

Concepts of Operating System

Assignment 1

Problem 1:

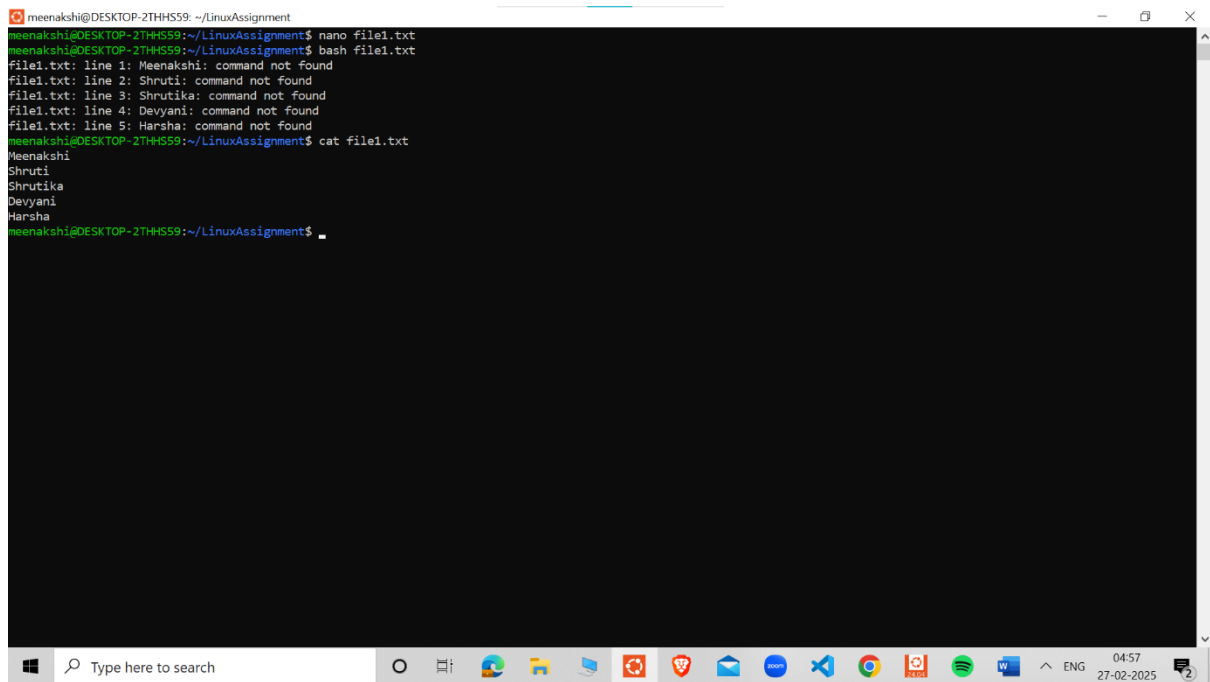
a) Navigate and List:

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.

```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~$ pwd
/home/meenakshi
meenakshi@DESKTOP-2THH559:~$ cd
meenakshi@DESKTOP-2THH559:~$ ls
1 Assignment      Travels.class  classprograms  linklist_magicsessions  meenakshi_lokhande  program19.java
2 MainDemo.class  a.out          java           magicsessions           program1             singly_linked_list_01
meenakshi@DESKTOP-2THH559:~$ mkdir LinuxAssignment
meenakshi@DESKTOP-2THH559:~$ ls
1 LinuxAssignment  a.out          linklist_magicsessions  program1
2 MainDemo.class  classprograms  magicsessions           program19.java
Assignment Travels.class  java           meenakshi_lokhande    singly_linked_list_01
meenakshi@DESKTOP-2THH559:~$ cd LinuxAssignment/
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$
```

b) File Management:

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



```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ nano file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ bash file1.txt
file1.txt: line 1: Meenakshi: command not found
file1.txt: line 2: Shruti: command not found
file1.txt: line 3: Shrutika: command not found
file1.txt: line 4: Devyani: command not found
file1.txt: line 5: Harsha: command not found
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat file1.txt
Meenakshi
Shruti
Shrutika
Devyani
Harsha
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$
```

The screenshot shows a Windows terminal window with a black background and green text. The terminal title bar reads "meenakshi@DESKTOP-2THH559: ~/LinuxAssignment". The user enters the command `nano file1.txt`, which opens a nano editor. They then run `bash file1.txt`, which executes the file. The output shows five lines of "command not found" errors for the names Meenakshi, Shruti, Shrutika, Devyani, and Harsha. Finally, the user runs `cat file1.txt`, which displays the names on separate lines. The Windows taskbar at the bottom shows the search bar, task view button, and several application icons. The system clock in the bottom right corner indicates the time is 04:57 on 27-02-2025.

