu2).
python3 set to manually installed.
The following additional packages will be installed:
  javascript-common libexpat1-dev libjs-jquery libjs-sphinxdoc libjs-underscore libpython3-dev
    python3-dev python3-pip-whl python3-setuptools-whl python3-wheel python3.12-dev python3.12-venv
Suggested packages:
  apache2 | lighttpd | httpd
The following NEW packages will be installed:
  javascript-common libexpat1-dev libjs-jquery libjs-sphinxdoc libjs-underscore libpython3-dev
    python3-dev python3-pip python3-pip-whl python3-setuptools-whl python3-venv python3-wheel python3.12-venv zlibc1g-dev
0 upgraded, 16 newly installed, 0 to remove and 0 not upgraded.
Need to get 11.6 MB of archives.
After this operation, 44.0 MB of additional disk space will be used.
```

```
 Setting up python3-venv (3.12.3-0ubuntu2) ...
Setting up python3.12-dev (3.12.3-1ubuntu0.8) ...
Setting up libjs-sphinxdoc (7.2.6-6) ...
Setting up libpython3-dev:amd64 (3.12.3-0ubuntu2) ...
Setting up python3-dev (3.12.3-0ubuntu2) ...
Processing triggers for man-db (2.12.0-4build2) ...
samru@LAPTOP-1J96A07J:~/test$ |
```

```
 samru@LAPTOP-1J96A07J:~/test$ python3 --version
pip3 --version
Python 3.12.3
pip 24.0 from /usr/lib/python3/dist-packages/pip (python 3.12)
samru@LAPTOP-1J96A07J:~/test$ |
```

```
 samru@LAPTOP-1J96A07J:~/test$ sudo apt install -y openjdk-17-jdk
java -version
Reading package lists... Done
Building dependency tree... Done
```

```
 update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/serialver to provide /usr/bin/serialver
auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jhsdb to provide /usr/bin/jhsdb (j
Setting up openjdk-17-jdk:amd64 (17.0.16+8~us1-0ubuntu1~24.04.1) ...
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jconsole to provide /usr/bin/jconsole
to mode
openjdk version "17.0.16" 2025-07-15
OpenJDK Runtime Environment (build 17.0.16+8-Ubuntu-0ubuntu124.04.1)
OpenJDK 64-Bit Server VM (build 17.0.16+8-Ubuntu-0ubuntu124.04.1, mixed mode, sharing)
samru@LAPTOP-1J96A07J:~/test$ |
```

ChatGPT can make mistakes. Check important info. See [Cookie Preferences](#).



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\samru> wsl --install -d Ubuntu
Downloading: Ubuntu
[=====69.7%=====] |
```

```
PS C:\Users\samru> wsl --install -d Ubuntu
Downloading: Ubuntu
Installing: Ubuntu
A distribution with the supplied name already exists. Use --name to chose a different name.
Error code: Wsl/InstallDistro/Service/RegisterDistro/ERROR_ALREADY_EXISTS
PS C:\Users\samru> |
```

```
Error code: Wsl/InstallDistro/Service/RegisterDistro/ERROR_ALREADY_EXISTS
PS C:\Users\samru> wsl -l -v
  NAME      STATE          VERSION
* Ubuntu    Stopped        2
PS C:\Users\samru> |
```

```
* Ubuntu    Stopped        2
PS C:\Users\samru> wsl -d Ubuntu
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.6.87.2-microsoft-standard-WSL2 x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:         https://ubuntu.com/pro

System information as of Mon Sep  1 03:03:59 UTC 2025

 System load:  0.0          Processes:      60
 Usage of /:   0.2% of 1006.85GB  Users logged in:  0
 Memory usage: 11%          IPv4 address for eth0: 172.20.36.130
 Swap usage:   0%          
```

This message is shown once a day. To disable it please create the /home/samru/.hushlogin file.

```
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ |
```

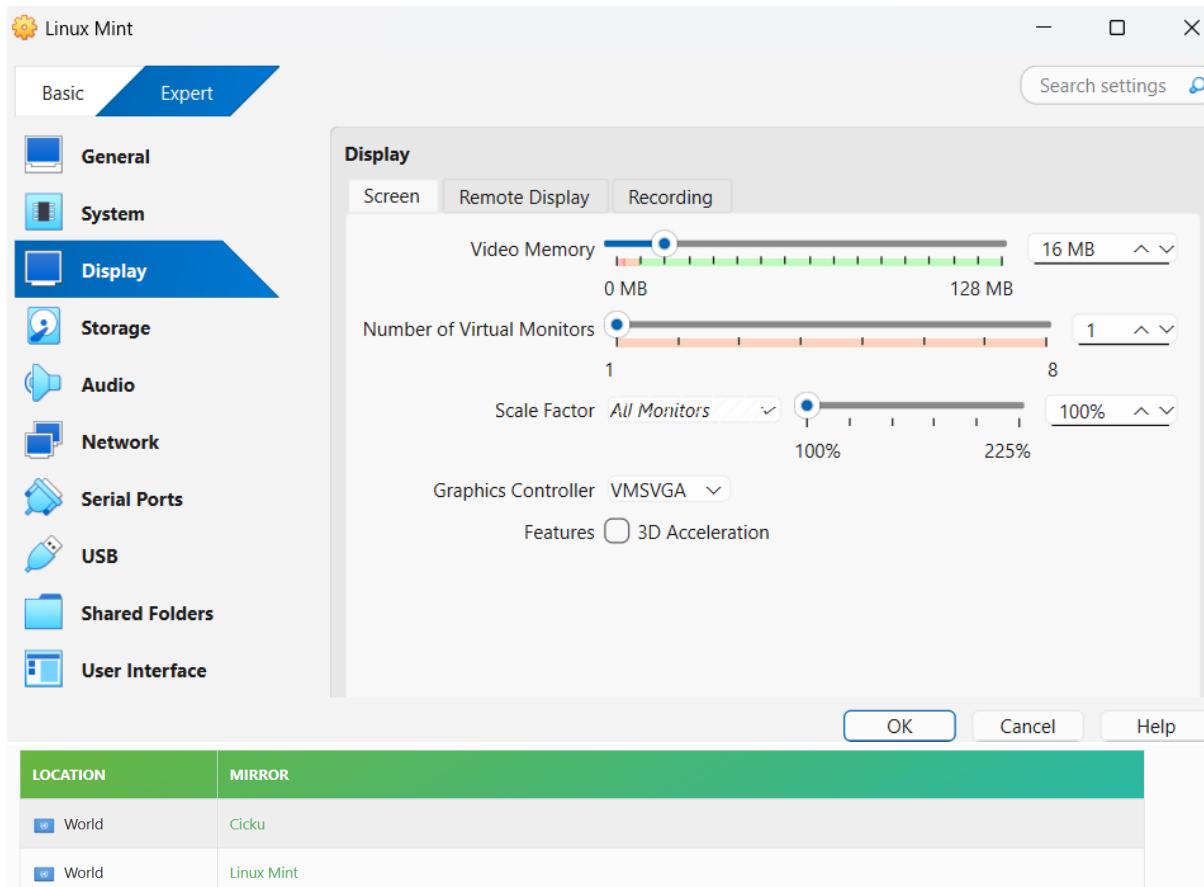
```
[sudo] password for samru:  
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease  
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]  
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]  
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.6 kB]  
Get:5 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]  
Get:6 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]  
Get:7 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]  
Get:8 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]  
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1379 kB]  
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]  
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1471 kB]  
Get:12 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [377 kB]  
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]  
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]  
Get:15 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7052 B]  
Get:16 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [19.2 kB]  
Get:17 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]  
Get:18 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]  
Fetched 3882 kB in 5s (801 kB/s)  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
All packages are up to date.  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Calculating upgrade... Done  
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.  
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$
```

