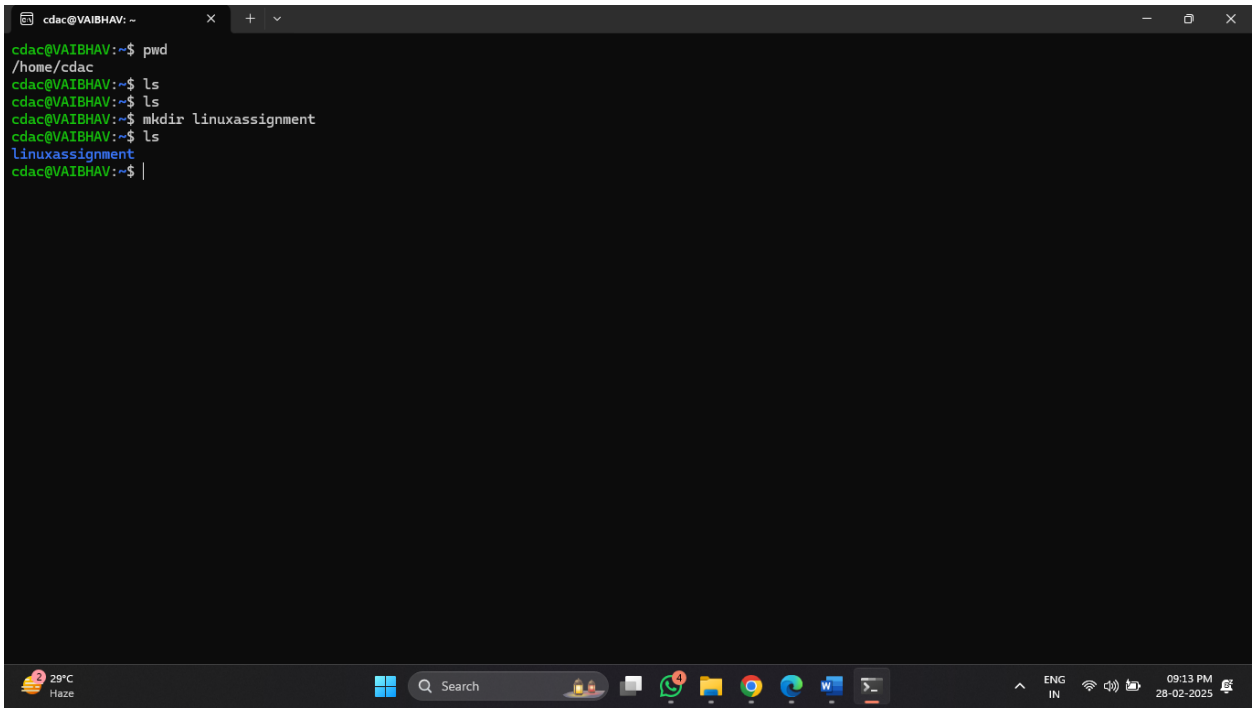
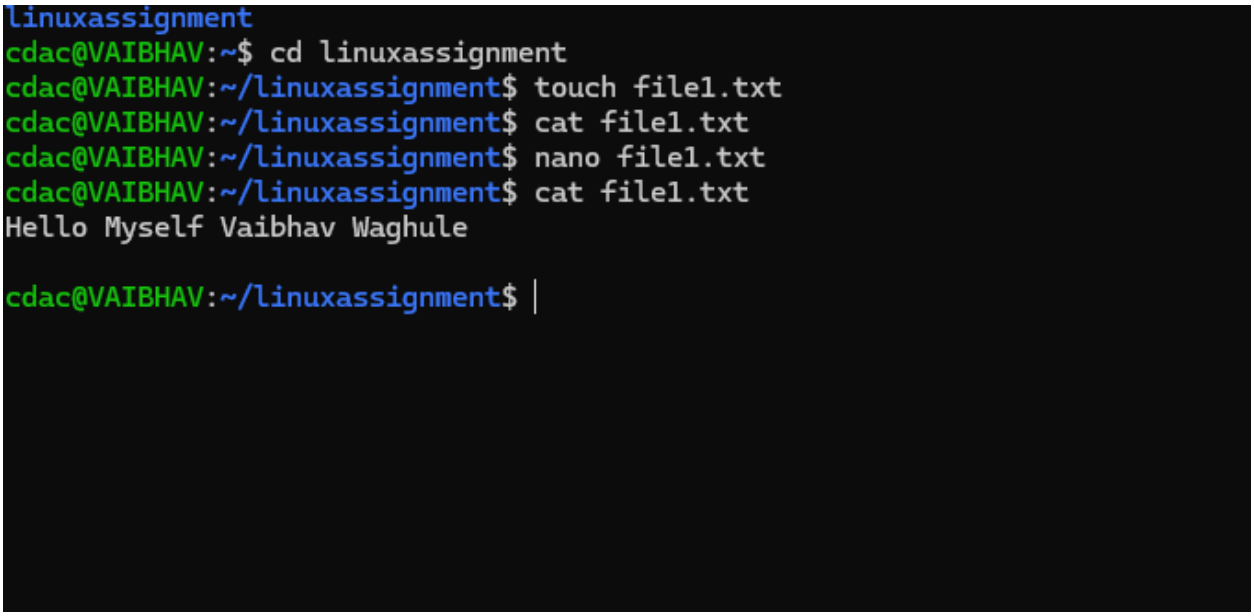
ASSIGNMENT-1

Problem 1: Read the instructions carefully and answer accordingly. If there is any need to insert some data then do that as well.

