Problem 1: Read the instructions carefully and answer accordingly. If there is

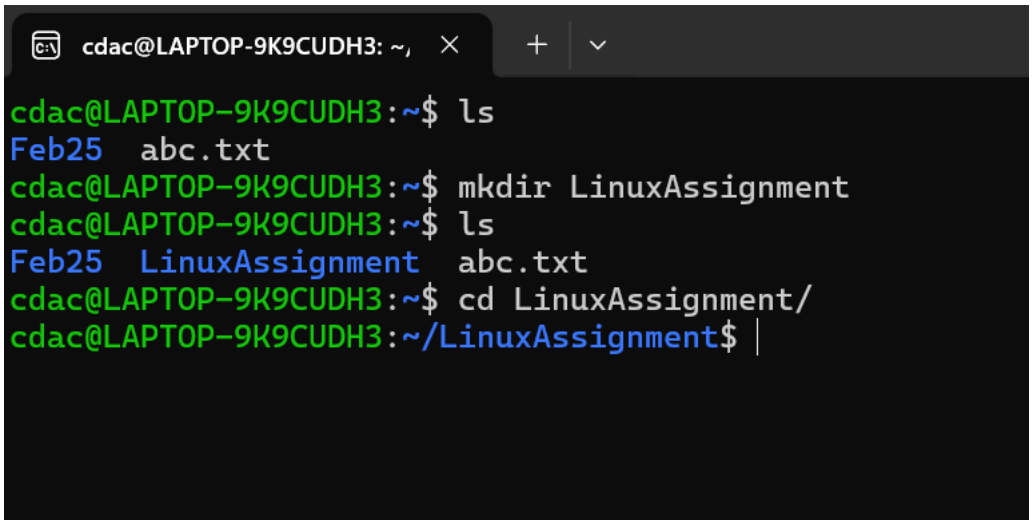
any need to insert some data then do that as well.

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.
Steps:
-for listing run ls command

-For making directory mkdir  command

- for navigation using cd command
Output:




b) File Management:

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

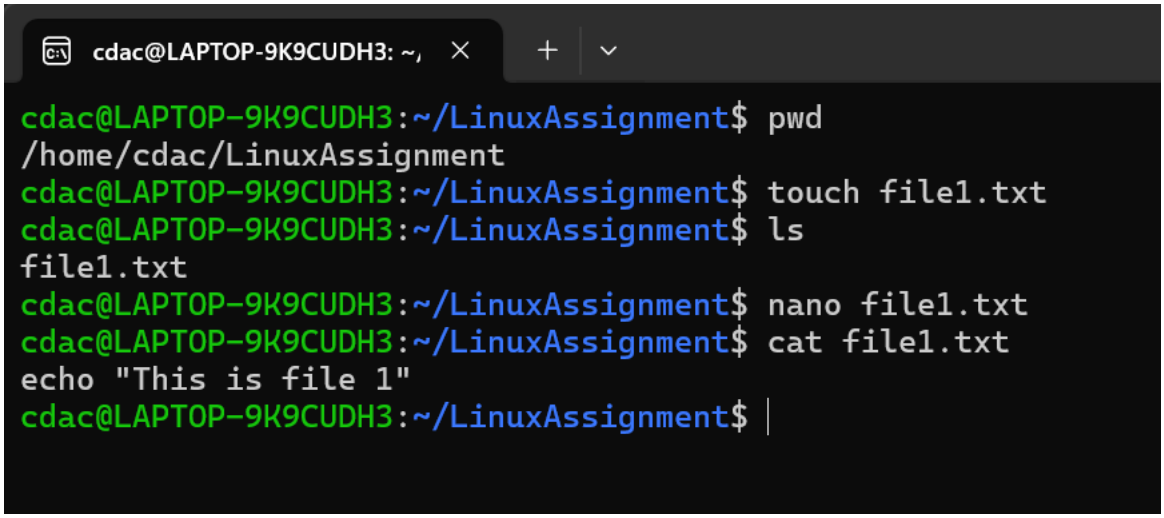
Steps:

- in LinuxAssignment making file using touch file1.txt

- now entering data using nano command which will open editor

-For printing data in file using cat command

Output:




c) Directory Management:

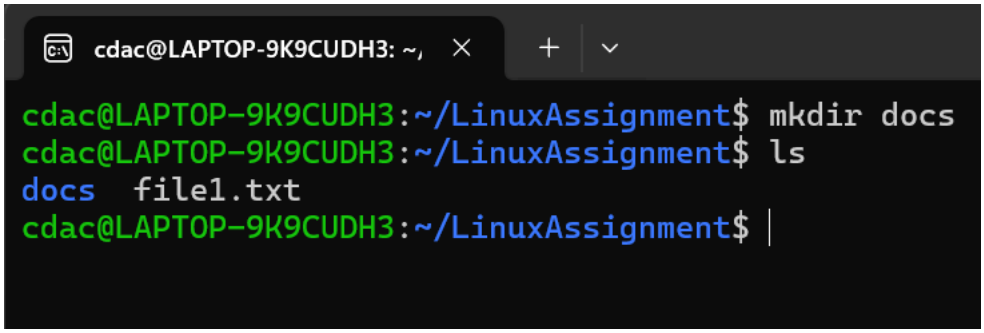
a. Create a new directory named "docs" inside the "LinuxAssignment" directory.

Steps:

-making new directory name docs

-for cheking ls

Output:




d) Copy and Move Files:

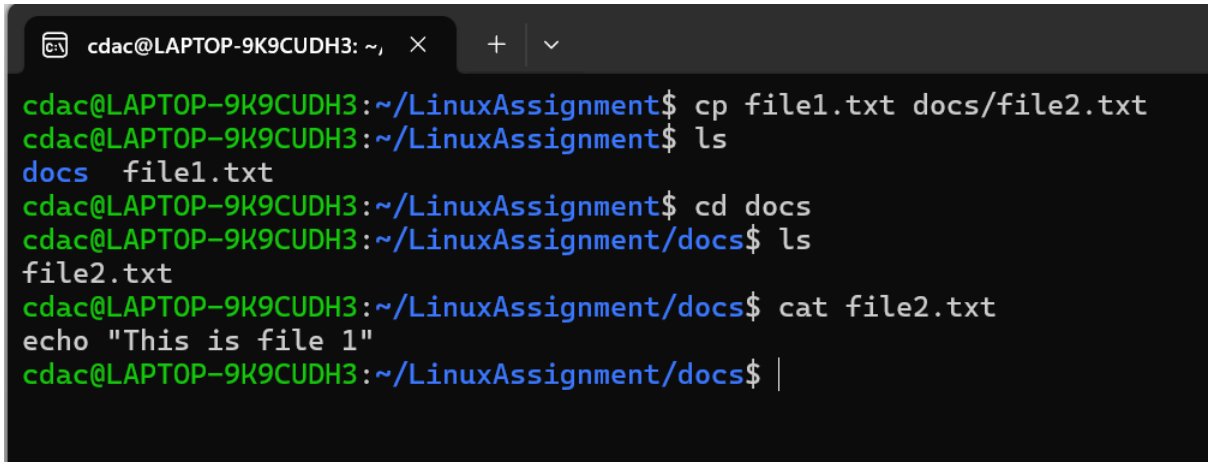
a. Copy the "file1.txt" file into the "docs" directory and rename it to "file2.txt".

Steps:

-for coping using cd command

-after using cat command to print data in file2.txt

Output:




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.

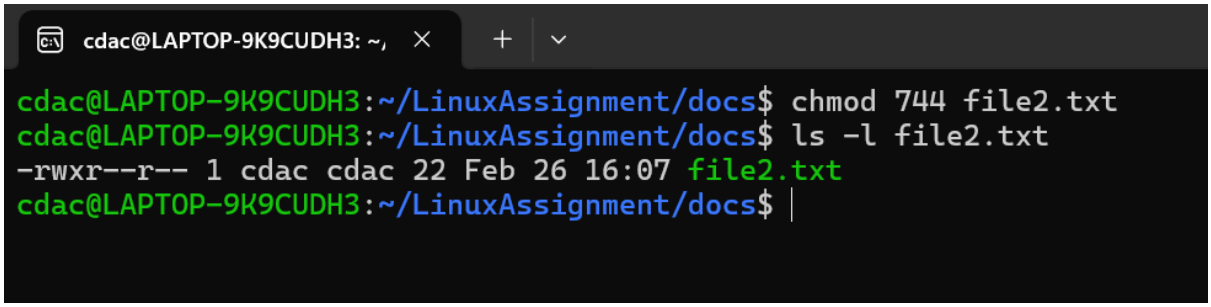
Steps:

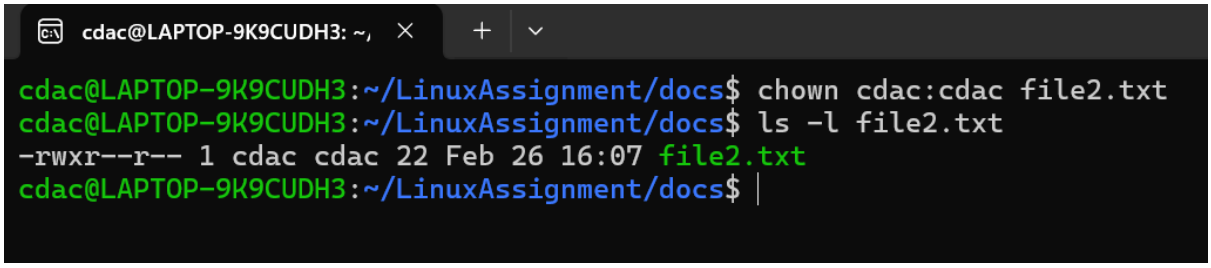
-using chmod 744 to give permission 7 means read, write, execute , 4 means only read .