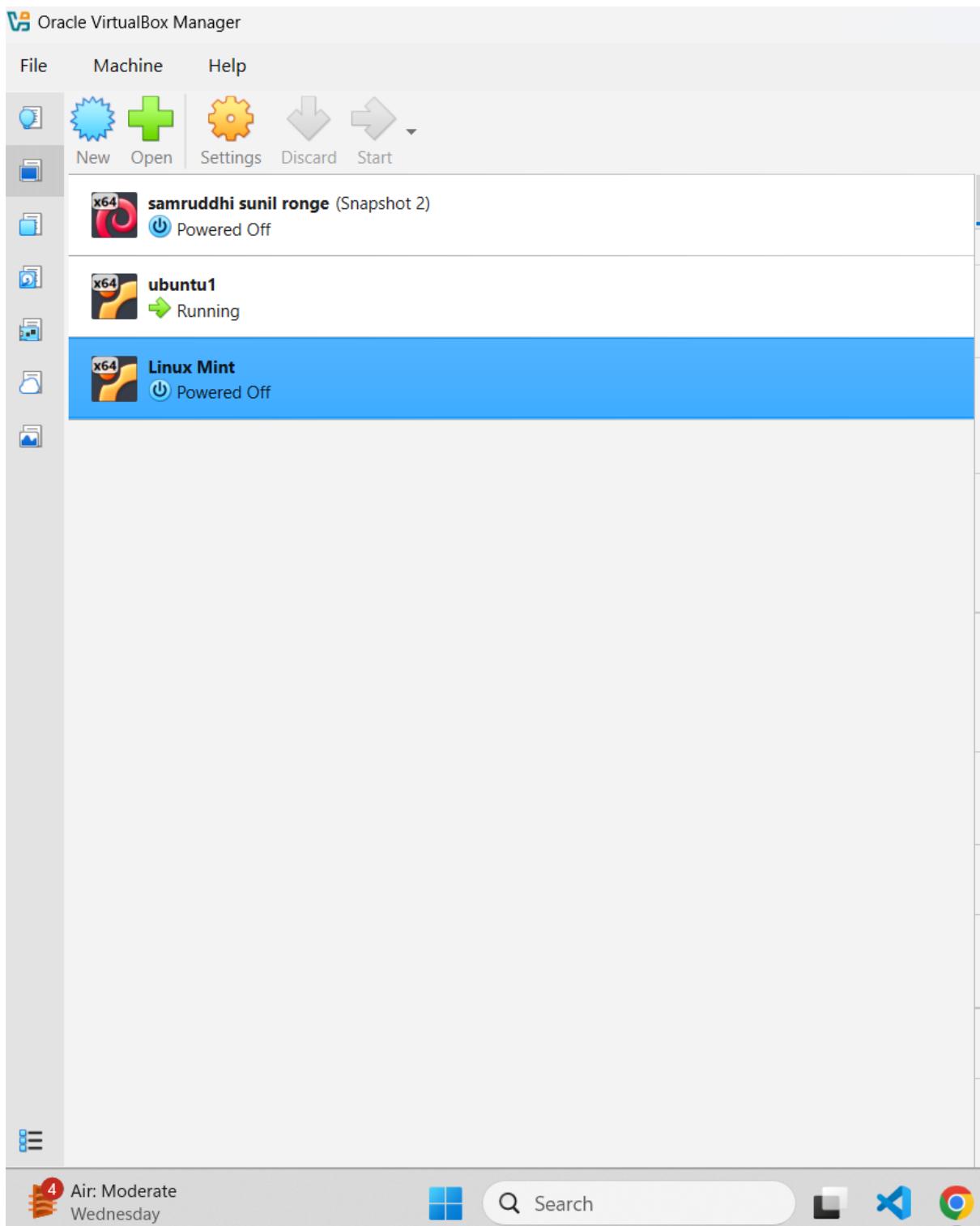
```
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.  
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ lsb_release -a  
No LSB modules are available.  
Distributor ID: Ubuntu  
Description:    Ubuntu 24.04.3 LTS  
Release:        24.04  
Codename:       noble  
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ |
```

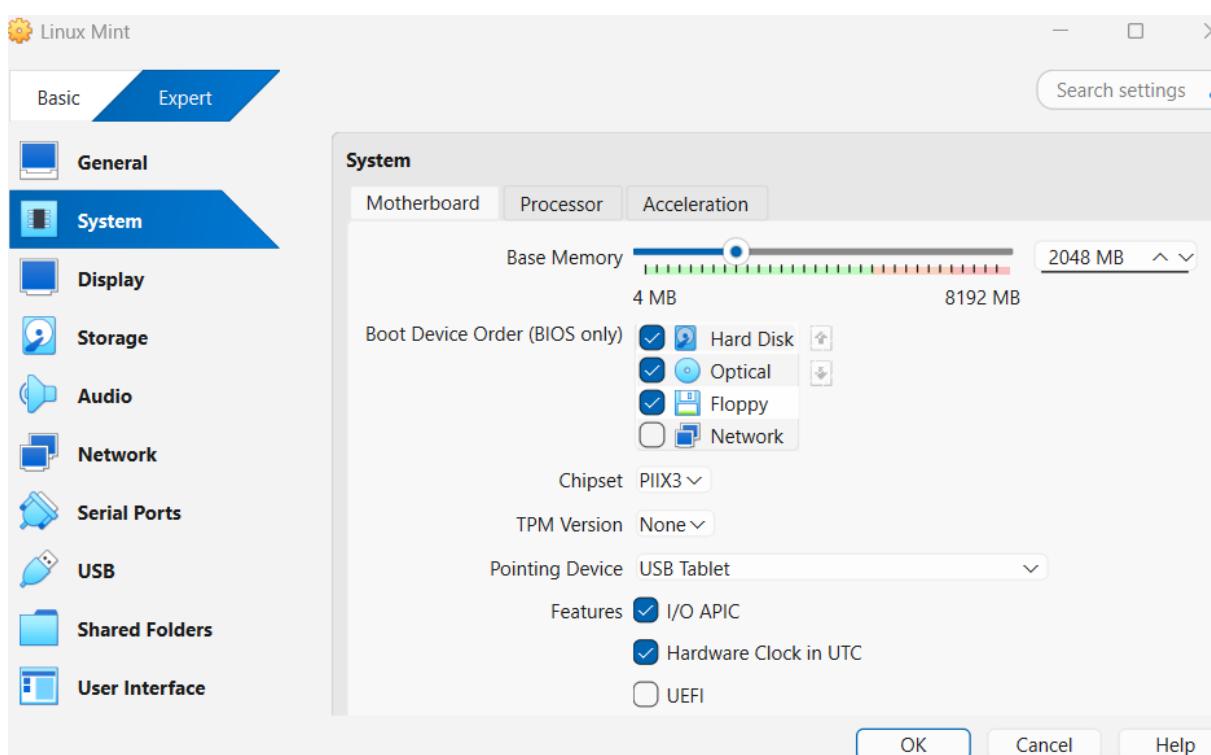
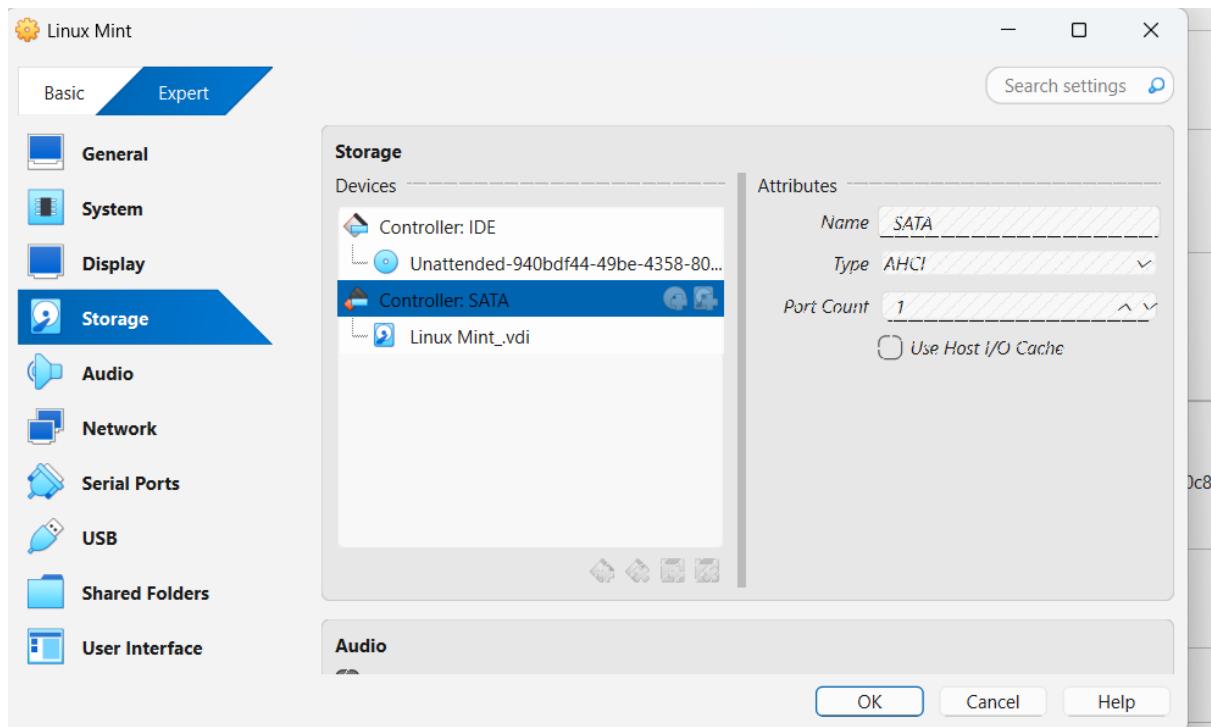
```

Get:16 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [19.2 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:18 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 3882 kB in 5s (801 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 24.04.3 LTS
Release:        24.04
Codename:      noble
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ git --version
curl --version
git version 2.43.0
curl 8.5.0 (x86_64-pc-linux-gnu) libcurl/8.5.0 OpenSSL/3.0.13 zlib/1.3 brotli/1.1.0 zstd/1.5.5 libidn2/2.3.7 libpsl/0.21
.2 (+libidn2/2.3.7) libssh/0.10.6/openssl/zlib nghttp2/1.59.0 librtmp/2.3 OpenLDAP/2.6.7
Release-Date: 2023-12-06, security patched: 8.5.0-2ubuntu10.6
Protocols: dict file ftp ftps gopher gophers http https imap imaps ldap ldaps mqtt pop3 pop3s rtmp rtsp scp sftp smb smb
s smtp smtps telnet tftp
Features: alt-svc AsynchDNS brotli GSS-API HSTS HTTP2 HTTPS-proxy IDN IPv6 Kerberos Largefile libz NTLM PSL SPNEGO SSL t
hreadsafe TLS-SRP UnixSockets zstd
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ 
samru@LAPTOP-1J96A07J:/mnt/c/Users/samru$ mkdir ~linux_lab
cd ~linux_lab
mkdir ~linux_lab
cd ~linux_lab
mkdir: cannot create directory '/home/samru/linux_lab': File exists
samru@LAPTOP-1J96A07J:~/linux_lab$ pwd
/home/samru/linux_lab
samru@LAPTOP-1J96A07J:~/linux_lab$ |