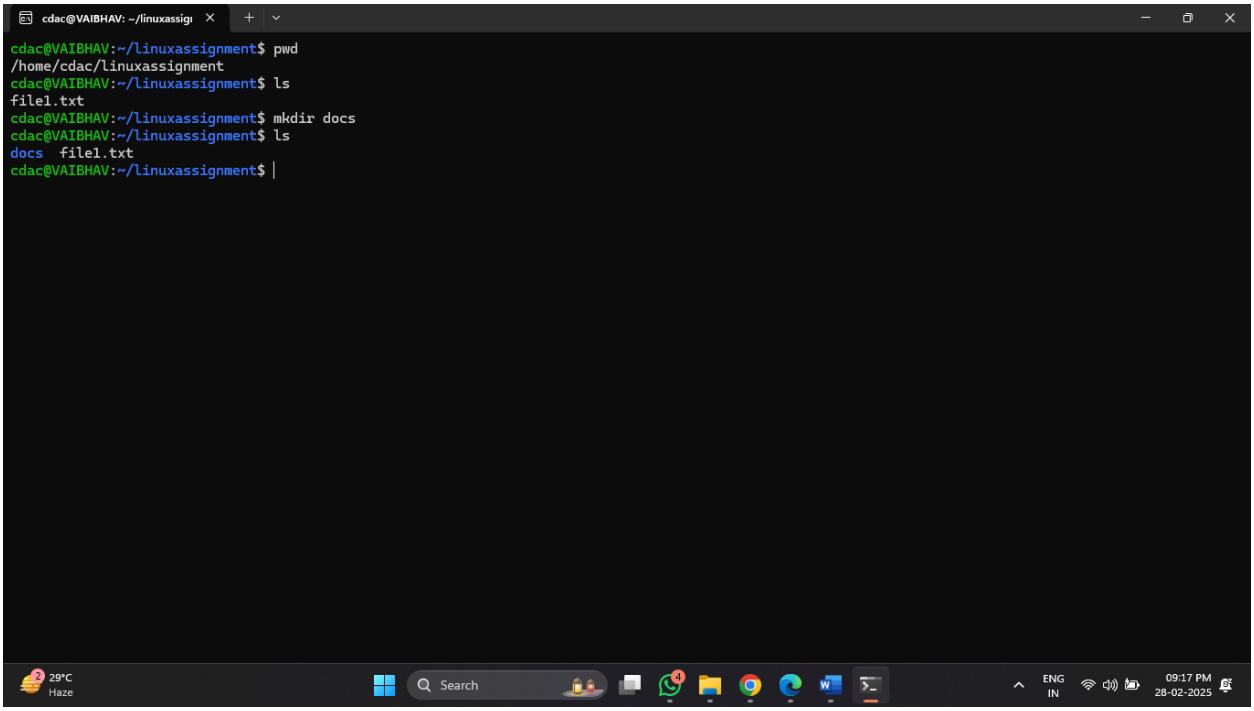
a) Navigate and List: a. Start by navigating to your home directory and list its contents. Then, move into a directory named "LinuxAssignment" if it exists; otherwise, create it.



b) File Management: a. Inside the "LinuxAssignment" directory, create a new file named "file1.txt". Display its contents.----



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

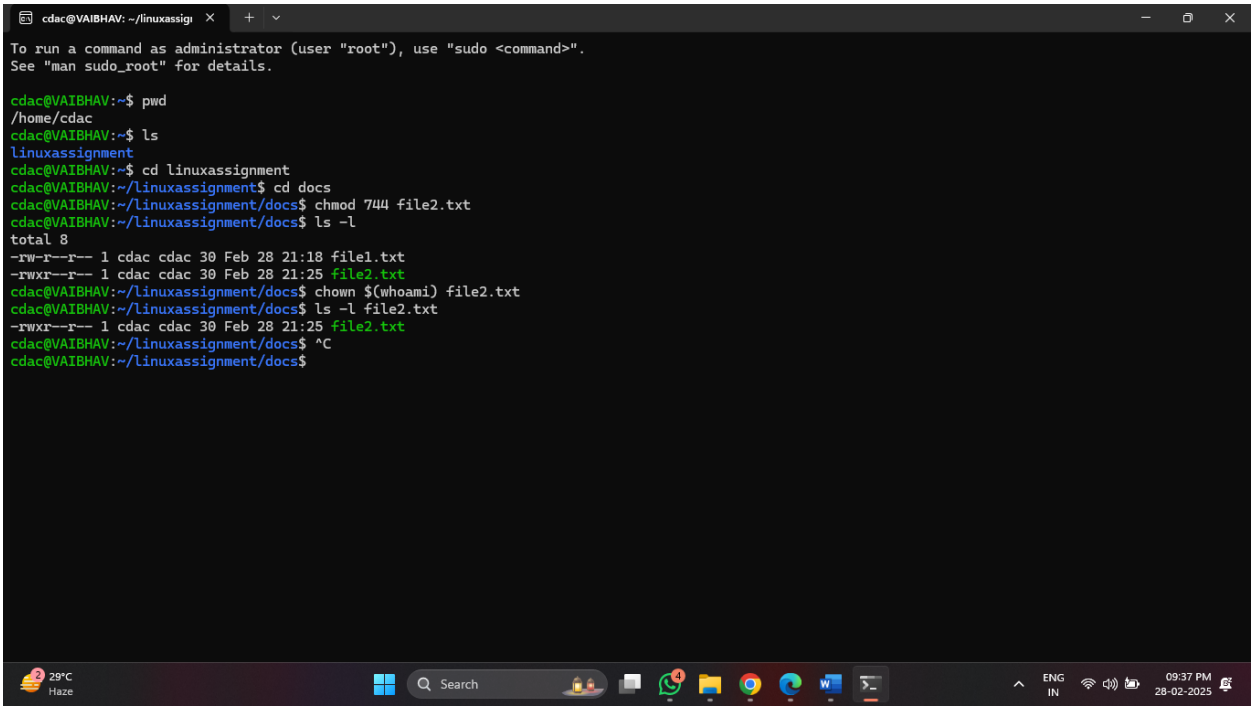


d) *Copy and Move Files: a. Copy the "file1.txt" file into the "docs" directory* and rename it to "file2.txt".

```
cdac@VAIBHAV:~/linuxassignment$ cp file1.txt docs
cdac@VAIBHAV:~/linuxassignment$ cd docs/
cdac@VAIBHAV:~/linuxassignment/docs$ ls
file1.txt
cdac@VAIBHAV:~/linuxassignment/docs$ my file1.txt file2.txt
my: command not found
cdac@VAIBHAV:~/linuxassignment/docs$ ls
file1.txt
cdac@VAIBHAV:~/linuxassignment/docs$ cp my_file1.txt my_file2.txt
cp: cannot stat 'my_file1.txt': No such file or directory
cdac@VAIBHAV:~/linuxassignment/docs$ ls
file1.txt
cdac@VAIBHAV:~/linuxassignment/docs$ my_file1.txt my_file2.txt
my_file1.txt: command not found
cdac@VAIBHAV:~/linuxassignment/docs$ ls
file1.txt
cdac@VAIBHAV:~/linuxassignment/docs$ cp file1.txt file2.txt
cdac@VAIBHAV:~/linuxassignment/docs$ ls
file1.txt  file2.txt
cdac@VAIBHAV:~/linuxassignment/docs$
```