-and ls -l to checking it

-chown command is used to change the owner to current user

Output:



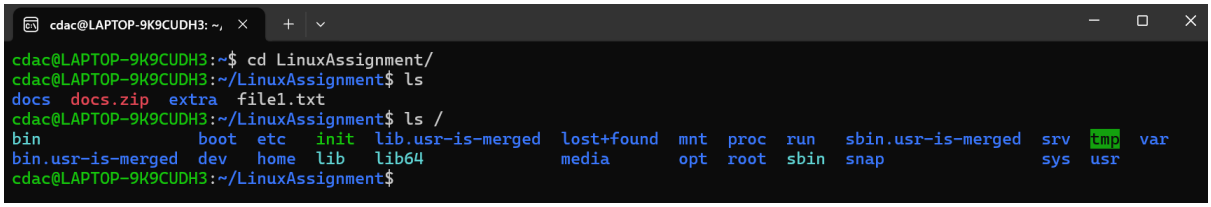

f) Final Checklist:

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

Steps:

-using ls to list LinuxAssignment directory

-using ls/ to list root
Output:

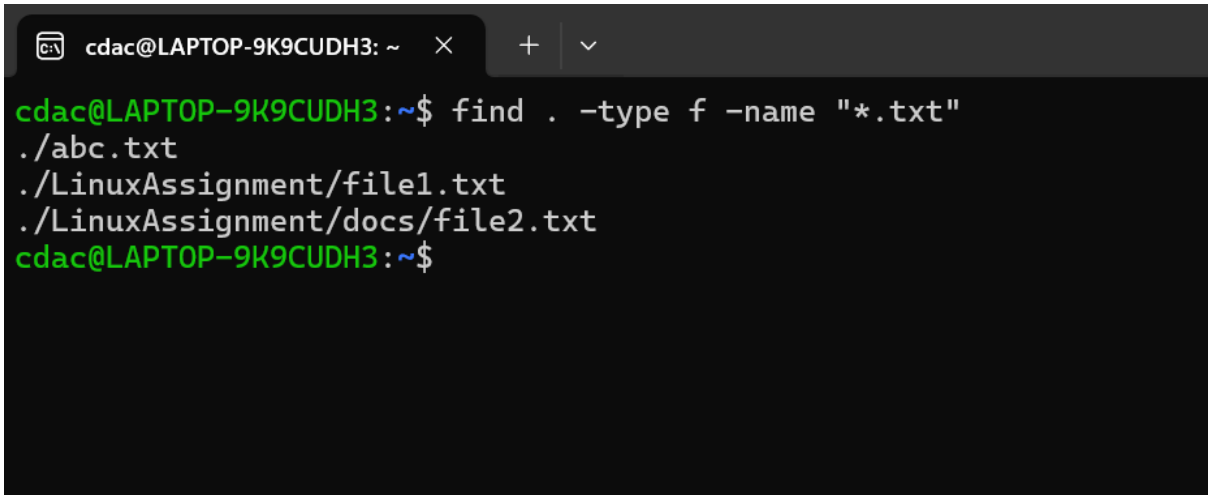



g) File Searching:

a. Search for all files with the extension ".txt" in the current directory and its subdirectories.

Steps:

-Using find command to find the documents
Output:

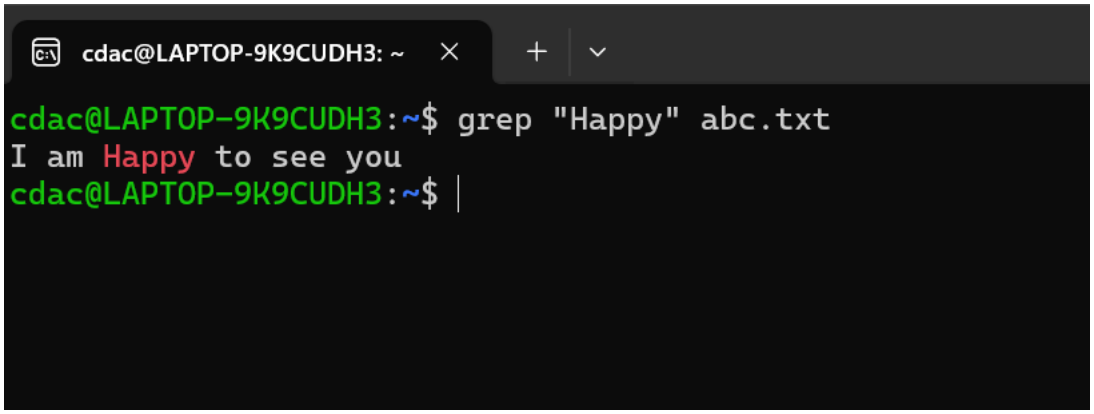



b. Display lines containing a specific word in a file (provide a file name and the specific

word to search).

Steps:

-using greap command to search happy word in abc.txt file
Output:

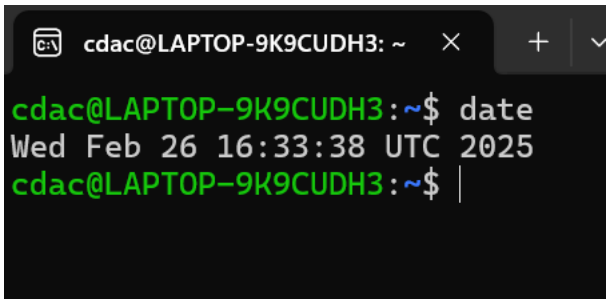



h) System Information:

a. Display the current system date and time.

Steps:

- using  date command to print current time and date
Output:

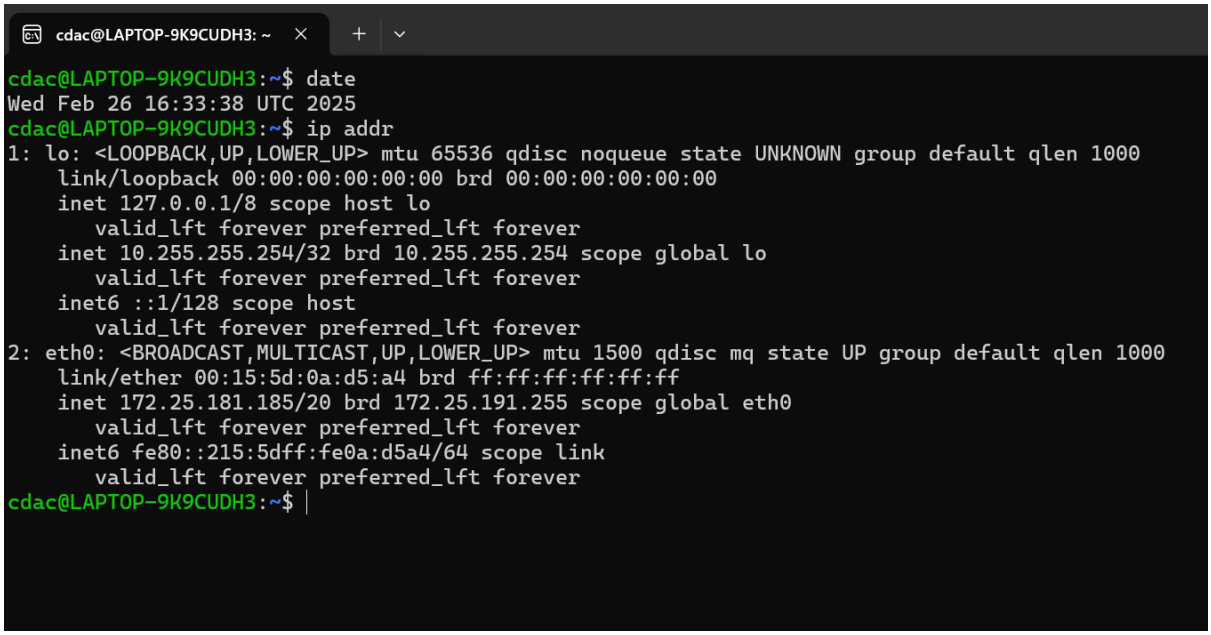



i) Networking:

a. Display the IP address of the system.