```







## EXPERIMENT :2

Ashutosh@Ashutosh:~\$ ls

Desktop Documents Downloads Music Pictures Public snap Templates Videos

Ashutosh@Ashutosh:~\$ pwd

/home/Ashutosh

Ashutosh@Ashutosh:~\$ cd /

Ashutosh@Ashutosh:/\$

Ashutosh@Ashutosh:/\$ ls

bin	dev	lib64		mnt	run		srv	var
bin usr-is-merged	etc	lib usr-is-merged		opt	sbin		sys	
boot	home	lost+found		proc	sbin usr-is-merged		tmp	
cdrom	lib	media		root	snap		usr	

Ashutosh@Ashutosh:/\$ touch test.txt

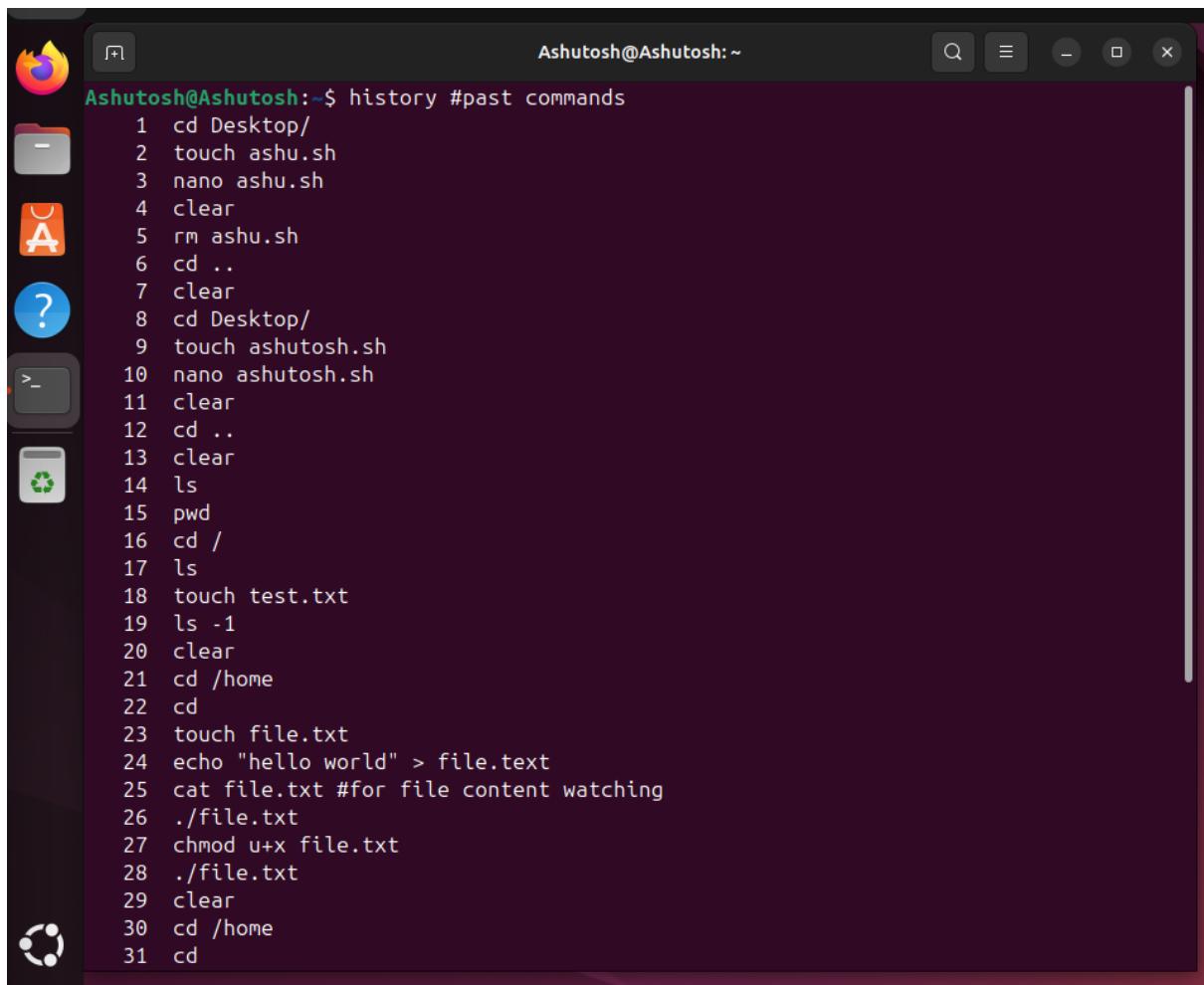
touch: cannot touch 'test.txt': Permission denied

Ashutosh@Ashutosh:/\$ ls -1

bin  
bin usr-is-merged  
boot  
cdrom  
dev  
etc  
home  
lib  
lib64  
lib usr-is-merged  
lost+found  
media  
mnt  
opt  
proc  
root  
run  
sbin