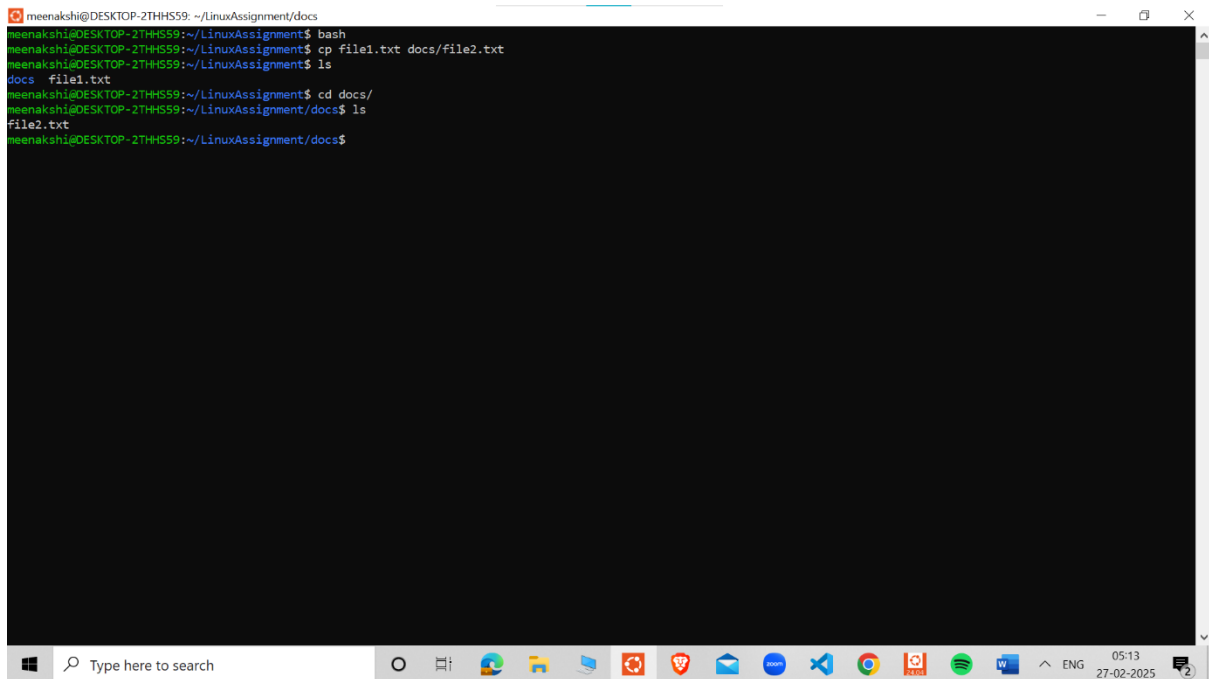
c) Directory Management:

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

```
meenakshi@DESKTOP-2THHS59: ~/LinuxAssignment
meenakshi@DESKTOP-2THHS59:~$ pwd
/home/meenakshi
meenakshi@DESKTOP-2THHS59:~$ ls
1 Assignment      MainDemo.class  a.out          java           magicsessions  program1.       singly_linked_list_01
2 LinuxAssignment Travels.class   classprograms  linklist_magic meenakshi_lokhande program19.java
meenakshi@DESKTOP-2THHS59:~$ cd LinuxAssignment/
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ mkdir docs
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ ls
docs  file1.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$
```

d) Copy and Move Files:

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

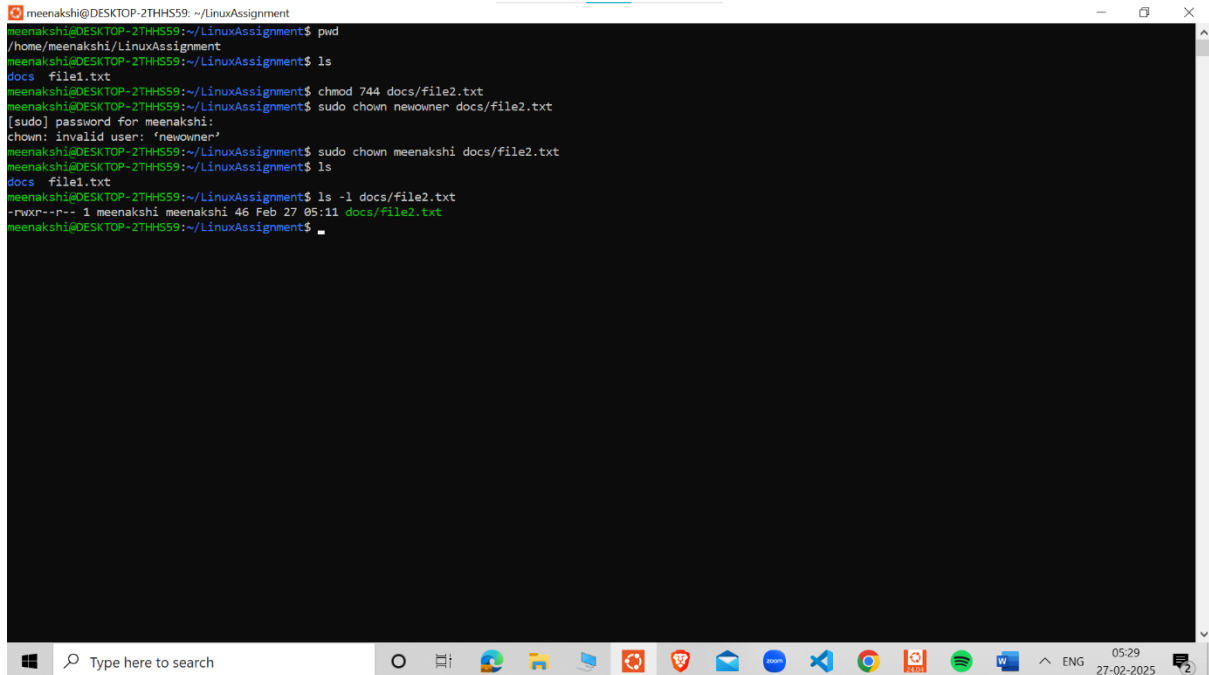


```
meenakshi@DESKTOP-2THHS59: ~/LinuxAssignment/docs
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ bash
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cp file1.txt docs/file2.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ ls
docs  file1.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cd docs/
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment/docs$ ls
file2.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment/docs$
```

The screenshot shows a Windows desktop environment with a terminal window open. The terminal displays a series of commands and their outputs. The user navigates to the 'docs' directory and successfully copies 'file1.txt' to 'file2.txt'. The Windows taskbar at the bottom shows various application icons and the system clock indicating 05:13 on 27-02-2025.

e) Permissions and Ownership:

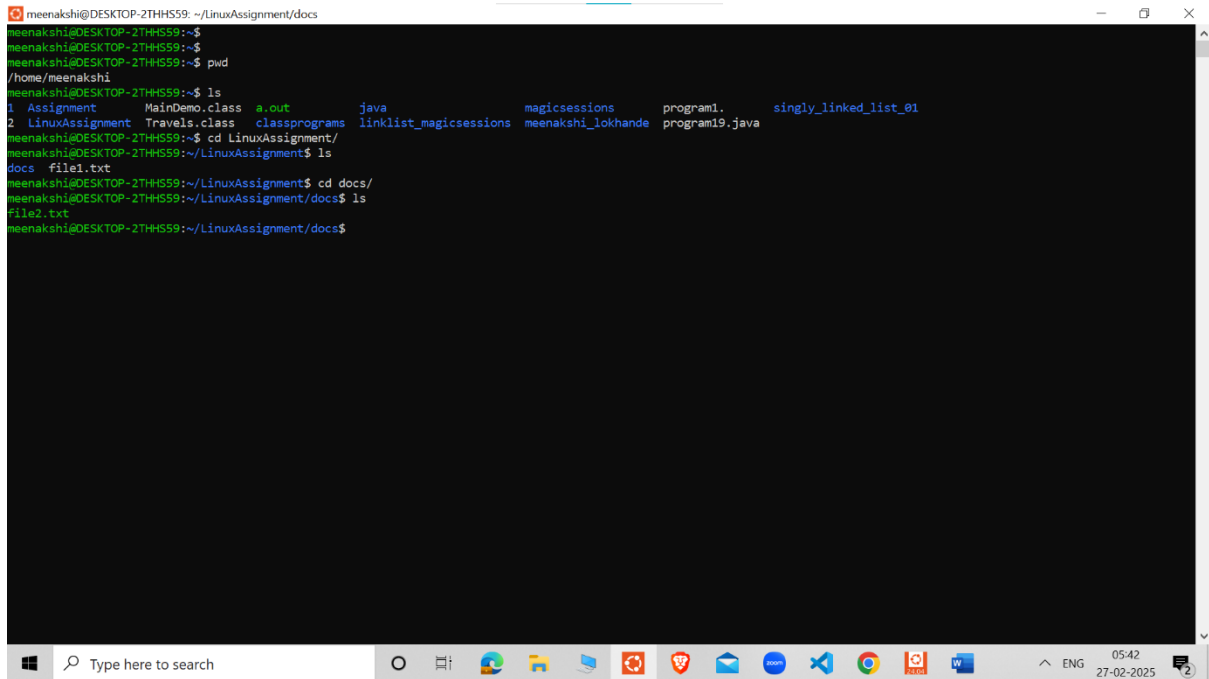
a. Change the permissions of "file2.txt" to allow read, write, and execute permissions for the owner and only read permissions for others. Then, change the owner of "file2.txt" to the current user.



```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ pwd
/home/meenakshi/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls
docs  file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ chmod 744 docs/file2.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ sudo chown newowner docs/file2.txt
[sudo] password for meenakshi:
chown: invalid user: 'newowner'
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ sudo chown meenakshi docs/file2.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls
docs  file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls -l docs/file2.txt
-rwxr--r-- 1 meenakshi meenakshi 46 Feb 27 05:11 docs/file2.txt
meenakshi@DESKTOP-2THH559:~/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.

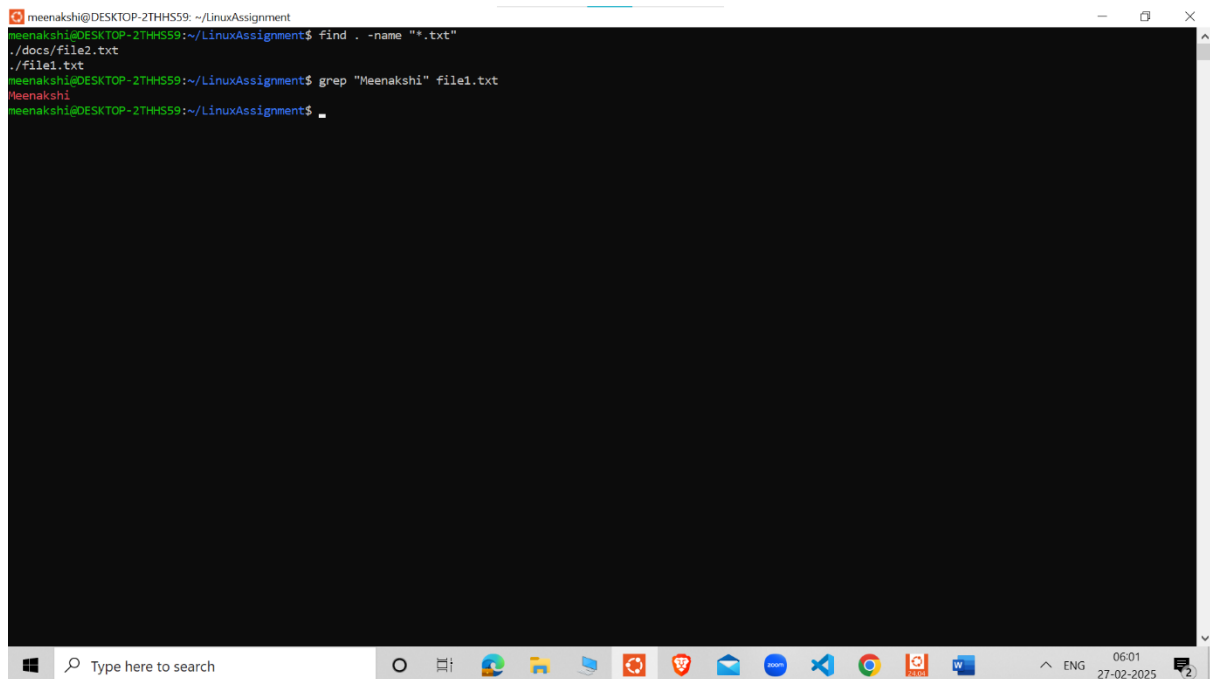