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---



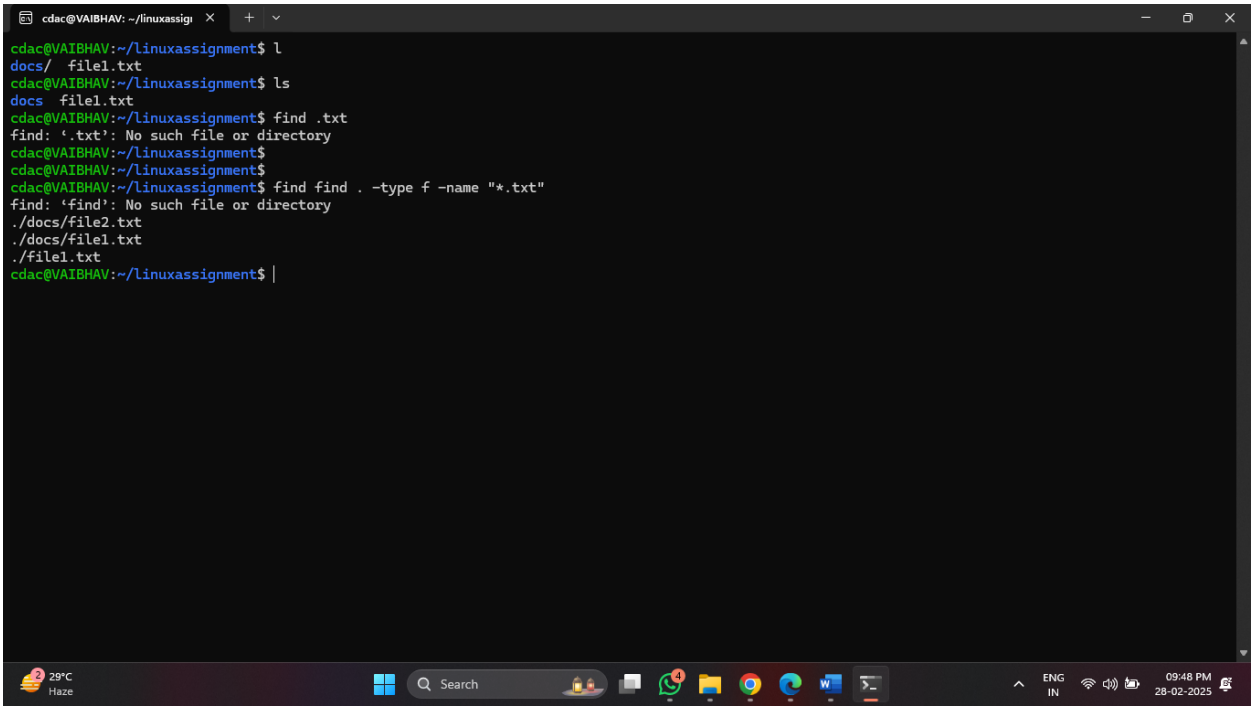
f) Final Checklist: a. Finally, list the contents of the "LinuxAssignment" directory and the root directory to ensure that all operations were