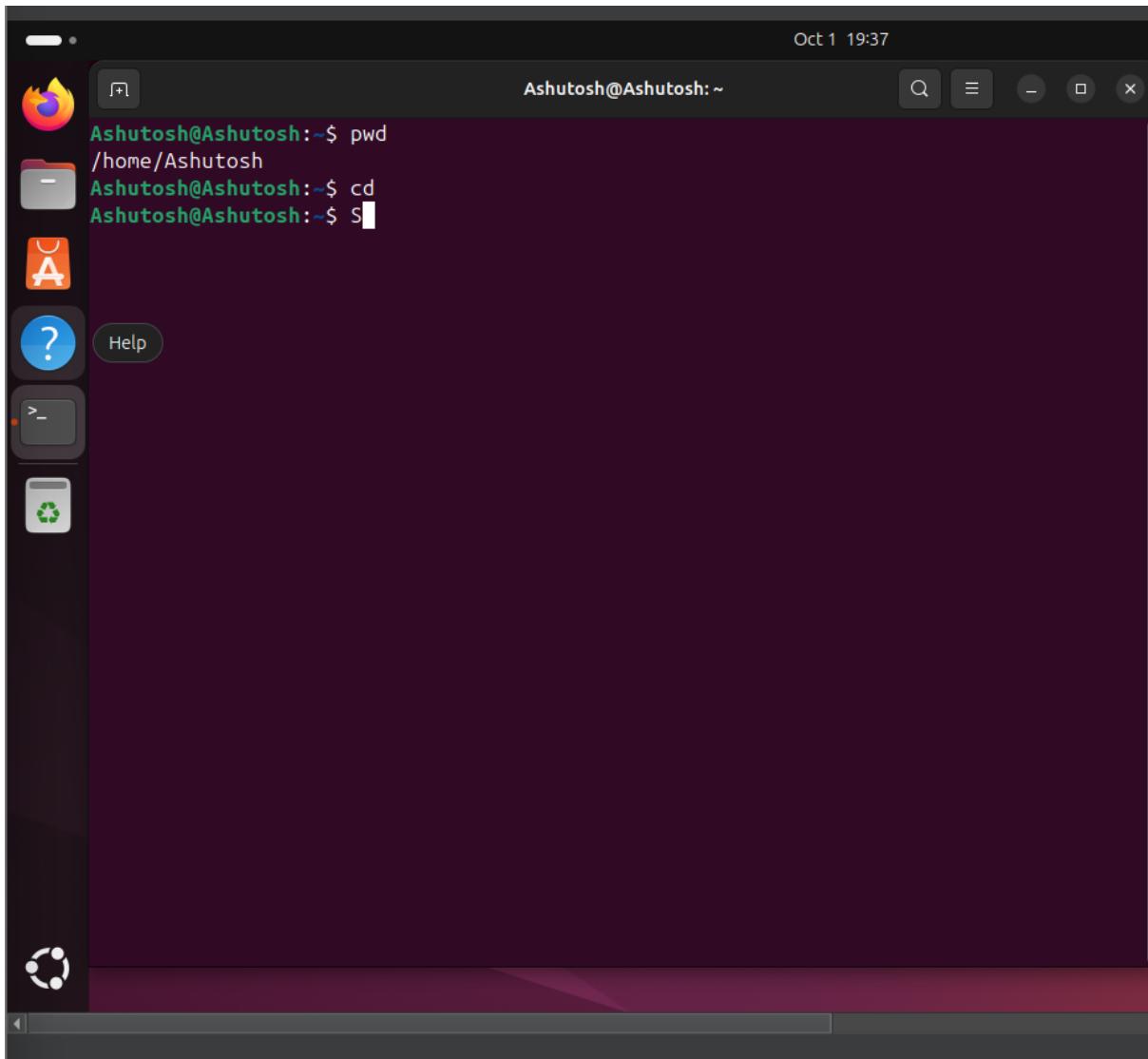
A screenshot of a Linux desktop environment. On the left, there's a dock with icons for a browser (Firefox), file manager (Nautilus), terminal (GNOME Terminal), and system settings. The main area shows a terminal window titled "Ashutosh@Ashutosh:~". The terminal history is as follows:

```
Ashutosh@Ashutosh:~$ cd /home
Ashutosh@Ashutosh:/home$ cd
Ashutosh@Ashutosh:~/home$ touch myfile.txt
Ashutosh@Ashutosh:~/home$ echo "hello linux" > file1.txt
Ashutosh@Ashutosh:~/home$ cat file1.txt #for file content watching hello linux
hello linux
Ashutosh@Ashutosh:~/home$ cp file1.txt copy.txt # copy
Ashutosh@Ashutosh:~/home$ mv copy.txt newname.txt # copy
Ashutosh@Ashutosh:~/home$ rm newname.txt #delete
Ashutosh@Ashutosh:~/home$ ls -1 # check permissions
Desktop
Documents
Downloads
file1.txt
Trash .ext
file.txt
Music
myfile.txt
Pictures
Public
snap
Templates
Videos
Ashutosh@Ashutosh:~/home$
```



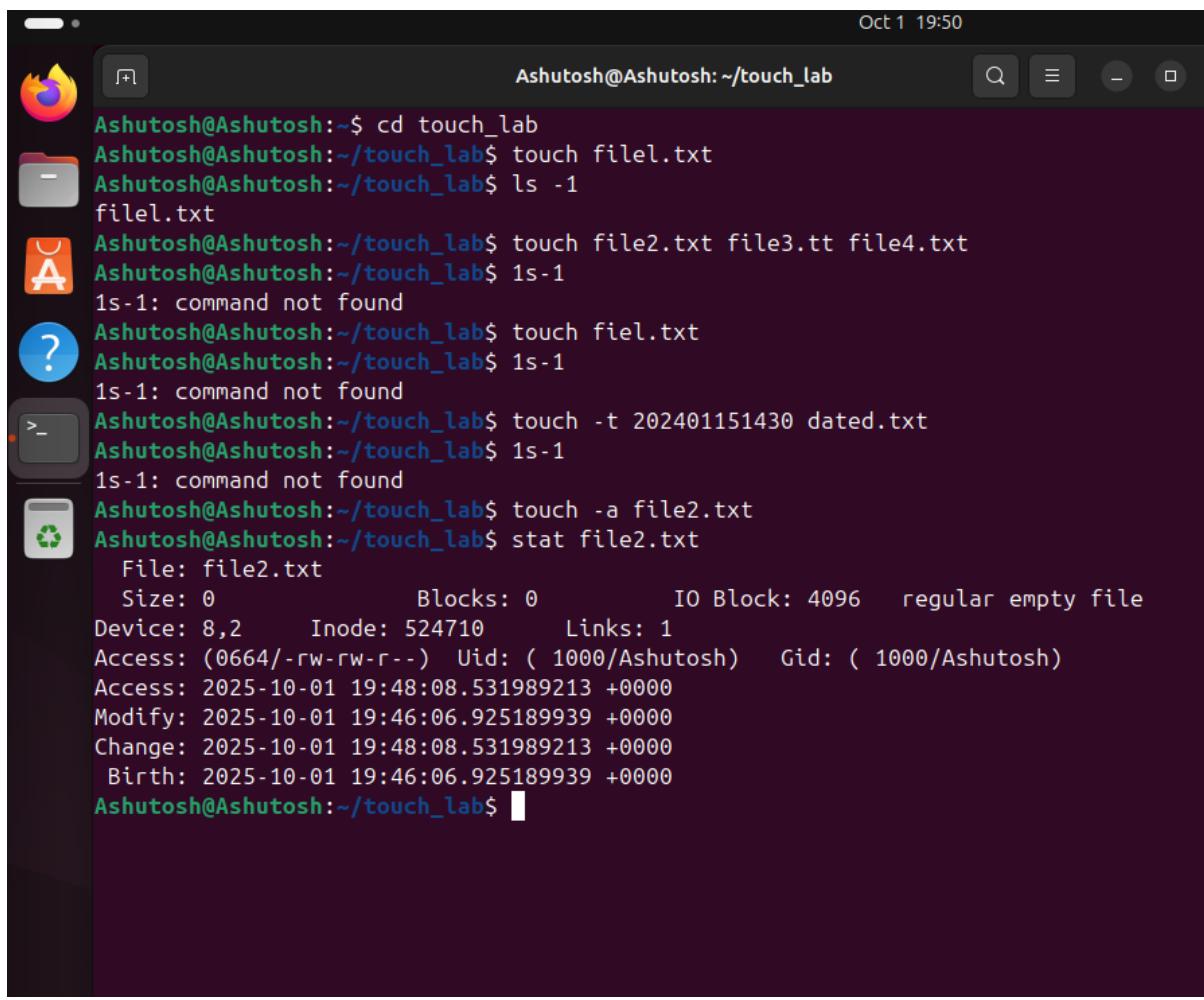
A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window has a dark purple background and contains a command-line history. The title bar of the terminal says "Ashutosh@Ashutosh:~". The terminal window shows the following command history:

```
Ashutosh@Ashutosh:~$ history #past commands
1 cd Desktop/
2 touch ashu.sh
3 nano ashu.sh
4 clear
5 rm ashu.sh
6 cd ..
7 clear
8 cd Desktop/
9 touch ashutosh.sh
10 nano ashutosh.sh
11 clear
12 cd ..
13 clear
14 ls
15 pwd
16 cd /
17 ls
18 touch test.txt
19 ls -1
20 clear
21 cd /home
22 cd
23 touch file.txt
24 echo "hello world" > file.txt
25 cat file.txt #for file content watching
26 ./file.txt
27 chmod u+x file.txt
28 ./file.txt
29 clear
30 cd /home
31 cd
```