```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment/docs
meenakshi@DESKTOP-2THH559:~$
meenakshi@DESKTOP-2THH559:~$
meenakshi@DESKTOP-2THH559:~$ pwd
/home/meenakshi
meenakshi@DESKTOP-2THH559:~$ ls
1 Assignment      MainDemo.class  a.out          java           magicssessions  magicssessions  program1.      singly_linked_list_01
2 LinuxAssignment Travels.class   classprograms  linklist_magicssessions meenakshi_lokhande program19.java
meenakshi@DESKTOP-2THH559:~$ cd LinuxAssignment/
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls
docs  file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cd docs/
meenakshi@DESKTOP-2THH559:~/LinuxAssignment/docs$ ls
File2.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment/docs$
```

The screenshot shows a terminal window with a Windows taskbar at the bottom. The terminal output shows the user navigating from the home directory to the LinuxAssignment directory and then to the docs subdirectory, listing files at each step. The taskbar includes a search bar, several application icons, and a system tray showing the date and time as 05:42 on 27-02-2025.

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).

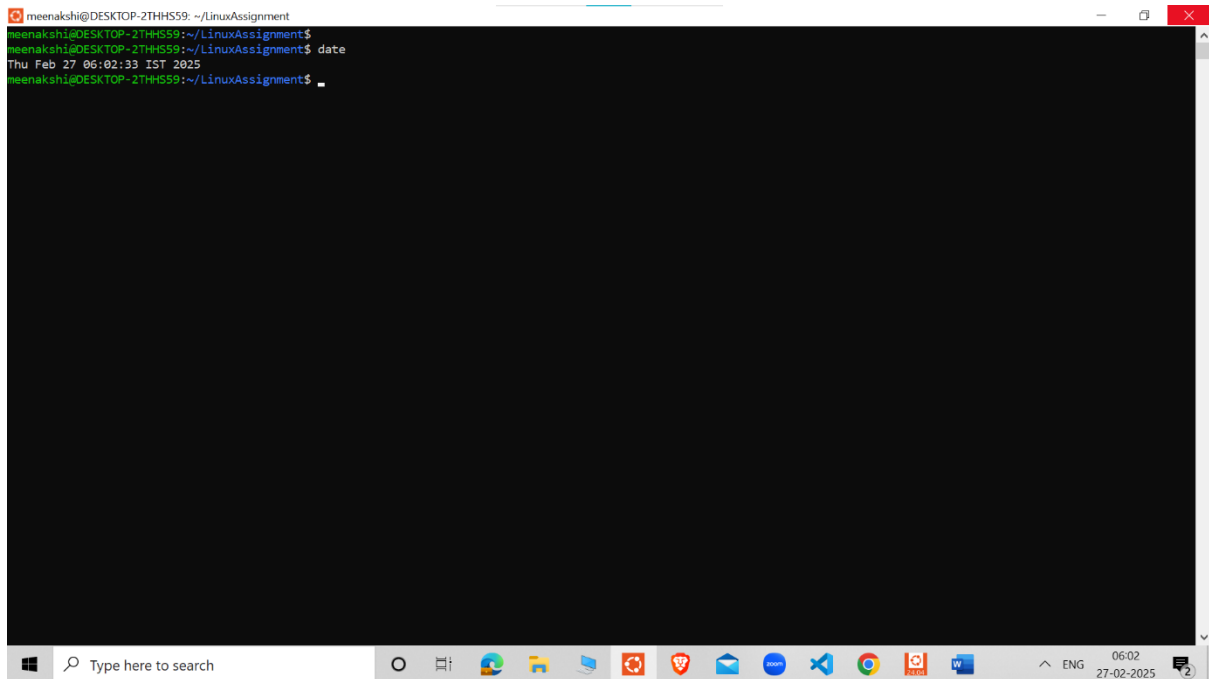