Steps:

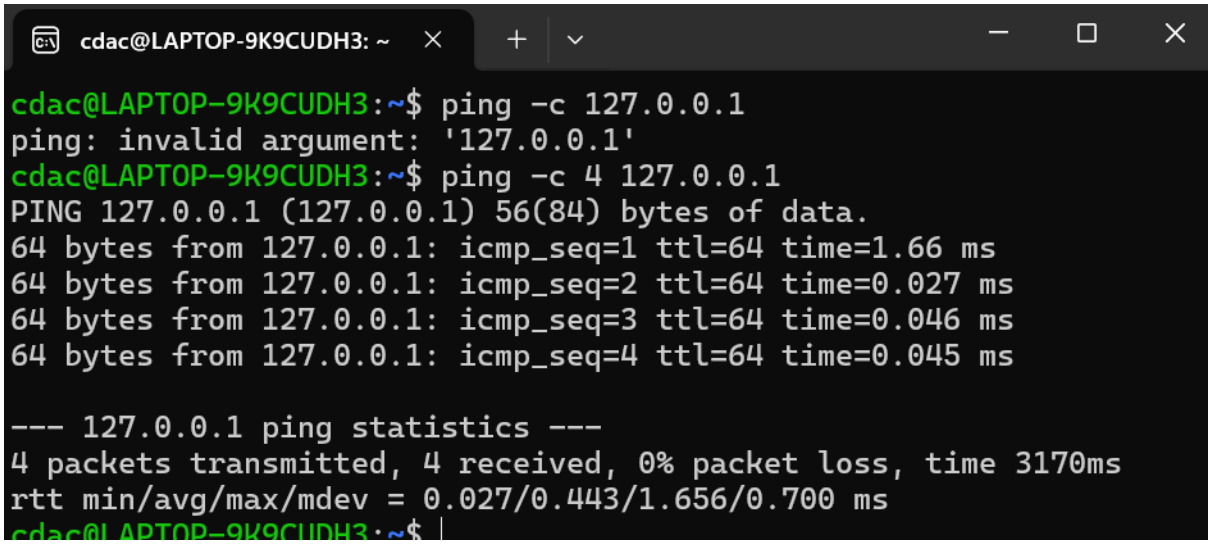
-using ip addr command to display the ip address of the system
Output:




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

Steps:

Using ping command and -c to send 4 paccets to chek connectivity
Output:

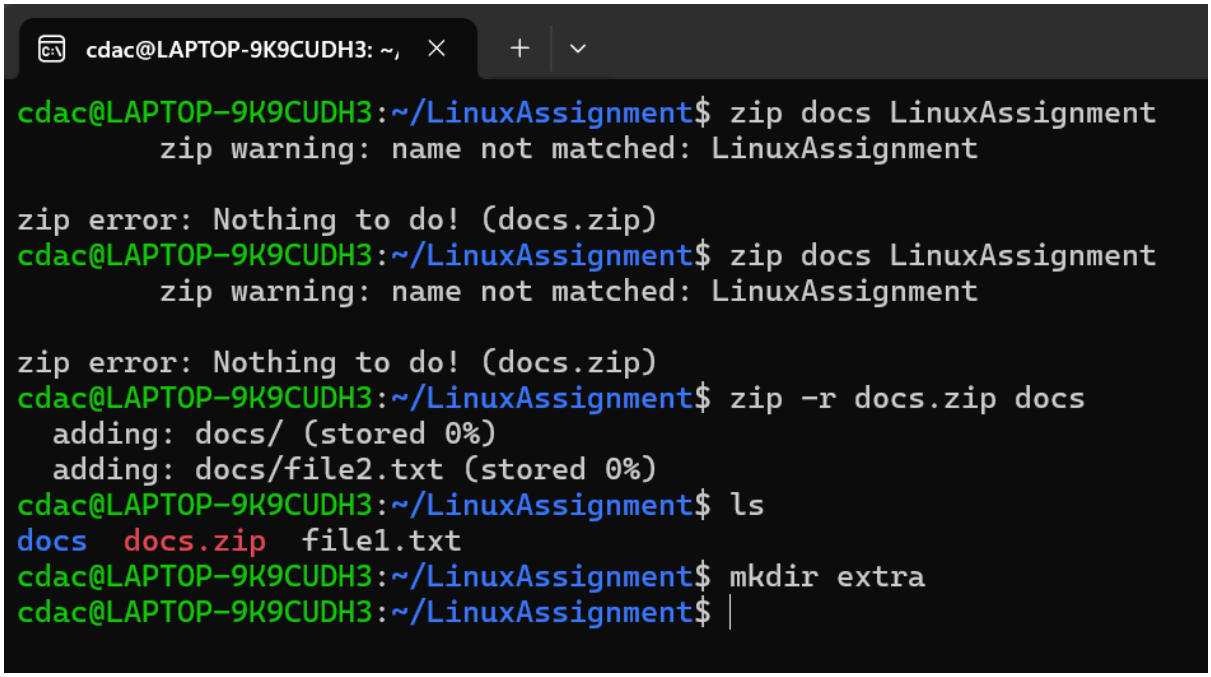



j) File Compression:

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

Steps:

-using zip -r to zip the doc directory
Output:



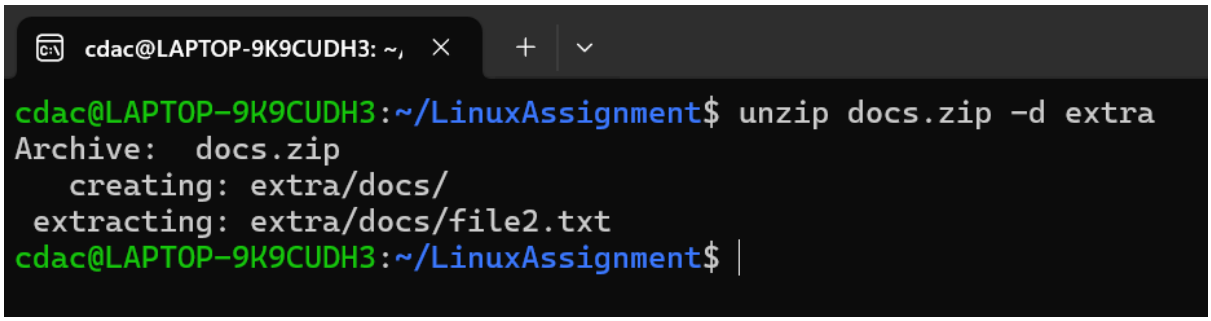

b. Extract the contents of the zip file into a new directory.

Steps:

-creating extra directory using mkdir command

- using unzip command and giving directory using -d

Output:




k) File Editing:

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

Steps:

Using nano command to open file in the text editor

And adter saving using cat command to display the data

Output:

```
cdac@LAPTOP-9K9CUDH3: ~,
cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ ls
docs  docs.zip  extra  file1.txt
cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ nano file1.txt
cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ cat file1.txt
Hello , How are you?
Hello World
Nice to see you
hii

cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$
```

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

Steps:

-Using sed command to replace “hii” with “Hii”.

-using cat command to display the file for checking if changes are done or not

Output:

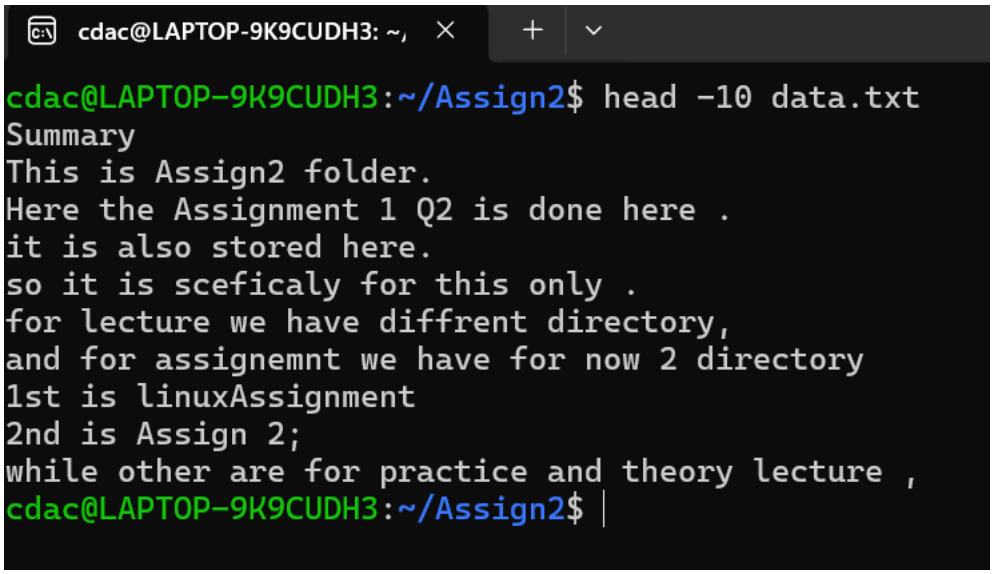
```
cdac@LAPTOP-9K9CUDH3: ~,
cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ ls
docs  docs.zip  extra  file1.txt
cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ nano file1.txt
cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ cat file1.txt
Hello , How are you?
Hello World
Nice to see you
hii

cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ sed -i 's/hii/Hii/g' file1.txt
cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$ cat file1.txt
Hello , How are you?
Hello World
Nice to see you
Hii

cdac@LAPTOP-9K9CUDH3:~/LinuxAssignment$
```

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.