performed correctly----

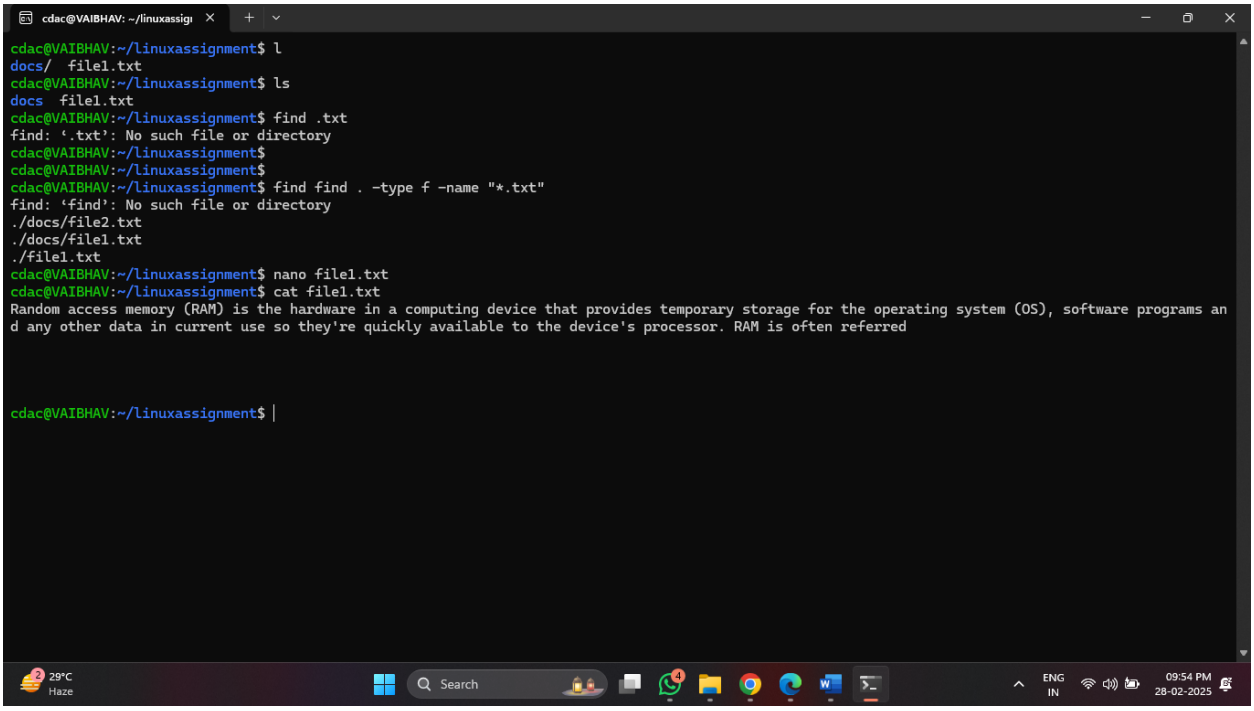
```
cdac@VAIBHAV:~/linuxassignment/docs$ cd ..
cdac@VAIBHAV:~/linuxassignment$ cd docs
cdac@VAIBHAV:~/linuxassignment/docs$ chmod 744 file2.txt
cdac@VAIBHAV:~/linuxassignment/docs$ ls -l
total 8
-rw-r--r-- 1 cdac cdac 30 Feb 28 21:18 file1.txt
-rwxr--r-- 1 cdac cdac 30 Feb 28 21:25 file2.txt
cdac@VAIBHAV:~/linuxassignment/docs$ chown $(whoami) file2.txt
cdac@VAIBHAV:~/linuxassignment/docs$ ls -l file2.txt
-rwxr--r-- 1 cdac cdac 30 Feb 28 21:25 file2.txt
cdac@VAIBHAV:~/linuxassignment/docs$ cd ..
cdac@VAIBHAV:~/linuxassignment$ ls -l ~/linuxassignment
total 8
drwxr-xr-x 2 cdac cdac 4096 Feb 28 21:25 docs
-rw-r--r-- 1 cdac cdac   30 Feb 28 21:15 file1.txt
cdac@VAIBHAV:~/linuxassignment$ ls -l
total 8
drwxr-xr-x 2 cdac cdac 4096 Feb 28 21:25 docs
-rw-r--r-- 1 cdac cdac   30 Feb 28 21:15 file1.txt
cdac@VAIBHAV:~/linuxassignment$ ls -l /
total 2436
lrwxrwxrwx   1 root root       7 May 31  2023 bin -> usr/bin
drwxr-xr-x   2 root root    4096 May 31  2023 boot
drwxr-xr-x  16 root root    3580 Feb 28 19:05 dev
drwxr-xr-x  99 root root    4096 Feb 28 21:35 etc
drwxr-xr-x   3 root root    4096 Feb 27 22:15 home
-rwxrwxrwx   1 root root 2424984 Feb 12 06:29 init
lrwxrwxrwx   1 root root       7 May 31  2023 lib -> usr/lib
lrwxrwxrwx   1 root root       9 May 31  2023 lib32 -> usr/lib32
lrwxrwxrwx   1 root root       9 May 31  2023 lib64 -> usr/lib64
lrwxrwxrwx   1 root root      10 May 31  2023 libx32 -> usr/libx32
drwx------   2 root root   16384 Feb 27 22:14 lost+found
drwxr-xr-x   2 root root    4096 May 31  2023 media
drwxr-xr-x   9 root root    4096 Feb 27 22:15 mnt
drwxr-xr-x   2 root root    4096 May 31  2023 opt
```

```
dr-xr-xr-x 182 root root       0 Feb 28 19:45 proc
drwx------   3 root root    4096 Feb 27 22:17 root
drwxr-xr-x  23 root root     700 Feb 28 19:45 run
lrwxrwxrwx   1 root root       8 May 31  2023 sbin -> usr/sbin
drwxr-xr-x   6 root root    4096 May 31  2023 snap
drwxr-xr-x   2 root root    4096 May 31  2023 srv
dr-xr-xr-x  11 root root       0 Feb 28 19:04 sys
drwxrwxrwt  11 root root    4096 Feb 28 21:35 tmp
drwxr-xr-x  14 root root    4096 May 31  2023 usr
drwxr-xr-x  13 root root    4096 May 31  2023 var
cdac@VAIBHAV:~/linuxassignment$
```

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



b. 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.

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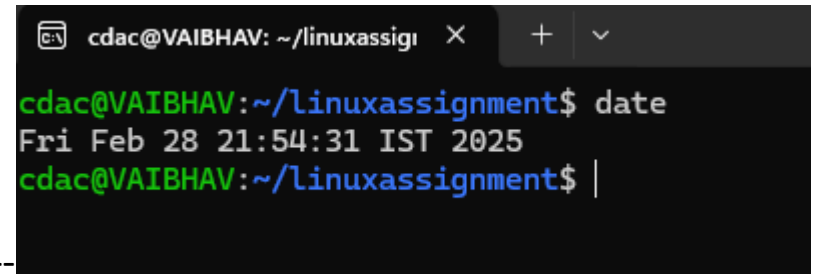
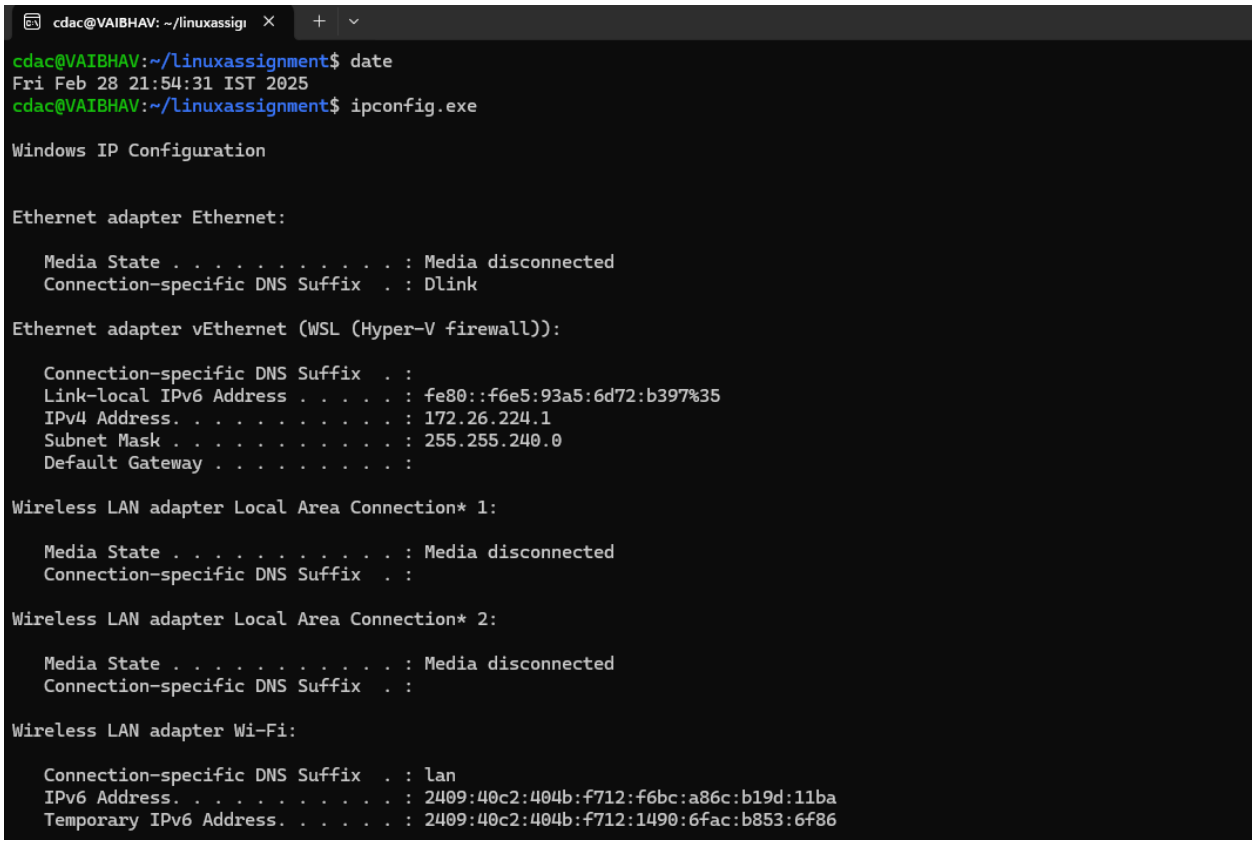
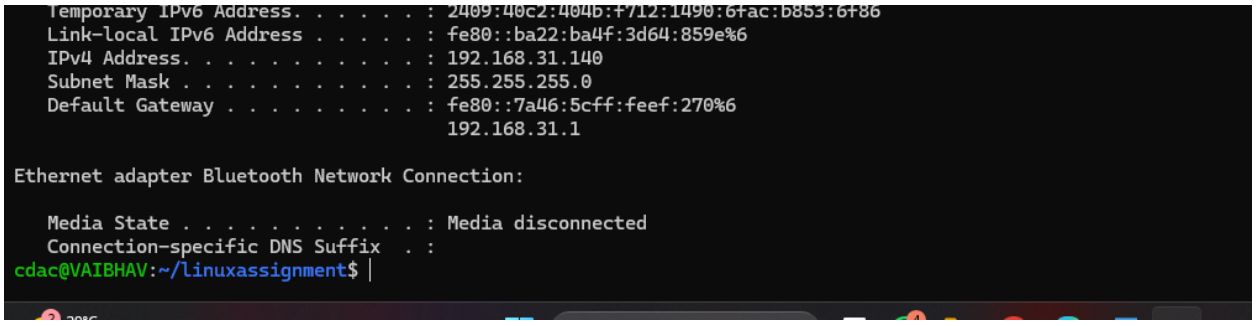