```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ find . -name "*.txt"
./docs/file2.txt
./file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ grep "Meenakshi" file1.txt
Meenakshi
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$
```

The screenshot shows a Windows terminal window with a black background and green text. The user is in the directory ~/LinuxAssignment. They run the command 'find . -name "*.txt"' which lists two files: ./docs/file2.txt and ./file1.txt. Then, they run 'grep "Meenakshi" file1.txt' which outputs 'Meenakshi'. The Windows taskbar is visible at the bottom with various application icons and a system clock showing 06:01 on 27-02-2025.

h) System Information:

a. Display the current system date and time.



```
meenakshi@DESKTOP-ZTHHS59: ~/LinuxAssignment
meenakshi@DESKTOP-ZTHHS59:~/LinuxAssignment$
meenakshi@DESKTOP-ZTHHS59:~/LinuxAssignment$ date
Thu Feb 27 06:02:33 IST 2025
meenakshi@DESKTOP-ZTHHS59:~/LinuxAssignment$
```

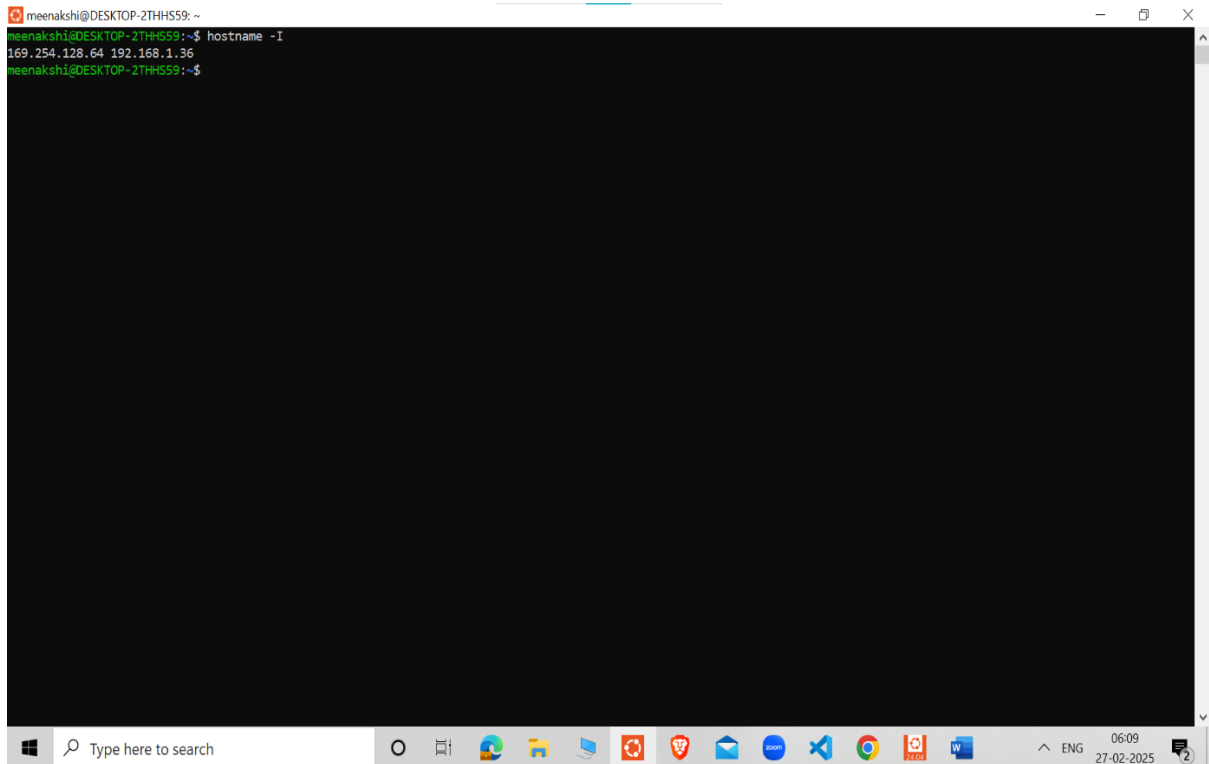
The screenshot shows a Windows desktop environment with a terminal window open. The terminal window has a title bar that reads "meenakshi@DESKTOP-ZTHHS59: ~/LinuxAssignment". The terminal content shows the user entering the command "date" and receiving the output "Thu Feb 27 06:02:33 IST 2025". The Windows taskbar at the bottom includes the Start button, a search bar with the text "Type here to search", and several application icons. The system tray on the right shows the time as "06:02" and the date as "27-02-2025", along with language and notification icons.

i) Networking:

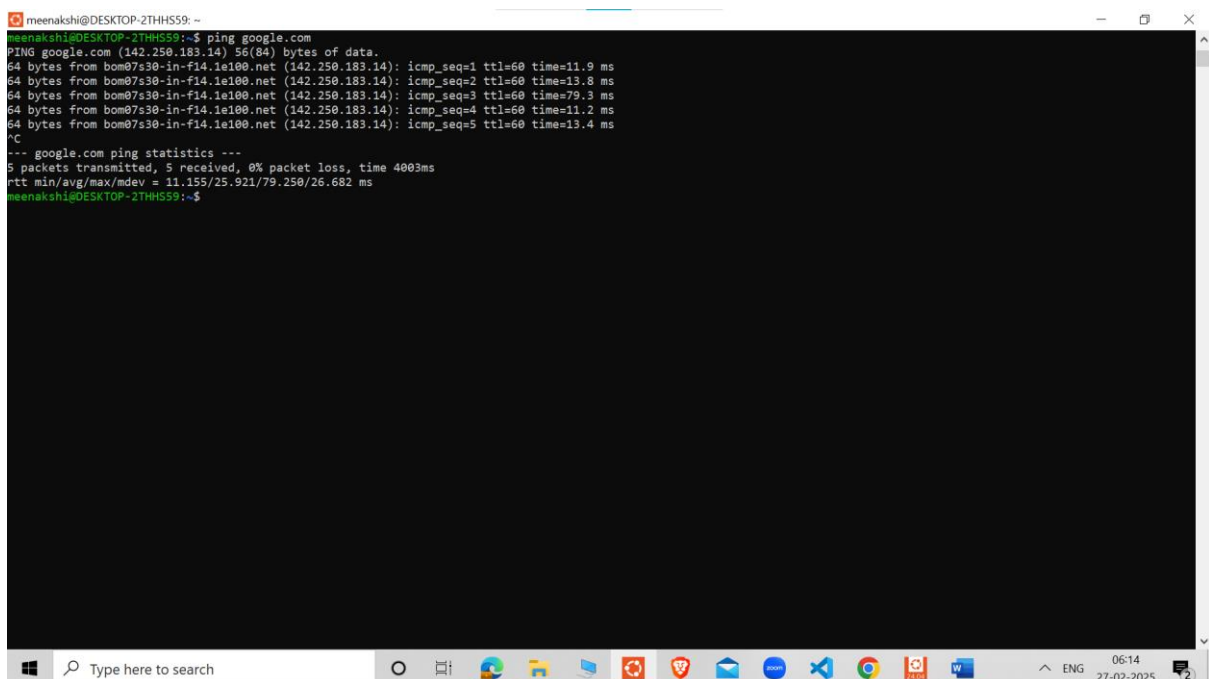
a. Display the IP address of the system.

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

