

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@PRATIK-DAREKAR:~$ pwd
```

```
/home/cdac
```

```
cdac@PRATIK-DAREKAR:~$ ls
```

```
cdac@PRATIK-DAREKAR:~$ feb25
```

```
feb25: command not found
```

```
cdac@PRATIK-DAREKAR:~$ pwd
```

```
/home/cdac
```

```
cdac@PRATIK-DAREKAR:~$ cd
```

```
cdac@PRATIK-DAREKAR:~$ ls
```

```
cdac@PRATIK-DAREKAR:~$ mkdir LinuxAssignment
```

```
cdac@PRATIK-DAREKAR:~$ ls
```

```
LinuxAssignment
```

```
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment/
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

```
System information as of Thu Feb 27 11:05:49 UTC 2025
System load:  0.16          Processes:      31
Usage of /:   0.1% of 1006.85GB  Users logged in: 0
Memory usage: 6%            IPv4 address for eth0: 172.22.212.237
Swap usage:   0%

This message is shown once a day. To disable it please create the
/home/cdac/.hushlogin file.
cdac@PRATIK-DAREKAR:~$ cd~
Command 'cd~' not found, did you mean:
  command 'cdb' from deb tinycdb (0.81-1)
Try: sudo apt install <deb name>
cdac@PRATIK-DAREKAR:~$ cd
cdac@PRATIK-DAREKAR:~$ ls
cdac@PRATIK-DAREKAR:~$ pwd
/home/cdac
cdac@PRATIK-DAREKAR:~$ ls
cdac@PRATIK-DAREKAR:~$ feb25
feb25: command not found
cdac@PRATIK-DAREKAR:~$ pwd
/home/cdac
cdac@PRATIK-DAREKAR:~$ cd
cdac@PRATIK-DAREKAR:~$ ls
cdac@PRATIK-DAREKAR:~$ mkdir LinuxAssignment
cdac@PRATIK-DAREKAR:~$ ls
LinuxAssignment
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment/
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ~;7~;5~
```

b) File Management:

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

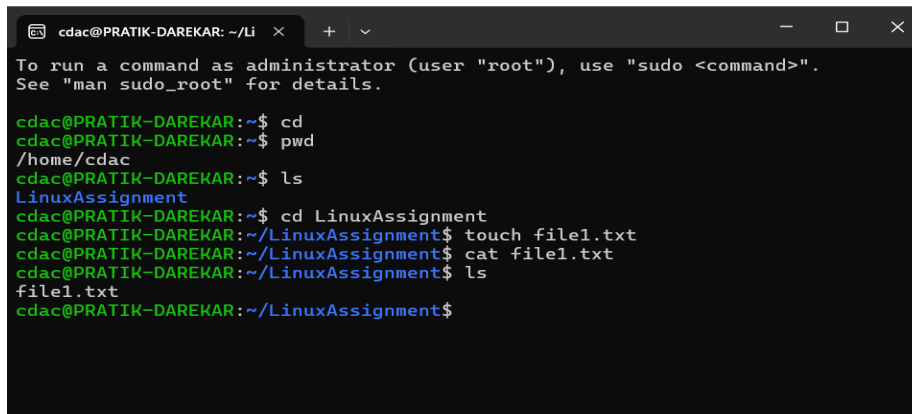
```
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ touch file1.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat file1.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
```

file1.txt

A terminal window with a dark background and light green text. The window title is 'cdac@PRATIK-DAREKAR: ~/Li'. It shows a sequence of commands and their outputs: 'cd' changes the directory to '/home/cdac', 'pwd' confirms the current directory, 'ls' lists the contents of the home directory showing 'LinuxAssignment', 'cd LinuxAssignment' changes to the subdirectory, 'touch file1.txt' creates the file, 'cat file1.txt' shows an empty file, and 'ls' lists the contents of the subdirectory showing 'file1.txt'.

```
cdac@PRATIK-DAREKAR: ~/Li x + v
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

cdac@PRATIK-DAREKAR:~$ cd
cdac@PRATIK-DAREKAR:~$ pwd
/home/cdac
cdac@PRATIK-DAREKAR:~$ ls
LinuxAssignment
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ touch file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

c) Directory Management: a. Create a new directory named "docs" inside the "LinuxAssignment" directory.

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ mkdir -p LinuxAssignment/docs
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
```