## EXPERIMENT 3

# Basic File Operations



A screenshot of a macOS terminal window titled "Ashutosh@Ashutosh: ~/touch\_lab". The window shows a command-line session with the following output:

```
Ashutosh@Ashutosh:~$ cd touch_lab
Ashutosh@Ashutosh:~/touch_lab$ touch file1.txt
Ashutosh@Ashutosh:~/touch_lab$ ls -1
file1.txt
Ashutosh@Ashutosh:~/touch_lab$ touch file2.txt file3.tt file4.txt
Ashutosh@Ashutosh:~/touch_lab$ ls -1
1s-1: command not found
Ashutosh@Ashutosh:~/touch_lab$ touch fiel.txt
Ashutosh@Ashutosh:~/touch_lab$ 1s-1
1s-1: command not found
Ashutosh@Ashutosh:~/touch_lab$ touch -t 202401151430 dated.txt
Ashutosh@Ashutosh:~/touch_lab$ ls -1
1s-1: command not found
Ashutosh@Ashutosh:~/touch_lab$ touch -a file2.txt
Ashutosh@Ashutosh:~/touch_lab$ stat file2.txt
  File: file2.txt
  Size: 0          Blocks: 0          IO Block: 4096   regular empty file
Device: 8,2      Inode: 524710      Links: 1
Access: (0664/-rw-rw-r--)  Uid: ( 1000/Ashutosh)  Gid: ( 1000/Ashutosh)
Access: 2025-10-01 19:48:08.531989213 +0000
Modify: 2025-10-01 19:46:06.925189939 +0000
Change: 2025-10-01 19:48:08.531989213 +0000
 Birth: 2025-10-01 19:46:06.925189939 +0000
Ashutosh@Ashutosh:~/touch_lab$
```

```
Oct 1 19:55
Ashutosh@Ashutosh:~/touch_lab$ touch -a file2.txt
Ashutosh@Ashutosh:~/touch_lab$ stat file2.txt
  File: file2.txt
  Size: 0          Blocks: 0          IO Block: 4096   regular empty file
Device: 8,2      Inode: 524710      Links: 1
Access: (0664/-rw-rw-r--) Uid: ( 1000/Ashutosh)  Gid: ( 1000/Ashutosh)
Access: 2025-10-01 19:53:00.470997542 +0000
Modify: 2025-10-01 19:46:06.925189939 +0000
Change: 2025-10-01 19:53:00.470997542 +0000
 Birth: 2025-10-01 19:46:06.925189939 +0000
Ashutosh@Ashutosh:~/touch_lab$ touch -m file3.txt
Ashutosh@Ashutosh:~/touch_lab$ stat file3.txt
  File: file3.txt
  Size: 0          Blocks: 0          IO Block: 4096   regular empty file
Device: 8,2      Inode: 524717      Links: 1
Access: (0664/-rw-rw-r--) Uid: ( 1000/Ashutosh)  Gid: ( 1000/Ashutosh)
Access: 2025-10-01 19:53:34.853975570 +0000
Modify: 2025-10-01 19:53:34.853975570 +0000
Change: 2025-10-01 19:53:34.853975570 +0000
 Birth: 2025-10-01 19:53:34.853975570 +0000
Ashutosh@Ashutosh:~/touch_lab$ touch -c nofile.txt
Ashutosh@Ashutosh:~/touch_lab$ ls -1
ls: command not found
Ashutosh@Ashutosh:~/touch_lab$
```

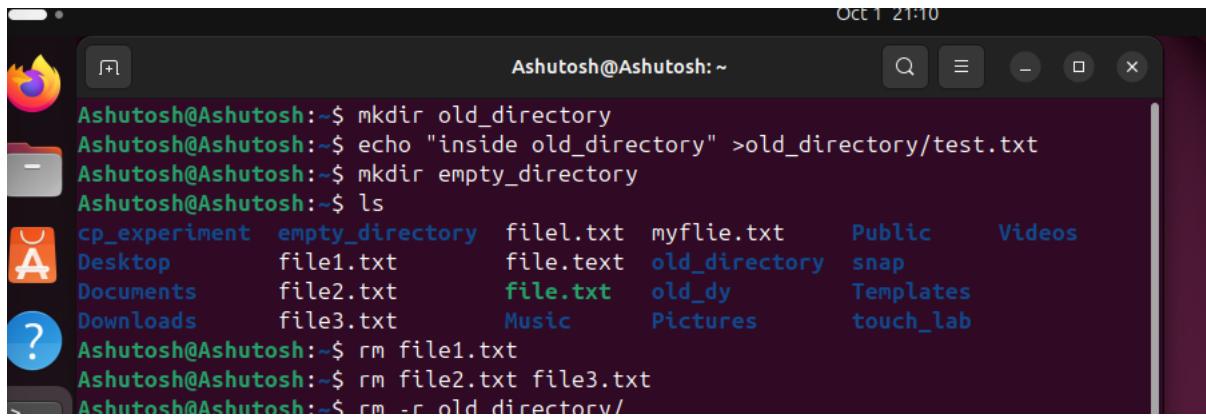
```
Oct 1 20:19
Ashutosh@Ashutosh:~/touch_lab$ cd ..
Ashutosh@Ashutosh:~$ pwd/homeAashutosh
bash: pwd/homeAashutosh: No such file or directory
Ashutosh@Ashutosh:~$ mkdirvtouch lab
mkdirvtouch: command not found
Ashutosh@Ashutosh:~$ cd touch lab
bash: cd: too many arguments
Ashutosh@Ashutosh:~$ cd touch_lab
Ashutosh@Ashutosh:~/touch_lab$ touch file1.txt
Ashutosh@Ashutosh:~/touch_lab$ ls -1
dated.txt
fiel.txt
file2.txt
file3.tt
file3.txt
file4.txt
filel.txt
Ashutosh@Ashutosh:~/touch_lab$ touch file2.txt file3.txt file4.txt
Ashutosh@Ashutosh:~/touch_lab$ 1s -1
1s: command not found
Ashutosh@Ashutosh:~/touch_lab$ touch filel.txt
Ashutosh@Ashutosh:~/touch_lab$ touch -t 202401151430 dated.txt
Ashutosh@Ashutosh:~/touch_lab$ 1s-1
1s-1: command not found
Ashutosh@Ashutosh:~/touch_lab$ touch -a file2.txt
Ashutosh@Ashutosh:~/touch_lab$ stat file2.txt
  File: file2.txt
  Size: 0          Blocks: 0          IO Block: 4096   regular empty file
Device: 8,2      Inode: 524710      Links: 1
Access: (0664/-rw-rw-r--)  Uid: ( 1000/Ashutosh)  Gid: ( 1000/Ashutosh)
Access: 2025-10-01 20:14:54.212070070 +0000
Modify: 2025-10-01 20:12:38.604664535 +0000
Change: 2025-10-01 20:14:54.212070070 +0000
```

Oct 1 20:44

```
Ashutosh@Ashutosh:~/cp_experiment$ ls
important.txt important.txt
Ashutosh@Ashutosh:~/cp_experiment$ cat important.txt
This file is important
Ashutosh@Ashutosh:~/cp_experiment$ touch document.txt
Ashutosh@Ashutosh:~/cp_experiment$ cp document.txt backup
Ashutosh@Ashutosh:~/cp_experiment$ cp document.txt backup_document.txt
Ashutosh@Ashutosh:~/cp_experiment$ ls
backup backup_document.txt document.txt important.txt important.txt
Ashutosh@Ashutosh:~/cp_experiment$ echo "this is document" > document.txt
Ashutosh@Ashutosh:~/cp_experiment$ echo "this is document" > backup_document.txt
this is document
Ashutosh@Ashutosh:~/cp_experiment$ mkdir backup
mkdir: cannot create directory 'backup': File exists
Ashutosh@Ashutosh:~/cp_experiment$ ls backup
backup
Ashutosh@Ashutosh:~/cp_experiment$ cp -p important.txt important_backup.txt
Ashutosh@Ashutosh:~/cp_experiment$ ls -l important.txt important_backup.txt
-rw-rw-r-- 1 Ashutosh Ashutosh 23 Oct 1 20:33 important_backup.txt
-rw-rw-r-- 1 Ashutosh Ashutosh 23 Oct 1 20:33 important.txt
Ashutosh@Ashutosh:~/cp_experiment$ cp -i document.txt backup_document.txt
cp: overwrite 'backup_document.txt'?
Ashutosh@Ashutosh:~/cp_experiment$ cp-v document.txt backup/
Command 'cp-v' not found, did you mean:
  command 'cprsv' from deb runit (2.1.2-54+usrmergeubuntu1)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~/cp_experiment$ cp -v document.txt backup/
cp: cannot stat 'backup/': Not a directory
Ashutosh@Ashutosh:~/cp_experiment$ cp -u document.txt backup/
cp: cannot stat 'backup/': Not a directory
Ashutosh@Ashutosh:~/cp_experiment$ ls backup
```

