

Problem 1

a) Navigate and List:

a. Start by navigating to your home directory and list its contents. Then, move into a directory named "LinuxAssignment" if it exists; otherwise, create it.

```
cdac@LAPTOP-G3TFE4RL:~$ pwd
/home/cdac
cdac@LAPTOP-G3TFE4RL:~$ cd
cdac@LAPTOP-G3TFE4RL:~$ ls
hello.txt
cdac@LAPTOP-G3TFE4RL:~$ mkdir LinuxAssignment
cdac@LAPTOP-G3TFE4RL:~$ ls
LinuxAssignment  hello.txt
cdac@LAPTOP-G3TFE4RL:~$ cd LinuxAssignment/
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$
```

b) File Management:

a. Inside the "LinuxAssignment" directory, create a new file named "file1.txt". Display its contents.

```
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ touch file1.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ nano file1.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ cat file1.txt
Lucknow
Pune
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$
```

c) Directory Management:

a. Create a new directory named "docs" inside the "LinuxAssignment" directory.

```
cdac@LAPTOP-G3TFE4RL:~$ cd
cdac@LAPTOP-G3TFE4RL:~$ mkdir -p LinuxAssignment/docs
cdac@LAPTOP-G3TFE4RL:~$ ls -l LinuxAssignment
docs
file1.txt
cdac@LAPTOP-G3TFE4RL:~$ |
```

d) Copy and Move Files:

- a. Copy the "file1.txt" file into the "docs" directory and rename it to "file2.txt".

```
cdac@LAPTOP-G3TFE4RL:~$ cd
cdac@LAPTOP-G3TFE4RL:~$ cd ~/LinuxAssignment
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ cp file1.txt docs/file2.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ ls -l docs
file2.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ |
```

e) Permissions and Ownership:

- a. Change the permissions of "file2.txt" to allow read, write, and execute permissions for the owner and only read permissions for others. Then, change the owner of "file2.txt" to the current user.

```
cdac@LAPTOP-G3TFE4RL:~$ cd ~/LinuxAssignment
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ chmod 744 docs/file2.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ chown $(whoami) docs/file2.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ ls -l docs/file2.txt
docs/file2.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ |
```

f) Final Checklist:

a. Finally, list the contents of the "LinuxAssignment" directory and the root directory to ensure that all operations were performed correctly.

```
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ pwd
/home/cdac/LinuxAssignment
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ ls -l ~/LinuxAssignment
docs
file1.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ ls -l ~/LinuxAssignment/docs
file2.txt
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ ls -l /
bin
bin.usr-is-merged
boot
dev
etc
home
init
lib
lib.usr-is-merged
lib64
lost+found
media
mnt
opt
proc
root
run
sbin
sbin.usr-is-merged
snap
srv
sys
tmp
usr
var
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ |
```

g) File Searching:

- Search for all files with the extension ".txt" in the current directory and its subdirectories.
- Display lines containing a specific word in a file (provide a file name and the specific word to search).

h) System Information:

a. Display the current system date and time.

```
cdac@LAPTOP-G3TFE4RL:~/LinuxAssignment$ cd
cdac@LAPTOP-G3TFE4RL:~$ date +"%Y-%m-%d %H:%M:%S"
2025-02-27 15:41:32
cdac@LAPTOP-G3TFE4RL:~$ |
```