LinuxAssignment file1.txt

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

```
cdac@PRATIK-DAREKAR: ~/Li x + v
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

cdac@PRATIK-DAREKAR:~$ cd
cdac@PRATIK-DAREKAR:~$ pwd
/home/cdac
cdac@PRATIK-DAREKAR:~$ ls
LinuxAssignment
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ touch file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ mkdir -p LinuxAssignment/docs
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
LinuxAssignment  file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

d) Copy and Move Files:

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

```
cdac@PRATIK-DAREKAR:~$ pwd
/home/cdac
cdac@PRATIK-DAREKAR:~$ ls -l
LinuxAssignment
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp file1.txt docs/file2.txt
cp: cannot create regular file 'docs/file2.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ mkdir -p docs
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp file1.txt docs/file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l docs/
file2.txt
```

```
cdac@PRATIK-DAREKAR: ~/LI x + v
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

cdac@PRATIK-DAREKAR:~$ cd
cdac@PRATIK-DAREKAR:~$ pwd
/home/cdac
cdac@PRATIK-DAREKAR:~$ ls
LinuxAssignment
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ touch file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ mkdir -p LinuxAssignment/docs
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
LinuxAssignment  file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp LinuxAssignment/file1.txt linuxAss
ignment/docs/file2.txt
cp: cannot stat 'LinuxAssignment/file1.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cd LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment/LinuxAssignment$ cp file1.txt docs/fil
e2.txt
cp: cannot stat 'file1.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment/LinuxAssignment$ ls -l
docs
cdac@PRATIK-DAREKAR:~/LinuxAssignment/LinuxAssignment$ touch file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment/LinuxAssignment$ pwd
/home/cdac/LinuxAssignment/LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment/LinuxAssignment$ cd
cdac@PRATIK-DAREKAR:~$ pwd
/home/cdac
cdac@PRATIK-DAREKAR:~$ ls -l
LinuxAssignment
cdac@PRATIK-DAREKAR:~$ cd LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp file1.txt docs/file2.txt
cp: cannot create regular file 'docs/file2.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ mkdir -p docs
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp file1.txt docs/file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l docs/
file2.txt
cdac@PRATIK-DAREKAR:~/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@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment/docs/
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp LinuxAssignment/file1.txt
LinuxAssignment/docs/file2.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ chmod 744 LinuxAssignment/docs/file2.txt
```

```
chown $(whoami) LinuxAssignment/docs/file2.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ chown $(whoami) LinuxAssignment/docs/file2.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment/docs/file2.txt
```

```
LinuxAssignment/docs/file2.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment/docs/
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp LinuxAssignment/file1.txt LinuxAss
ignment/docs/file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ chmod 744 LinuxAssignment/docs/file2.
txt
chown $(whoami) LinuxAssignment/docs/file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ chown $(whoami) LinuxAssignment/docs/
file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment/docs/file2.txt
LinuxAssignment/docs/file2.txt
cdac@PRATIK-DAREKAR:~/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@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment
```

```
docs
```

```
file1.txt
```

```
cdac@PRATIK-DAREKAR:~/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@PRATIK-DAREKAR:~/LinuxAssignment\$

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment/docs/
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cp LinuxAssignment/file1.txt LinuxAss
ignment/docs/file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ chmod 744 LinuxAssignment/docs/file2.
txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ chown $(whoami) LinuxAssignment/docs/
file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment/docs/file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l LinuxAssignment
docs
file1.txt
cdac@PRATIK-DAREKAR:~/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@PRATIK-DAREKAR:~/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).