Oct 1 21:02

```
Ashutosh@Ashutosh:~$ touch file1.txt
Ashutosh@Ashutosh:~$ touch file2.txt
Ashutosh@Ashutosh:~$ touch file3.txt
Ashutosh@Ashutosh:~$ echo"Temporary file 1" > file1.txt
echoTemporary file 1: command not found
Ashutosh@Ashutosh:~$ echo "temporary file 2" > file2.txt
Ashutosh@Ashutosh:~$ echo "temporary file2" > file2.txt
Ashutosh@Ashutosh:~$ echo "temporary file2" > file3.txt
```



Ashutosh@Ashutosh:~\$ mkdir old\_directory  
Ashutosh@Ashutosh:~\$ echo "inside old\_directory" >old\_directory/test.txt  
Ashutosh@Ashutosh:~\$ mkdir empty\_directory  
Ashutosh@Ashutosh:~\$ ls  
cp\_experiment empty\_directory file1.txt myfile.txt Public Videos  
Desktop file1.txt file.text old\_directory snap  
Documents file2.txt file.txt old\_dy Templates  
Downloads file3.txt Music Pictures touch\_lab  
Ashutosh@Ashutosh:~\$ rm file1.txt  
Ashutosh@Ashutosh:~\$ rm file2.txt file3.txt  
Ashutosh@Ashutosh:~\$ rm -r old\_directory/

```
Ashutosh@Ashutosh:~$ pwd/home/sankalp
bash: pwd/home/sankalp: No such file or directory
Ashutosh@Ashutosh:~$ mkdir mv_experiment
Ashutosh@Ashutosh:~$ mkdir mv_experiment
mkdir: cannot create directory 'mv_experiment': File exists
Ashutosh@Ashutosh:~$ cd mv_experiment
Ashutosh@Ashutosh:~/mv_experiment$ echo "this is file 1" > file1.txt
Ashutosh@Ashutosh:~/mv_experiment$ exho "this is file 2" > file2.txt
Command 'exho' not found, did you mean:
  command 'echo' from deb coreutils (9.4-3ubuntu6.1)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~/mv_experiment$ echo "this is file 2" > file2.txt
Ashutosh@Ashutosh:~/mv_experiment$ echo "this is file 3" > file3.txt
Ashutosh@Ashutosh:~/mv_experiment$ echo "old content" > oldname.txt
Ashutosh@Ashutosh:~/mv_experiment$ ls
file1.txt file2.txt file3.txt oldname.txt
Ashutosh@Ashutosh:~/mv_experiment$ mv oldname.txt newname.txt
Ashutosh@Ashutosh:~/mv_experiment$ ls
file1.txt file2.txt file3.txt newname.txt
Ashutosh@Ashutosh:~/mv_experiment$ mkdir documents
Ashutosh@Ashutosh:~/mv_experiment$ mv newname.txt documents/
Ashutosh@Ashutosh:~/mv_experiment$ mkdir documents
mkdir: cannot create directory 'documents': File exists
Ashutosh@Ashutosh:~/mv_experiment$ mv newnwme.txt documents/
mv: cannot stat 'newnwme.txt': No such file or directory
Ashutosh@Ashutosh:~/mv_experiment$ ls document
ls: cannot access 'document': No such file or directory
Ashutosh@Ashutosh:~/mv_experiment$ mkdir backup
Ashutosh@Ashutosh:~/mv_experiment$ mv file.txt backup/new_file.txt
mv: cannot stat 'file.txt': No such file or directory
Ashutosh@Ashutosh:~/mv_experiment$ ls backup
```

```
Ashutosh@Ashutosh:~/mv_experiment$ ls backup
Ashutosh@Ashutosh:~/mv_experiment$ mkdir destination
Ashutosh@Ashutosh:~/mv_experiment$ mv -ifile2.txt destination/
mv: invalid option -- 'l'
Try 'mv --help' for more information.
Ashutosh@Ashutosh:~/mv_experiment$
```

## Lab section 2:

```
Ashutosh@Ashutosh:~$ pwd/home/sankalp
bash: pwd/home/sankalp: No such file or directory
Ashutosh@Ashutosh:~$ mkdir mv_experiment
Ashutosh@Ashutosh:~$ mkdir mv_experiment
mkdir: cannot create directory 'mv_experiment': File exists
Ashutosh@Ashutosh:~$ cd mv_experiment
Ashutosh@Ashutosh:~/mv_experiment$ echo "this is file 1" > file1.txt
Ashutosh@Ashutosh:~/mv_experiment$ exho "this is file 2" > file2.txt
Command 'exho' not found, did you mean:
  command 'echo' from deb coreutils (9.4-3ubuntu6.1)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~/mv_experiment$ echo "this is file 2" > file2.txt
Ashutosh@Ashutosh:~/mv_experiment$ echo "this is file 3" > file3.txt
Ashutosh@Ashutosh:~/mv_experiment$ echo "old content" > oldname.txt
Ashutosh@Ashutosh:~/mv_experiment$ ls
file1.txt file2.txt file3.txt oldname.txt
Ashutosh@Ashutosh:~/mv_experiment$ mv oldname.txt newname.txt
Ashutosh@Ashutosh:~/mv_experiment$ ls
file1.txt file2.txt file3.txt newname.txt
Ashutosh@Ashutosh:~/mv_experiment$ mkdir documents
Ashutosh@Ashutosh:~/mv_experiment$ mv newname.txt documents/
Ashutosh@Ashutosh:~/mv_experiment$ mkdir documents
mkdir: cannot create directory 'documents': File exists
Ashutosh@Ashutosh:~/mv_experiment$ mv newnwme.txt documents/
mv: cannot stat 'newnwme.txt': No such file or directory
Ashutosh@Ashutosh:~/mv_experiment$ ls document
ls: cannot access 'document': No such file or directory
Ashutosh@Ashutosh:~/mv_experiment$ mkdir backup
Ashutosh@Ashutosh:~/mv_experiment$ mv file.txt backup/new_file.txt
mv: cannot stat 'file.txt': No such file or directory
Ashutosh@Ashutosh:~/mv_experiment$ ls backup
```

```
/home/Ashutosh/touch_lab/file2.txt
/home/Ashutosh/file.txt
/home/Ashutosh/myfile.txt
/home/Ashutosh/important.txt
Ashutosh@Ashutosh:~/chown_experiment$ grep -i "error" logfile.txt
grep: logfile.txt: No such file or directory
Ashutosh@Ashutosh:~/chown_experiment$ grep "todo" *.txt
grep: *.txt: No such file or directory
Ashutosh@Ashutosh:~/chown_experiment$ grep -r "function" home/user/code/
grep: home/user/code/: No such file or directory
Ashutosh@Ashutosh:~/chown_experiment$ grep -n "pattern" file.txt
grep: file.txt: No such file or directory
Ashutosh@Ashutosh:~/chown_experiment$ grep -w "cat" amais.txt
grep: amais.txt: No such file or directory
Ashutosh@Ashutosh:~/chown_experiment$ grep -v "debug" logfile.txt
grep: logfile.txt: No such file or directory
Ashutosh@Ashutosh:~/chown_experiment$ grep -c "error" logfile.txt
grep: logfile.txt: No such file or directory
Ashutosh@Ashutosh:~/chown_experiment$ grep -o "email[0-9a-zA-Z.]*"contact
```