i) Networking: a. Display the IP address of the system. b. Ping a remote server to check connectivity (provide a remote server address to ping).





j) File Compression:

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

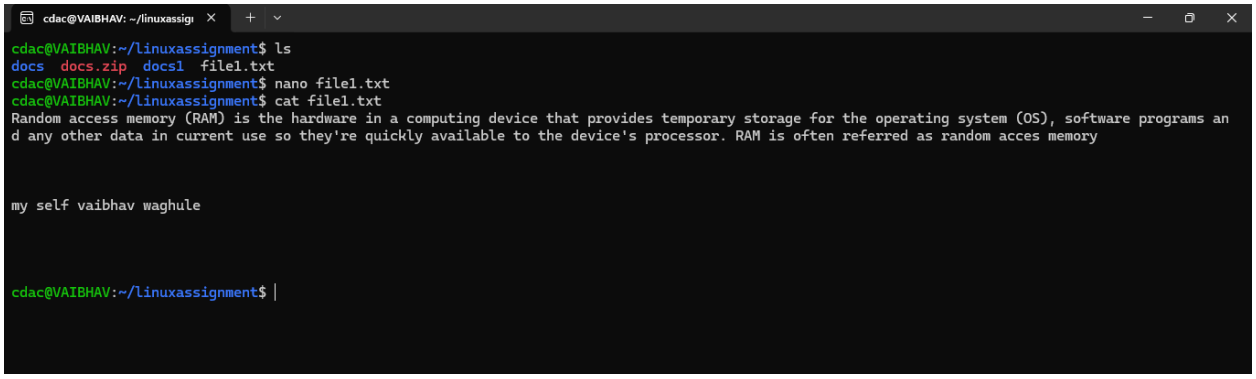
```
cdac@VAIBHAV:~/linuxassignment$ zip -r docs.zip docs
  adding: docs/ (stored 0%)
  adding: docs/file2.txt (stored 0%)
  adding: docs/file1.txt (stored 0%)
cdac@VAIBHAV:~/linuxassignment$
```

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

```
cdac@VAIBHAV: ~/linuxassigı
cdac@VAIBHAV:~/linuxassignment$ ls
docs  docs.zip  file1.txt
cdac@VAIBHAV:~/linuxassignment$ mkdir docs1
cdac@VAIBHAV:~/linuxassignment$ ls
docs  docs.zip  docs1  file1.txt
cdac@VAIBHAV:~/linuxassignment$ unzip docs.zip docs1
Archive:  docs.zip
caution: filename not matched:  docs1
cdac@VAIBHAV:~/linuxassignment$ unzip docs.zip -d docs1
Archive:  docs.zip
   creating: docs1/docs/
 extracting: docs1/docs/file2.txt
 extracting: docs1/docs/file1.txt
cdac@VAIBHAV:~/linuxassignment$ ls
docs  docs.zip  docs1  file1.txt
cdac@VAIBHAV:~/linuxassignment$
```