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ ls -l *.txt

file1.txt

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ grep -i "word" file1.txt

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ grep -n "word" file1.txt

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ ls

LinuxAssignment docs file1.txt

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$

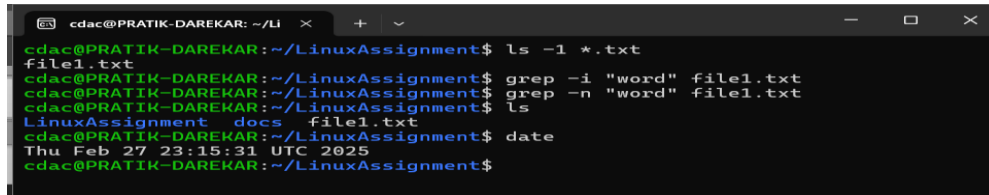
```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l *.txt
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ grep -i "word" file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ grep -n "word" file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
LinuxAssignment docs file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ |
```

h) System Information:

a. Display the current system date and time

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ date
```

Thu Feb 27 23:15:31 UTC 2025

A terminal window with a dark background and light green text. The window title is 'cdac@PRATIK-DAREKAR: ~/LinuxAssignment'. The commands and output are as follows:

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l *.txt
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ grep -i "word" file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ grep -n "word" file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
LinuxAssignment  docs  file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ date
Thu Feb 27 23:15:31 UTC 2025
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

i) Networking:

a. Display the IP address of the system.

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ip a
```

```
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
```

```
link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
```

```
inet 127.0.0.1/8 scope host lo
```

```
valid_lft forever preferred_lft forever
```

```
inet 10.255.255.254/32 brd 10.255.255.254 scope global lo
```

```
valid_lft forever preferred_lft forever
```

```
inet6 ::1/128 scope host
```

```
valid_lft forever preferred_lft forever
```

```
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000
```

```
link/ether 00:15:5d:05:20:27 brd ff:ff:ff:ff:ff:ff
```

```
inet 172.22.212.237/20 brd 172.22.223.255 scope global eth0
```

```
valid_lft forever preferred_lft forever
```

```
inet6 fe80::215:5dff:fe05:2027/64 scope link
```

```
valid_lft forever preferred_lft forever
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ hostname -I
```

172.22.212.237

b. Ping a remote server to check connectivity (provide a remote server address to ping).

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ping -c 4 google.com
```

PING google.com (142.250.183.78) 56(84) bytes of data.

64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=1 ttl=118 time=11.4 ms

64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=2 ttl=118 time=12.4 ms

64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=3 ttl=118 time=11.4 ms

64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=4 ttl=118 time=10.8 ms

--- google.com ping statistics ---

4 packets transmitted, 4 received, 0% packet loss, time 3004ms

rtt min/avg/max/mdev = 10.788/11.495/12.430/0.592 ms

```
cdac@PRATIK-DAREKAR: ~/LinuxAssignment$ ls -l *.txt
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ grep -i "word" file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ grep -n "word" file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls
LinuxAssignment docs file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ date
Thu Feb 27 23:15:31 UTC 2025
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group de
fault qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet 10.255.255.254/32 brd 10.255.255.254 scope global lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group
default qlen 1000
    link/ether 00:15:5d:05:20:27 brd ff:ff:ff:ff:ff:ff
    inet 172.22.212.237/20 brd 172.22.223.255 scope global eth0
        valid_lft forever preferred_lft forever
    inet6 fe80::215:5dff:fe05:2027/64 scope link
        valid_lft forever preferred_lft forever
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ hostname -I
172.22.212.237
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ping -c 4 google.com
PING google.com (142.250.183.78) 56(84) bytes of data.
64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=1 ttl=118
time=11.4 ms
64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=2 ttl=118
time=12.4 ms
64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=3 ttl=118
time=11.4 ms
64 bytes from bom12s12-in-f14.1e100.net (142.250.183.78): icmp_seq=4 ttl=118
time=10.8 ms
--- google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 10.788/11.495/12.430/0.592 ms
```

j) File Compression:

a. Compress the "docs" directory into a zip file.