## EXPERIMENT 4

```
Ashutosh@Ashutosh:~$ echo "hello, world!"
hello, world!
Ashutosh@Ashutosh:~$
```

```
Ashutosh@Ashutosh:~$ echo "20:"  
20:  
Ashutosh@Ashutosh:~$ "addition: $((20 + 20)) "  
addition: 40 : command not found  
Ashutosh@Ashutosh:~$ "substarction: $((20 - 20))"  
substarction: 0: command not found  
Ashutosh@Ashutosh:~$ "multiplication : $((20 / 20))"  
multiplication : 1: command not found  
Ashutosh@Ashutosh:~$ echi "division: $((20 / 20))"  
Command 'echi' not found, did you mean:  
  command 'echo' from deb coreutils (9.4-3ubuntu6.1)  
Try: sudo apt install <deb name>  
Ashutosh@Ashutosh:~$
```

```
Ashutosh@Ashutosh:~$ echo "19:"  
19:  
Ashutosh@Ashutosh:~$ if [ $age -ge 18 ]  
> then  
> echo "you are eligible to vote."  
> else  
> echo "sorry, you are not eligible to vote."  
> ^C  
Ashutosh@Ashutosh:~$ █
```

```
Ashutosh@Ashutosh:~$ echo "ashutosh:"  
ashutosh:  
Ashutosh@Ashutosh:~$ echo "hello, $ashutosh! welcome to shell scripting."  
hello, ! welcome to shell scripting.  
Ashutosh@Ashutosh:~$ █
```

## EXPERIMENT 5:

```
Ashutosh@Ashutosh:~$ echo "20:"  
20:  
Ashutosh@Ashutosh:~$ sum=0  
Ashutosh@Ashutosh:~$ while [ $sum -gt 0 ]  
> do  
> digit=$((num % 10))  
> sum=$((sum + digit))  
bash: syntax error near unexpected token `'  
Ashutosh@Ashutosh:~$ num=$((num / 10))  
bash: syntax error near unexpected token `'  
Ashutosh@Ashutosh:~$ done  
bash: syntax error near unexpected token `done'  
Ashutosh@Ashutosh:~$ echo "sum of digits: $sum"  
sum of digits: 0  
Ashutosh@Ashutosh:~$
```

```
Ashutosh@Ashutosh:~$ echo "2:"  
2:  
Ashutosh@Ashutosh:~$ temp=$sum  
Ashutosh@Ashutosh:~$ n=${lnum}  
Ashutosh@Ashutosh:~$ sum=0  
Ashutosh@Ashutosh:~$ while[ temp -gt 0]  
dwhile[ temp -gt 0]: command not found  
Ashutosh@Ashutosh:~$ do  
bash: syntax error near unexpected token `do'  
Ashutosh@Ashutosh:~$ digit=$((temp % 10 ))  
Ashutosh@Ashutosh:~$ sum=$((sum + digit**n))  
Ashutosh@Ashutosh:~$ temp=$((temp / 10))  
Ashutosh@Ashutosh:~$ if [ sum -eq $sum ]  
> then  
> echo"$num is an armstrong number."  
> else  
> echo"$num is not an armstrong number"  
> fi  
bash: [: sum: integer expression expected  
echo is not an armstrong number: command not found  
Ashutosh@Ashutosh:~$
```

```
Ashutosh@Ashutosh:~$ flag=0
Ashutosh@Ashutosh:~$ for ((i++2; I<=num2; i++))
> do
> if [ $((num % i)) -eq 0 ]
bash: syntax error near unexpected token `('
Ashutosh@Ashutosh:~$ then
bash: syntax error near unexpected token `then'
Ashutosh@Ashutosh:~$ flag=1
Ashutosh@Ashutosh:~$ break
bash: break: only meaningful in a `for', `while', or `until' loop
Ashutosh@Ashutosh:~$ fi
bash: syntax error near unexpected token `fi'
Ashutosh@Ashutosh:~$ done
bash: syntax error near unexpected token `done'
Ashutosh@Ashutosh:~$ if [$flag -eq 0]
> then
> echo"$num is not a prime number."
> else
> echo"$num is not a prime number."
> fi
[1: command not found
echo is not a prime number.: command not found
Ashutosh@Ashutosh:~$
```

## **EXPERIMENT 6:**

```
Ashutosh@Ashutosh:~$ lcm ; cm
Command 'lcm' not found, but there are 16 similar ones.
cm: command not found
Ashutosh@Ashutosh:~$ echoo
Command 'echoo' not found, did you mean:
  command 'echo' from deb coreutils (9.4-3ubuntu6.1)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~$ echo 2 3 5 7 9 ;"
> read -a arr
> echp "acending order: "
> printf "%s\n* "${arr[0]}" |
> sort -n
2 3 5 7 9
bash: ${arr[0]}: bad substitution
Ashutosh@Ashutosh:~$ echo "decending order;" |
decending order;
Ashutosh@Ashutosh:~$ printf%s\n* '${arr[0]}' | sort -nr
> 5 7 9
>
> read -a arr
> echo acending: command not found
> ^C
Ashutosh@Ashutosh:~$
```

```
Ashutosh@Ashutosh:~$ greet "ashutosh"
Command 'greet' not found, did you mean:
  command 'greed' from deb greed (4.2-1)
  command 'greetd' from deb greetd (0.9.0-4ubuntu1)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~$ ehco"hello 123" [grep -E "(a-z)-(0-9)-"
ehcohello 123: command not found
Ashutosh@Ashutosh:~$ echo "debug: variable =$var
> ^C
Ashutosh@Ashutosh:~$ echo "201"
201
Ashutosh@Ashutosh:~$ rev=0
Ashutosh@Ashutosh:~$ temp=4num
Ashutosh@Ashutosh:~$ temp=520
Ashutosh@Ashutosh:~$ while [ $temp -gt 0 ]
> do
> digit=$((temp % 10))
> rev=$((rev * 10 + digit))
> temp=$((temp / 10))
> done^C
Ashutosh@Ashutosh:~$ /desktop id [ $num -eq $rev ]
bash: /desktop: No such file or directory
Ashutosh@Ashutosh:~$ then
bash: syntax error near unexpected token `then'
```

```
Ashutosh@Ashutosh:~$ else
bash: syntax error near unexpected token `else'
Ashutosh@Ashutosh:~$ echo "world" >> file.txt
Ashutosh@Ashutosh:~$ catr < file.txt
Command 'catr' not found, did you mean:
  command 'cstr' from deb liwc (1.21-2)
  command 'car' from deb ucommon-utils (7.0.1-0.1)
  command 'cat' from deb coreutils (9.4-3ubuntu6.1)
  command 'catm' from deb mescc-tools (1.4.0-1)
  command 'ctr' from deb containerd (1.7.27-0ubuntu1~24.04.1)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~$ cat < file.txt
world
Ashutosh@Ashutosh:~$ ls /noteexist 2> error.log
Ashutosh@Ashutosh:~$ greet () {
> echo " hello $1"
> }^C
Ashutosh@Ashutosh:~$ greet "ashutosh"
Command 'greet' not found, did you mean:
  command 'greetd' from deb greetd (0.9.0-4ubuntu1)
  command 'greed' from deb greed (4.2-1)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~$ ehco "ehllo1213" |grep -E"[a-z]+[0-9]+*"
> █
```

```
Ashutosh@Ashutosh:~$ for io
> for 1 in{1...5}
bash: syntax error near unexpected token `for'
Ashutosh@Ashutosh:~$ do
bash: syntax error near unexpected token `do'
Ashutosh@Ashutosh:~$ if [ $i -eq 3 ]: then
> continue
> fi
bash: syntax error near unexpected token `fi'
Ashutosh@Ashutosh:~$ 5
5: command not found
Ashutosh@Ashutosh:~$ done
bash: syntax error near unexpected token `done'
Ashutosh@Ashutosh:~$ echo "hello" <file.txt
hello
Ashutosh@Ashutosh:~$ echo "world" >> file.txt
Ashutosh@Ashutosh:~$ cat < file.txt
world
world
Ashutosh@Ashutosh:~$
```

```
Ashutosh@Ashutosh:~$ while [ $1 -le 5 ] : do echo "5: $1": i=5((i-1)): done
bash: syntax error near unexpected token `('
Ashutosh@Ashutosh:~$ i=1unitl { si -gt 5]
do
{: command not found
Ashutosh@Ashutosh:~$ do
bash: syntax error near unexpected token `do'
Ashutosh@Ashutosh:~$ echo "5: S1"
5: S1
Ashutosh@Ashutosh:~$ i=5((I+1))
bash: syntax error near unexpected token `('
Ashutosh@Ashutosh:~$ done
bash: syntax error near unexpected token `done'
Ashutosh@Ashutosh:~$ for io
> for i in{1...5}
bash: syntax error near unexpected token `for'
Ashutosh@Ashutosh:~$ do
bash: syntax error near unexpected token `do'
Ashutosh@Ashutosh:~$ if [ $i -eq 3 0: then
> ^C
Ashutosh@Ashutosh:~$ if [ $i -eq 3 0]: then
> █
```

```
Ashutosh@Ashutosh:~$ while [ $1 -le 5 ] : do echo "5: $1": i=5((i-1)): done
bash: syntax error near unexpected token `('
Ashutosh@Ashutosh:~$ i=1unitl { si -gt 5]
do
{: command not found
Ashutosh@Ashutosh:~$ do
bash: syntax error near unexpected token `do'
Ashutosh@Ashutosh:~$ echo "5: S1"
5: S1
Ashutosh@Ashutosh:~$ i=5((I+1))
bash: syntax error near unexpected token `('
Ashutosh@Ashutosh:~$ done
bash: syntax error near unexpected token `done'
Ashutosh@Ashutosh:~$ for io
> for i in{1...5}
bash: syntax error near unexpected token `for'
Ashutosh@Ashutosh:~$ do
bash: syntax error near unexpected token `do'
Ashutosh@Ashutosh:~$ if [ $i -eq 3 0: then
> ^C
Ashutosh@Ashutosh:~$ if [ $i -eq 3 0]: then
> █
```