Steps:

=for displaying first 10 line using head command
Output:

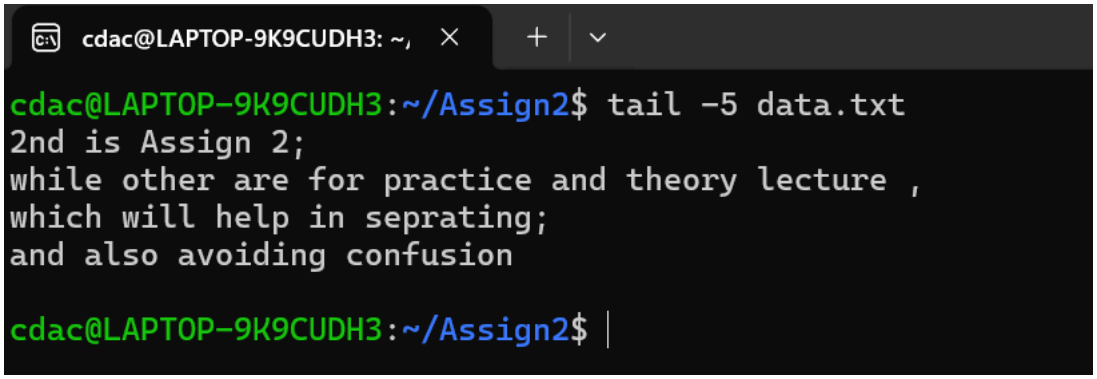



b. Now, to check the end of the file for any recent additions, display the last 5 lines of

"data.txt" using another command.

Steps:

-using tail command to display last 5 lines of data.txt file
Output:



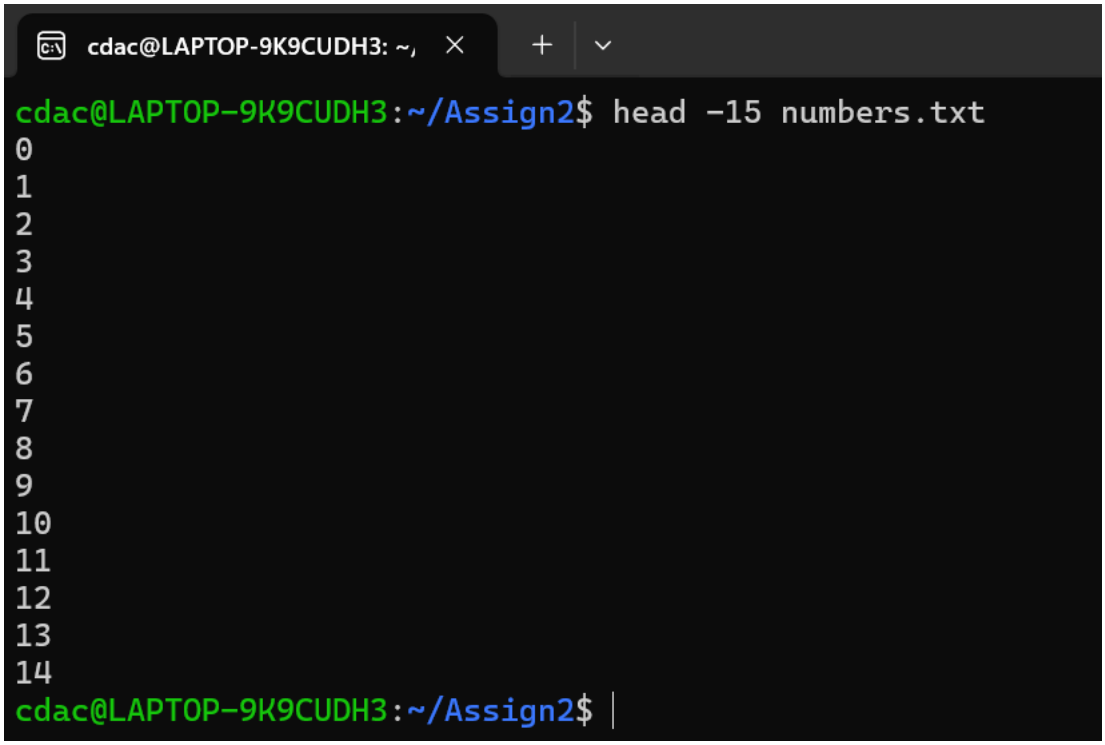

c. In a file named "numbers.txt," there are a series of numbers. Display the first 15 lines of

this file to analyze the initial data set.

Steps:

-using head command to display first 15 line

Output:




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

Steps:

Using tail command to display the last 3 line of the number.txt file
Output:


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."