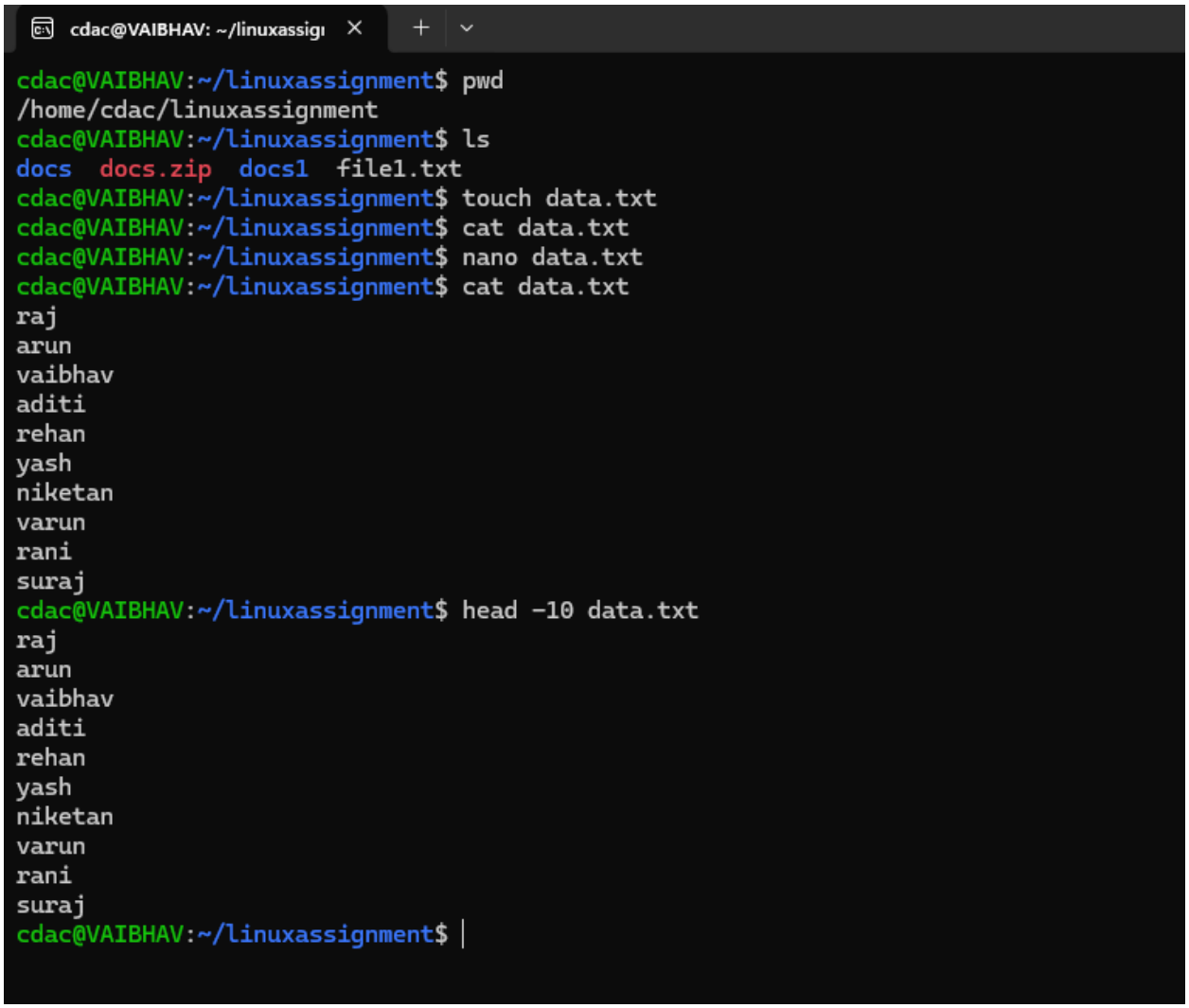
k) File Editing: a. Open the "file1.txt" file in a text editor and add some text to it.

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

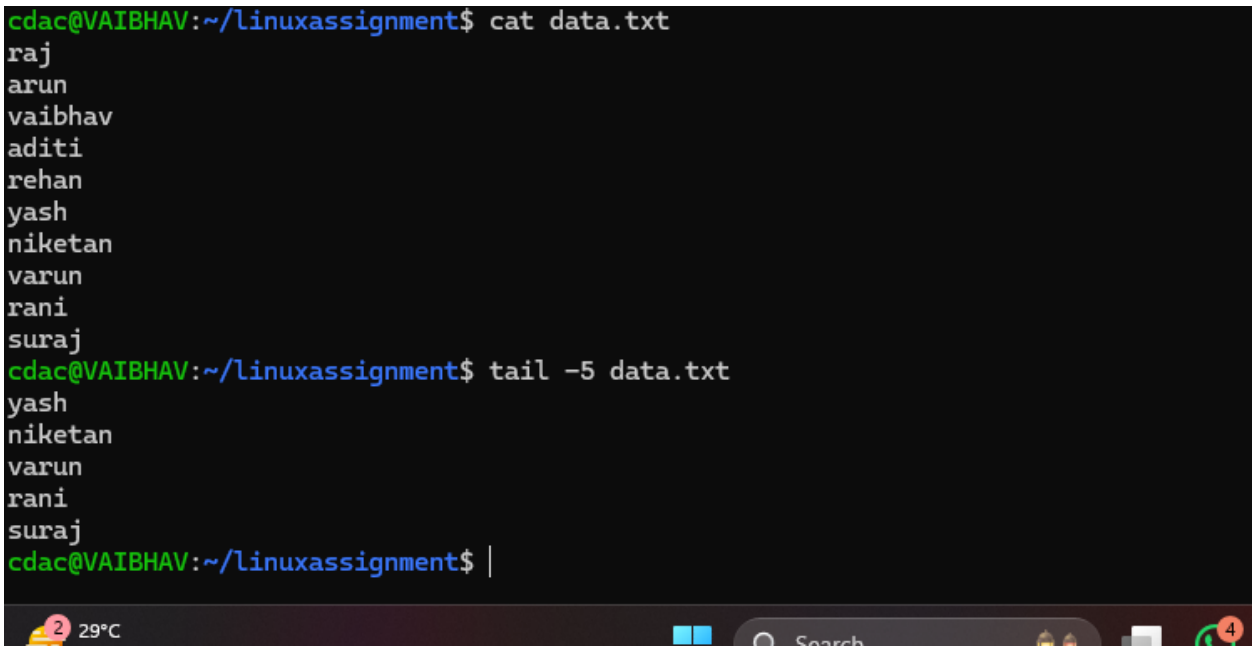


Problem 2: Read the instructions carefully and answer accordingly. If there is any need to insert some data then do that as well.