```
cdac@PRATIK-DAREKAR:~$ ls -l
```

```
LinuxAssignment
```

```
cdac@PRATIK-DAREKAR:~$ find ~ -type d -name "docs"
```

```
/home/cdac/LinuxAssignment/docs
```

```
/home/cdac/LinuxAssignment/LinuxAssignment/docs
```

```
cdac@PRATIK-DAREKAR:~$ cd /path/to/LinuxAssignment
```


-bash: cd: /path/to/LinuxAssignment: No such file or directory

cdac@PRATIK-DAREKAR:~\$ cd ~/LinuxAssignment

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ ls -l

LinuxAssignment

docs

file1.txt

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ zip -r docs.zip docs

adding: docs/ (stored 0%)

adding: docs/file2.txt (stored 0%)

b. Extract the contents of the zip file into a new directory.

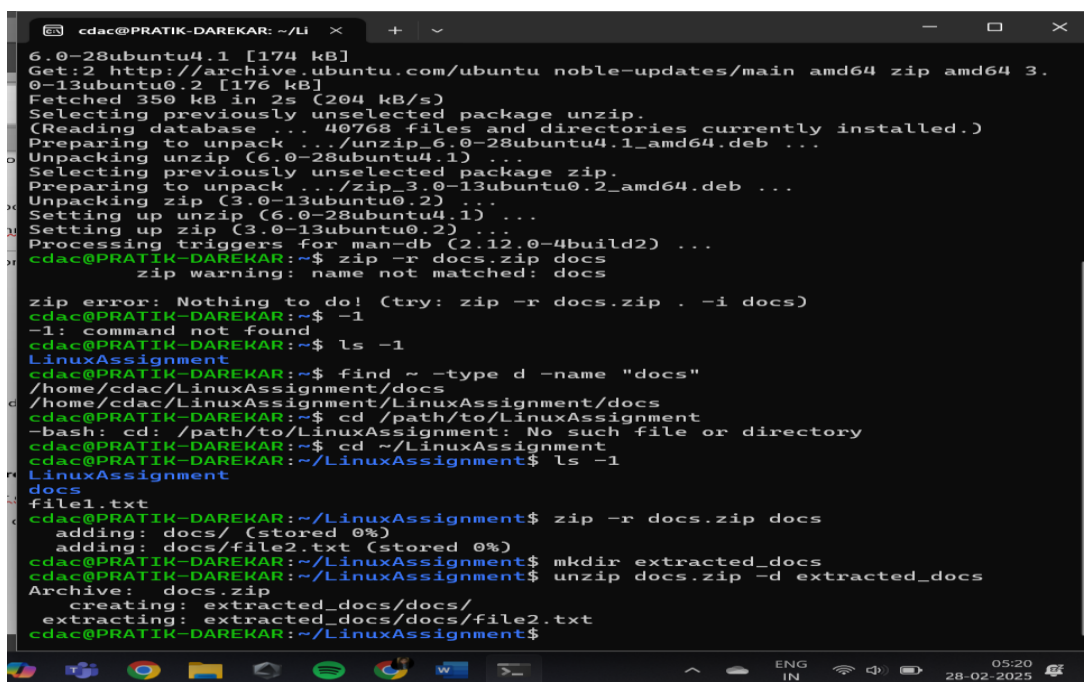
cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ mkdir extracted_docs

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ unzip docs.zip -d extracted_docs

Archive: docs.zip

creating: extracted_docs/docs/

extracting: extracted_docs/docs/file2.txt