## Experiment 7:

```
Ashutosh@Ashutosh:~$ ps
  PID TTY      TIME CMD
 6202 pts/0    00:00:00 bash
 6708 pts/0    00:00:00 ps
Ashutosh@Ashutosh:~$
```

```
top - 15:30:32 up 4:57, 1 user, load average: 0.00, 0.05, 0.07
Tasks: 270 total, 2 running, 268 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.2 us, 0.3 sy, 0.0 ni, 99.3 id, 0.0 wa, 0.0 hi, 0.1 si, 0.0 st
MiB Mem : 7258.5 total, 5159.2 free, 1090.3 used, 1282.4 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 6168.1 avail Mem

          PID USER      PR  NI    VIRT    RES    SHR S %CPU %MEM     TIME+ COMMAND
 2061 Ashutosh  20   0 5885940 414276 144028 S  7.5  5.6 13:28.68 gnome-s+
  2 root       20   0      0      0      0 S  0.3  0.0  0:00.63 kthreadd
 2468 Ashutosh  20   0 389376   7808   6912 S  0.3  0.1  0:02.43 gvfs-af+
 3481 root     20   0      0      0      0 I  0.3  0.0  0:03.63 kworker+
 3655 root     20   0 594944  42152  36512 S  0.3  0.6  0:04.51 fwupd
 6678 root     20   0      0      0      0 D  0.3  0.0  0:00.14 kworker+
 6710 Ashutosh  20   0 14536   5848  3672 R  0.3  0.1  0:00.06 top
  1 root     20   0 23072  13540  9316 S  0.0  0.2  0:06.19 systemd
  3 root     20   0      0      0      0 S  0.0  0.0  0:00.00 pool_wo+
  4 root     0 -20      0      0      0 I  0.0  0.0  0:00.00 kworker+
  5 root     0 -20      0      0      0 I  0.0  0.0  0:00.00 kworker+
  6 root     0 -20      0      0      0 I  0.0  0.0  0:00.00 kworker+
  7 root     0 -20      0      0      0 I  0.0  0.0  0:00.00 kworker+
  8 root     0 -20      0      0      0 I  0.0  0.0  0:00.00 kworker+
 11 root     0 -20      0      0      0 I  0.0  0.0  0:00.15 kworker+
 12 root     20   0      0      0      0 I  0.0  0.0  0:00.00 kworker+
 13 root     0 -20      0      0      0 I  0.0  0.0  0:00.00 kworker+
```

```
Ashutosh@Ashutosh:~$ pstree
systemd—ModemManager—3*[{ModemManager}]
      | NetworkManager—3*[{NetworkManager}]
      | accounts-daemon—3*[{accounts-daemon}]
      | avahi-daemon—avahi-daemon
      | colord—3*[{colord}]
      | cron
      | cups-browsed—3*[{cups-browsed}]
      | cupsd—2*[dbus]
      | dbus-daemon
      | fwupd—5*[{fwupd}]
      | gdm3—gdm-session-wor—gdm-wayland-ses—gnome-session-b—3*[{gnome-session-b}]
          | 3*[{gdm-wayland-ses}]
          | 3*[{gdm-session-wor}]
          | 3*[{gdm3}]
      | gnome-remote-de—3*[{gnome-remote-de}]
      | gpg-agent
      | 2*[kerneloops]
      | polkitd—3*[{polkitd}]
      | power-profiles—3*[{power-profiles-}]
      | rsyslogd—3*[{rsyslogd}]
      | rtkit-daemon—2*[{rtkit-daemon}]
      | snapd—11*[{snapd}]
      | switcheroo-cont—3*[{switcheroo-cont}]
```

## Experiment 8:

```
while true; do
echo "1.start a background job"
echo "2.compare files"
echo "3.count processes of current user"
echo "4.monitor memory usage every 5 seconds"
echo "5.search pattern in a file and display count"
echo "6.exit"
echo "enter your choice[1-6:]"
read choice

case $choice in
1) echo"starting background job"
sleep 60 &
echo "background job started"
jobs
echo"bringing job to foreground"
fg%1
kill -INT $!
echo "job terminated"
;;
```

```
kill -INT $!
echo "job terminated"
;;
2)
echo "enter first file"
read file1
echo "enter a second file:"
read file2
if[-e "$file1" "$file2"];then
echo"files are different"
else
echo"files are different"
fi
else
echo"one or both files do not exist"
fi
;;
3)
process_count=$(ps -u $USER | wc-l)
echo"number of processes run by $USER : $processes_count"
```

```
process_count=$(ps -u $USER | wc-l)
echo "number of processes run by $USER : $processes_count"
;;
4)echo "monitoring memory usagae.press to stop"
while true; do
echo "----$(date)----">>>memory_org.txt
free -m >> memory_log.txt
sleep 5
done
;;
5)
echo "enter s filename:"
read file
echo "enter s pattern to search:"
read pattern
if[-e "$file"];then
match_count=$(grep -c "$pattern" "$file")
match_count=$(grep -c "$pattern" "$file")
echo 'number of matching lines: $match_count'
echo "enter a filename:"
```

```
echo "enter a filename:"
read file
echo "enter a pattern to search"
read pattern
if[-e"$file"];then
match_count=$(grep -c "$pattern" "$file")
echo "number of matching lines : $match_count"
else
echo "file not found!"
fi
;;
6)
echo "exiting"
exit 0
;; *_)
echo "invalid choice"
;;
esac
done
```

## ASSIGNMENT 1:

```
Ashutosh@Ashutosh:~$ kill 1234
bash: kill: (1234) - No such process
Ashutosh@Ashutosh:~$ kill -9 1234
bash: kill: (1234) - No such process
Ashutosh@Ashutosh:~$ nice -n 10 sleep 60
echo "ls >output.txt" | at now +1 minute
^C
Ashutosh@Ashutosh:~$ renice 5 -p 1234
renice: failed to get priority for 1234 (process ID): No such process
Ashutosh@Ashutosh:~$ crontab -e
no crontab for Ashutosh - using an empty one
No modification made
Ashutosh@Ashutosh:~$
```

```
Ashutosh@Ashutosh:~$ kill -9 1234
bash: kill: (1234) - No such process
Ashutosh@Ashutosh:~$ nice -n 10 sleep 60
echo "ls >output.txt" | at now +1 minute
^C
Ashutosh@Ashutosh:~$ renice 5 -p 1234
renice: failed to get priority for 1234 (process ID): No such process
Ashutosh@Ashutosh:~$ crontab -e
no crontab for Ashutosh - using an empty one
No modification made
Ashutosh@Ashutosh:~$ nano check_file.sh
Ashutosh@Ashutosh:~$ nano +x check_file.sh
Ashutosh@Ashutosh:~$ nano + nano + check_file.sh
Ashutosh@Ashutosh:~$ ./check_file.sh
bash: ./check_file.sh: Permission denied
Ashutosh@Ashutosh:~$ bash check_file.sh
Ashutosh@Ashutosh:~$ enter filename:\n> ^C
Ashutosh@Ashutosh:~$ enter filename:
Command 'enter' not found, did you mean:
  command 'entr' from deb entr (5.3-1)
  command 'enber' from deb asn1c (0.9.28+dfsg-5)
Try: sudo apt install <deb name>
Ashutosh@Ashutosh:~$
```