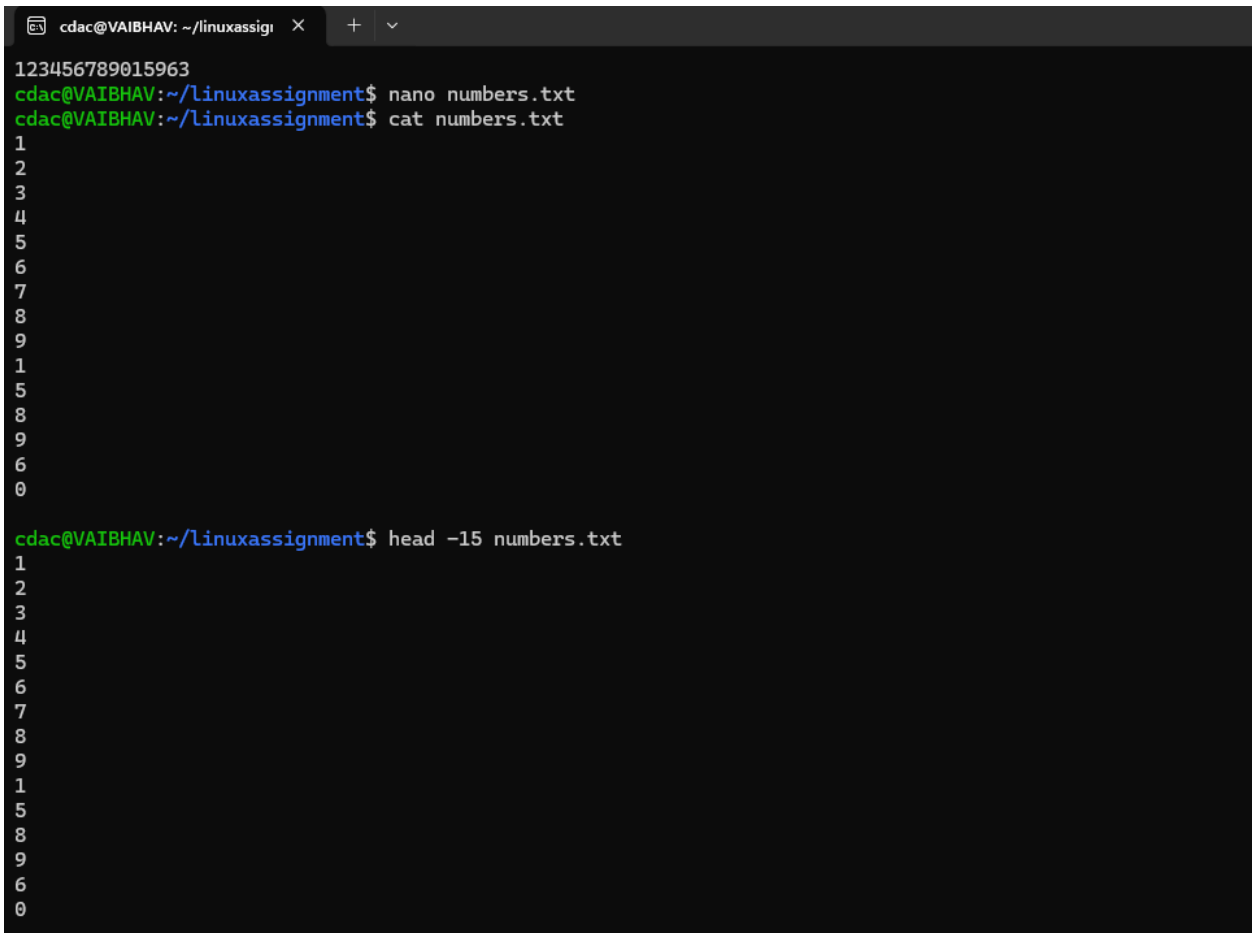
a. Suppose you have a file named "data.txt" containing important information. Display the first 10 lines of this file to quickly glance at its contents using a command.



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



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.



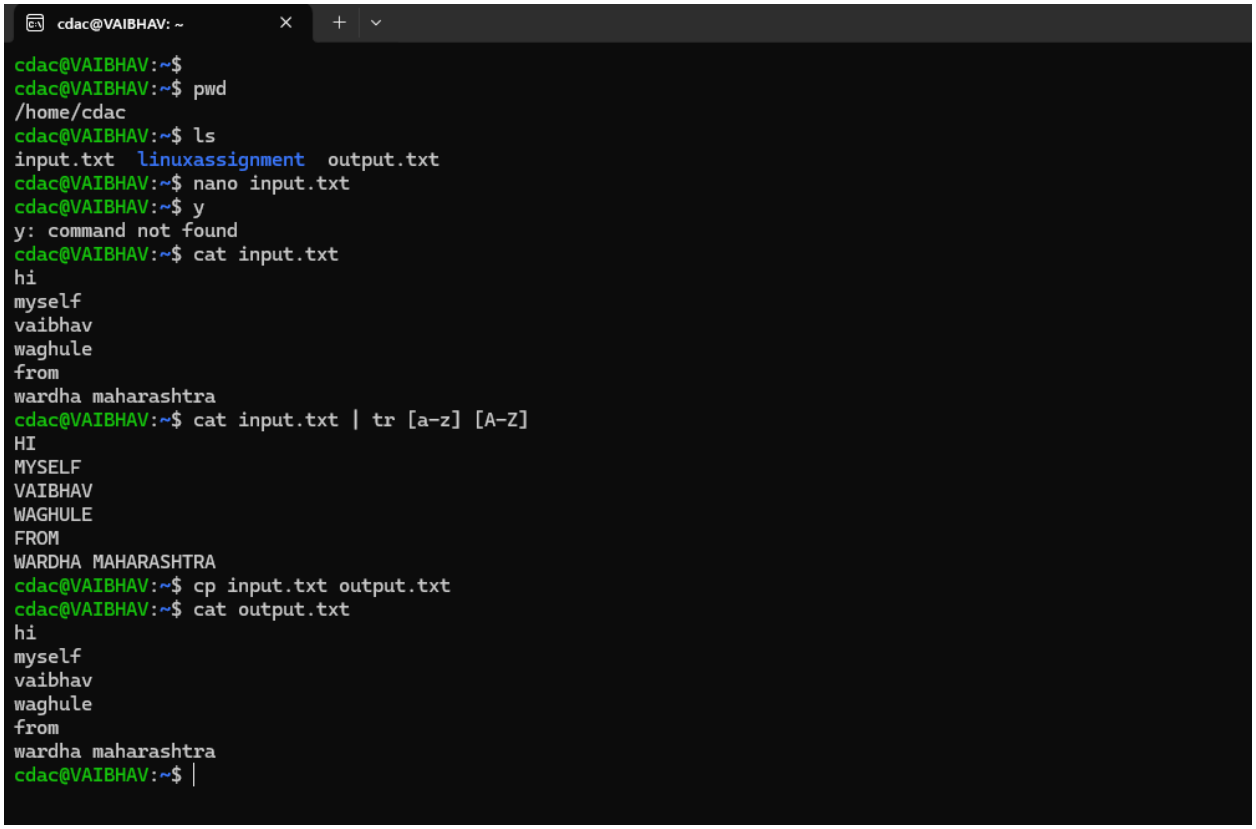
d. To focus on the last few numbers of the dataset, display the last 3 lines of "numbers.txt".

```
cdac@VAIBHAV:~/linuxassignment$ cat numbers.txt
1
2
3
4
5
6
7
8
9
1
5
8
9
6
0

cdac@VAIBHAV:~/linuxassignment$ tail -3 numbers.txt
6
0

cdac@VAIBHAV:~/linuxassignment$
```