```
cdac@PRATIK-DAREKAR: ~/LinuxAssignment
6.0-28ubuntu4.1 [174 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 zip amd64 3.0-13ubuntu0.2 [176 kB]
Fetched 350 kB in 2s (204 kB/s)
Selecting previously unselected package unzip.
(Reading database ... 40768 files and directories currently installed.)
Preparing to unpack .../unzip_6.0-28ubuntu4.1_amd64.deb ...
Unpacking unzip (6.0-28ubuntu4.1) ...
Selecting previously unselected package zip.
Preparing to unpack .../zip_3.0-13ubuntu0.2_amd64.deb ...
Unpacking zip (3.0-13ubuntu0.2) ...
Setting up unzip (6.0-28ubuntu4.1) ...
Setting up zip (3.0-13ubuntu0.2) ...
Processing triggers for man-db (2.12.0-4build2) ...
cdac@PRATIK-DAREKAR:~$ zip -r docs.zip docs
zip warning: name not matched: docs

zip error: Nothing to do! (try: zip -r docs.zip . -i docs)
cdac@PRATIK-DAREKAR:~$ -l
-l: command not found
cdac@PRATIK-DAREKAR:~$ ls -l
LinuxAssignment
cdac@PRATIK-DAREKAR:~$ find ~ -type d -name "docs"
/home/cdac/LinuxAssignment/docs
/home/cdac/LinuxAssignment/LinuxAssignment/docs
cdac@PRATIK-DAREKAR:~$ cd /path/to/LinuxAssignment
-bash: cd: /path/to/LinuxAssignment: No such file or directory
cdac@PRATIK-DAREKAR:~$ cd ~/LinuxAssignment
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l
LinuxAssignment
docs
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ zip -r docs.zip docs
adding: docs/ (stored 0%)
adding: docs/file2.txt (stored 0%)
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ mkdir extracted_docs
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ unzip docs.zip -d extracted_docs
Archive: docs.zip
creating: extracted_docs/docs/
extracting: extracted_docs/docs/file2.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

k) File Editing:

a. Open the "file1.txt" file in a text editor and add some text to it.

b. Replace a specific word in the "file1.txt" file with another word (provide the original word and the word to replace it with).

cdac@PRATIK-DAREKAR:~/LinuxAssignment\$ nano file1.txt

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sed -i 's/oldword/newword/g' file1.txt
```

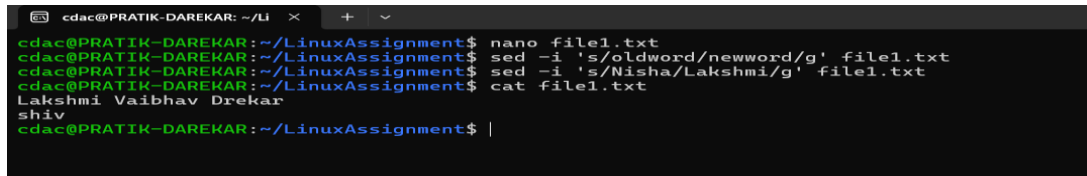
```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sed -i 's/Nisha/Lakshmi/g' file1.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat file1.txt
```

Lakshmi Vaibhav Drekar

shiv

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```



```
cdac@PRATIK-DAREKAR: ~/LinuxAssignment$ nano file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sed -i 's/oldword/newword/g' file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sed -i 's/Nisha/Lakshmi/g' file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat file1.txt
Lakshmi Vaibhav Drekar
shiv
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

Problem 2

- Suppose you have a file named "data.txt" containing important information. Display the first 10 lines of this file to quickly glance at its contents using a command.

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ touch data.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano data.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ head -n 10 data.txt
```

Nisha

Vaibhav

Pratik

Trishant

Shiv

Sanjay

Pratibha

Manisha

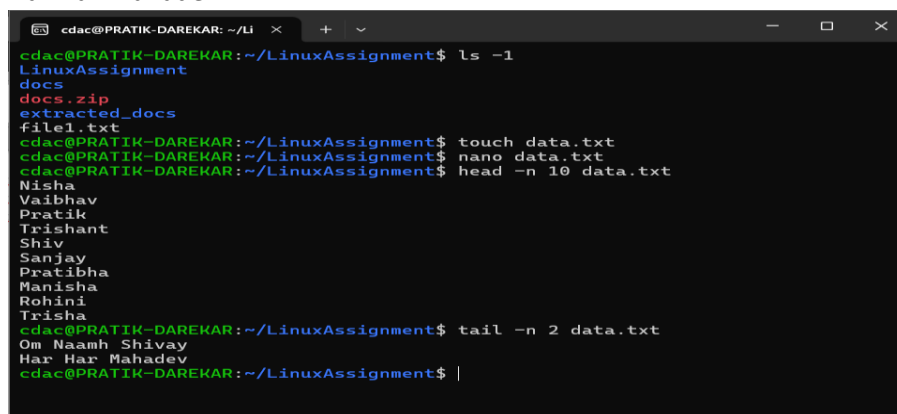
Rohini

Trisha

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tail -n 2 data.txt
```