Steps:

-using tr command to transform the lowercase into upper case

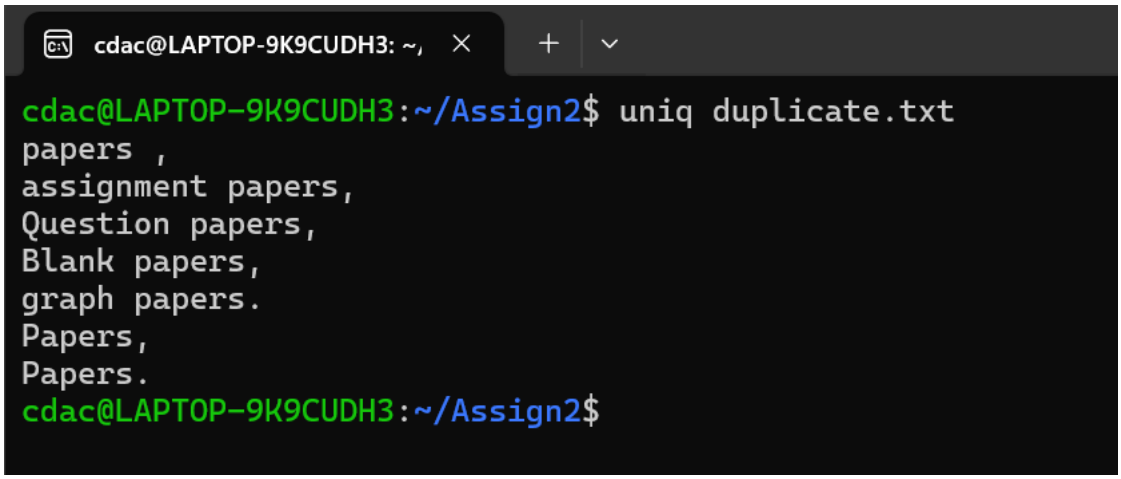
-using cat command to display output.txt file and changing if changes are done.
Output:

```
cdac@LAPTOP-9K9CUDH3:~/Assign2$ tr   [:lower:] [:upper:] < input
.txt > output.txt
cdac@LAPTOP-9K9CUDH3:~/Assign2$ cat output.txt
HELLO , HOW ARE YOU?
cdac@LAPTOP-9K9CUDH3:~/Assign2$ cat input.txt
Hello , How are you?
cdac@LAPTOP-9K9CUDH3:~/Assign2$
```

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."

Steps:

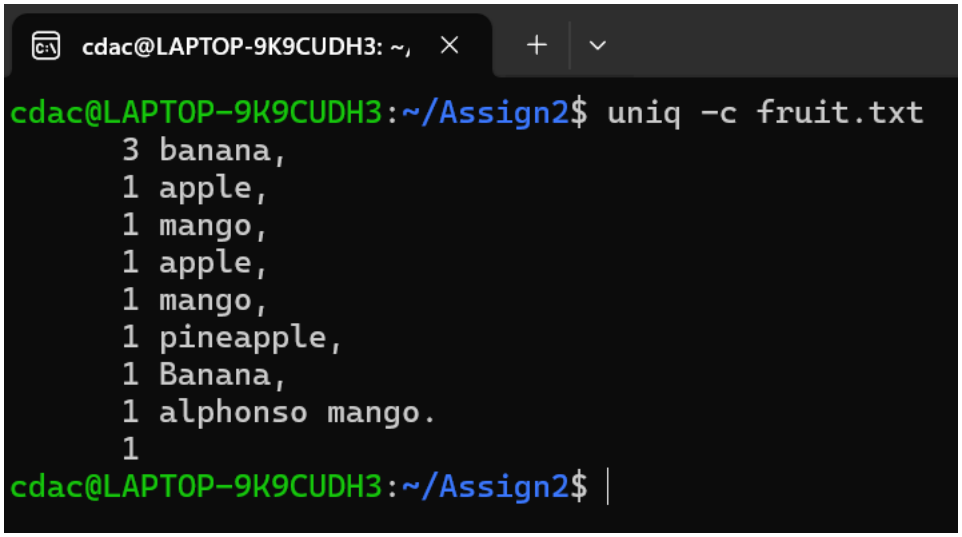
-using uniq command to print uniq lines of the duplicate .txt file
Output:




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."

Steps:

Using uniq command with -c attribute to display uniqe lines with cout of how many time that unique line is there
Output:


cdac@LAPTOP-9K9CUDH3: ~,
cdac@LAPTOP-9K9CUDH3:~/Assign2$ uniq -c fruit.txt
3 banana,
1 apple,
1 mango,
1 apple,
1 mango,
1 pineapple,
1 Banana,
1 alphonso mango.
1
cdac@LAPTOP-9K9CUDH3:~/Assign2$