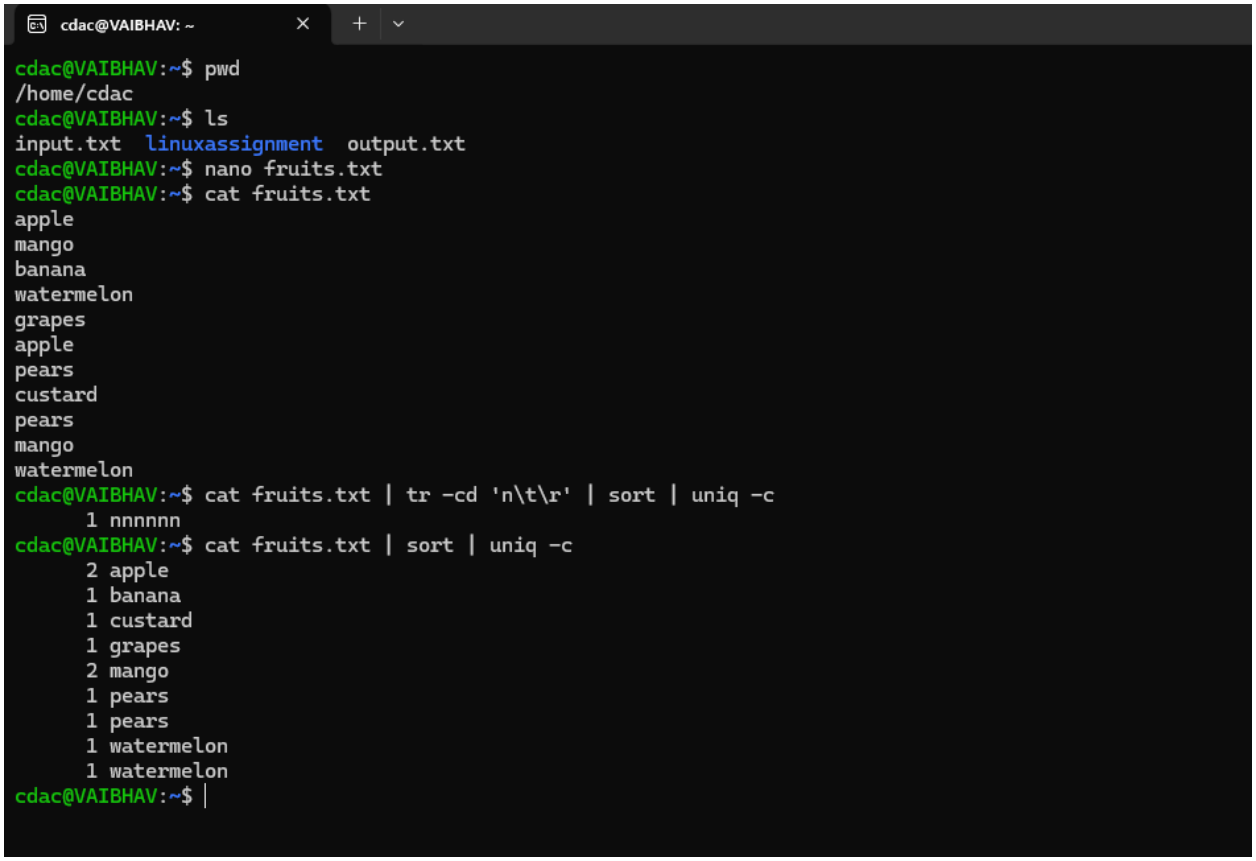
e. Imagine you have a file named "input.txt" with text content. Use a command to translate all lowercase letters to uppercase in "input.txt" and save the modified text in a new file named "output.txt."

```
cdac@VAIBHAV: ~
cdac@VAIBHAV:~$ pwd
/home/cdac
cdac@VAIBHAV:~$ ls
linuxassignment
cdac@VAIBHAV:~$ nano input.txt
cdac@VAIBHAV:~$ cat input.txt
hi
myself
vaibhav
waghule
from
wardha maharashtra
cdac@VAIBHAV:~$ cat input.txt | tr [a-z] [A-z]
HI
MYSELF
VAIBHAV
WAGHULE
FROM
WARDHA MAHARASHTRA
cdac@VAIBHAV:~$ cp input.txt output.txt
cdac@VAIBHAV:~$ cat output.txt
hi
myself
vaibhav
waghule
from
wardha maharashtra
cdac@VAIBHAV:~$
```

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."



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@VAIBHAV: ~
cdac@VAIBHAV:~$ pwd
/home/cdac
cdac@VAIBHAV:~$ ls
input.txt linuxassignment output.txt
cdac@VAIBHAV:~$ nano fruits.txt
cdac@VAIBHAV:~$ cat fruits.txt
apple
mango
banana
watermelon
grapes
apple
pears
custard
pears
mango
watermelon
cdac@VAIBHAV:~$ cat fruits.txt | tr -cd 'n\t\r' | sort | uniq -c
1 nnnnnn
cdac@VAIBHAV:~$ cat fruits.txt | sort | uniq -c
2 apple
1 banana
1 custard
1 grapes
2 mango
1 pears
1 pears
1 watermelon
1 watermelon
cdac@VAIBHAV:~$