Om Naamh Shivay

Har Har Mahadev



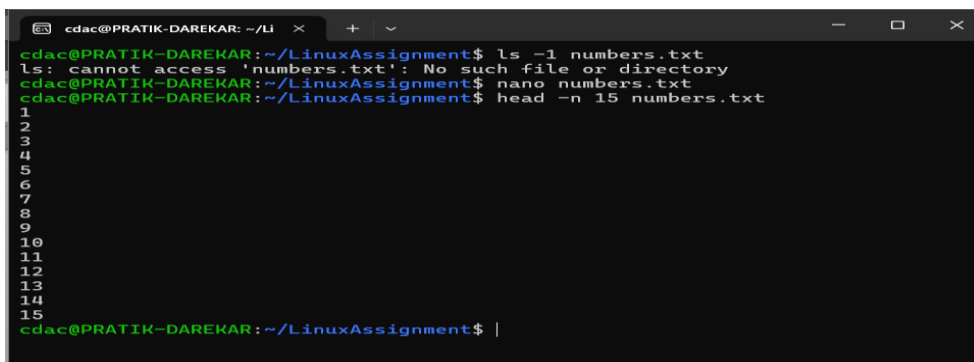
```
cdac@PRATIK-DAREKAR: ~/LinuxAssignment$ ls -l
LinuxAssignment
docs
docs.zip
extracted_docs
file1.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ touch data.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano data.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ head -n 10 data.txt
Nisha
Vaibhav
Pratik
Trishant
Shiv
Sanjay
Pratibha
Manisha
Rohini
Trisha
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tail -n 2 data.txt
Om Naamh Shivay
Har Har Mahadev
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```

- b. Now, to check the end of the file for any recent additions, display the last 5 lines of "data.txt" using another command.

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tail -n 5 data.txt
Sahil
Sohom
Tanu
Om Naamh Shivay
Har Har Mahadev
```

- c. In a file named "numbers.txt," there are a series of numbers. Display the first 15 lines of this file to analyze the initial data set.

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l numbers.txt
ls: cannot access 'numbers.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano numbers.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ head -n 15 numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```



```
cdac@PRATIK-DAREKAR: ~/LinuxAssignment$ ls -l numbers.txt
ls: cannot access 'numbers.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano numbers.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ head -n 15 numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ |
```

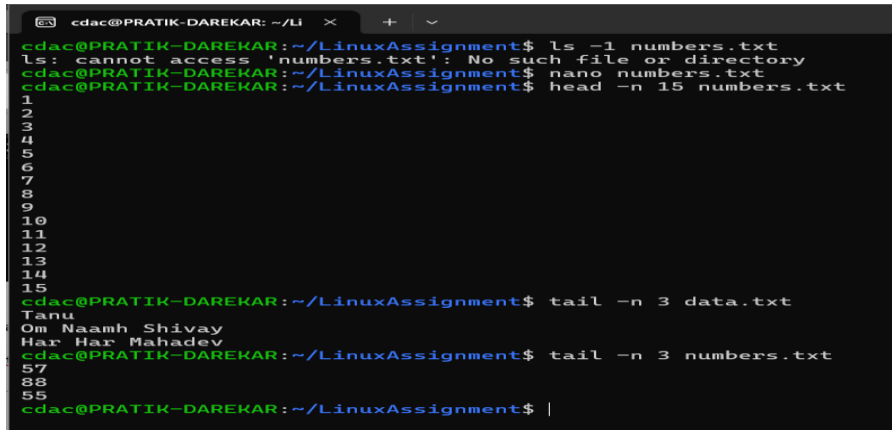
- d. To focus on the last few numbers of the dataset, display the last 3 lines of "numbers.txt"

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tail -n 3 numbers.txt
57
```

88

55

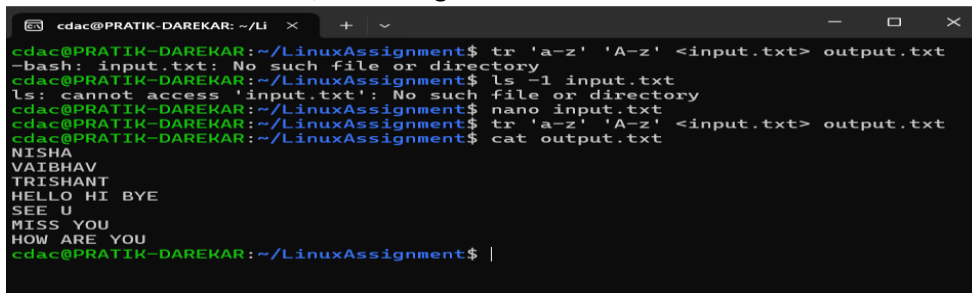
cdac@PRATIK-DAREKAR:~/LinuxAssignment\$



```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l numbers.txt
ls: cannot access 'numbers.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano numbers.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ head -n 15 numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tail -n 3 data.txt
Tanu
Om Naamh Shivay
Har Har Mahadev
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tail -n 3 numbers.txt
57
88
55
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ |
```

- e. Imagine you have a file named "input.txt" with text content. Use a command to translate all lowercase letters to uppercase in "input.txt" and save the modified text in a new file named "output.txt."

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l input.txt
ls: cannot access 'input.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano input.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tr 'a-z' 'A-z' <input.txt> output.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat output.txt
NISHA
VAIBHAV
TRISHANT
HELLO HI BYE
SEE U
MISS YOU
HOW ARE YOU
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```



```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tr 'a-z' 'A-z' <input.txt> output.txt
-bash: input.txt: No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l input.txt
ls: cannot access 'input.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano input.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ tr 'a-z' 'A-z' <input.txt> output.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ cat output.txt
NISHA
VAIBHAV
TRISHANT
HELLO HI BYE
SEE U
MISS YOU
HOW ARE YOU
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ |
```

- f. In a file named "duplicate.txt," there are several lines of text, some of which are duplicates. Use a command to display only the unique lines from "duplicate.txt."

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano duplicate.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sort duplicate.txt | uniq
good morning
hello
```

hello

how are you

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sort duplicate.txt | uniq -u
```

good morning

hello

```
cdac@PRATIK-DAREKAR: ~/LinuxAssignment$ nano fruit.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sort fruit.txt | uniq -c
 3 apple
 5 banana
 1 grape
 1 orange

cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l duplicate.txt
duplicate.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ rm duplicate.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ rm -i duplicate.txt
rm: cannot remove 'duplicate.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ ls -l duplicate.txt
ls: cannot access 'duplicate.txt': No such file or directory
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano duplicate.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sort duplicate.txt | uniq
good morning
hello
hello
how are you
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sort duplicate.txt | uniq -u
good morning
hello
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ |
```

- g. In a file named "fruit.txt," there is a list of fruits, but some fruits are repeated. Use a command to display each unique fruit along with the count of its occurrences in "fruit.txt."

```
cdac@PRATIK-DAREKAR: ~/LinuxAssignment$ nano fruit.txt
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sort fruit.txt | uniq -c
 3 apple
 5 banana
 1 grape
 1 orange
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ |
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ nano fruit.txt
```

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$ sort fruit.txt | uniq -c
```

3 apple

5 banana

1 grape

1 orange

```
cdac@PRATIK-DAREKAR:~/LinuxAssignment$
```