```
meenakshi@DESKTOP-2THH559: ~  
meenakshi@DESKTOP-2THH559:~$ hostname -I  
169.254.128.64 192.168.1.36  
meenakshi@DESKTOP-2THH559:~$
```

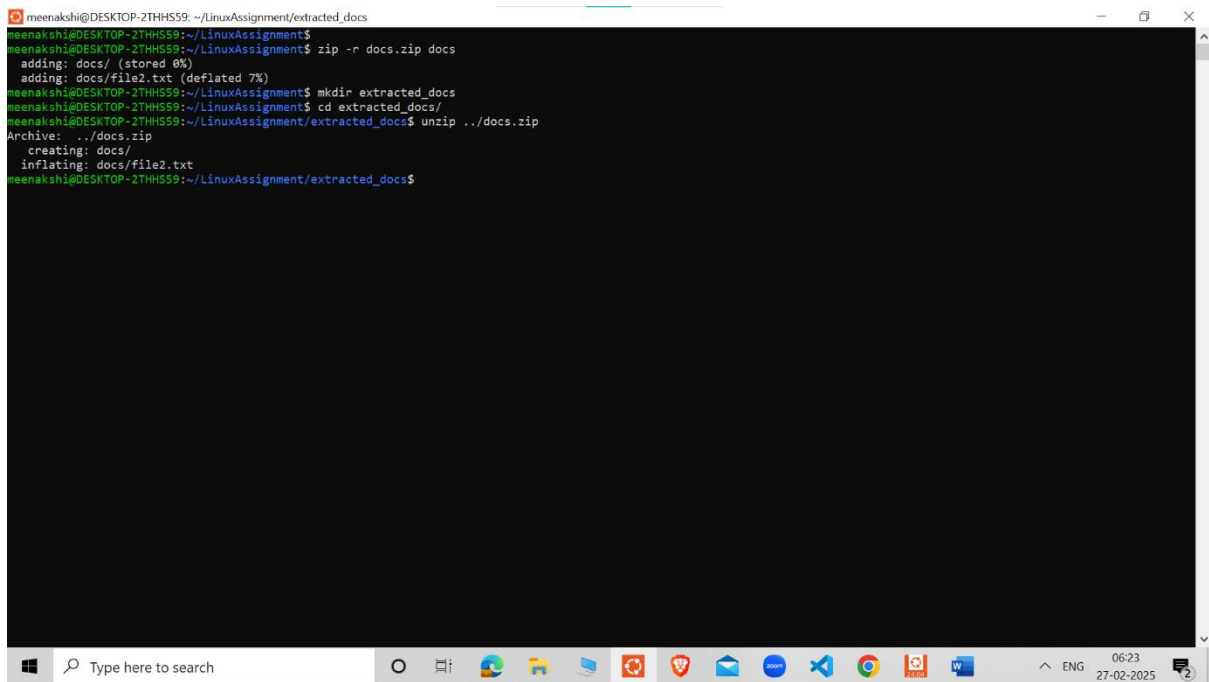
A screenshot of a Windows terminal window. The title bar shows the user 'meenakshi' and the system 'DESKTOP-2THH559'. The terminal displays the command 'hostname -I' and its output '169.254.128.64 192.168.1.36'. The Windows taskbar is visible at the bottom with various application icons and a system clock showing 06:09 on 27-02-2025.

```
meenakshi@DESKTOP-2THH559: ~  
meenakshi@DESKTOP-2THH559:~$ ping google.com  
PING google.com (142.250.183.14) 56(84) bytes of data:  
64 bytes from bom07s30-in-f14.1e100.net (142.250.183.14): icmp_seq=1 ttl=60 time=11.9 ms  
64 bytes from bom07s30-in-f14.1e100.net (142.250.183.14): icmp_seq=2 ttl=60 time=13.8 ms  
64 bytes from bom07s30-in-f14.1e100.net (142.250.183.14): icmp_seq=3 ttl=60 time=79.3 ms  
64 bytes from bom07s30-in-f14.1e100.net (142.250.183.14): icmp_seq=4 ttl=60 time=11.2 ms  
64 bytes from bom07s30-in-f14.1e100.net (142.250.183.14): icmp_seq=5 ttl=60 time=13.4 ms  
^C  
--- google.com ping statistics ---  
5 packets transmitted, 5 received, 0% packet loss, time 4003ms  
rtt min/avg/max/mdev = 11.155/25.921/79.250/26.682 ms  
meenakshi@DESKTOP-2THH559:~$
```

A screenshot of a Windows terminal window. The title bar shows the user 'meenakshi' and the system 'DESKTOP-2THH559'. The terminal displays the command 'ping google.com' and its output, which includes five successful ping responses with varying times and a summary statistics section showing 0% packet loss and an average round-trip time of approximately 26ms. The Windows taskbar is visible at the bottom with various application icons and a system clock showing 06:14 on 27-02-2025.

j) File Compression:

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

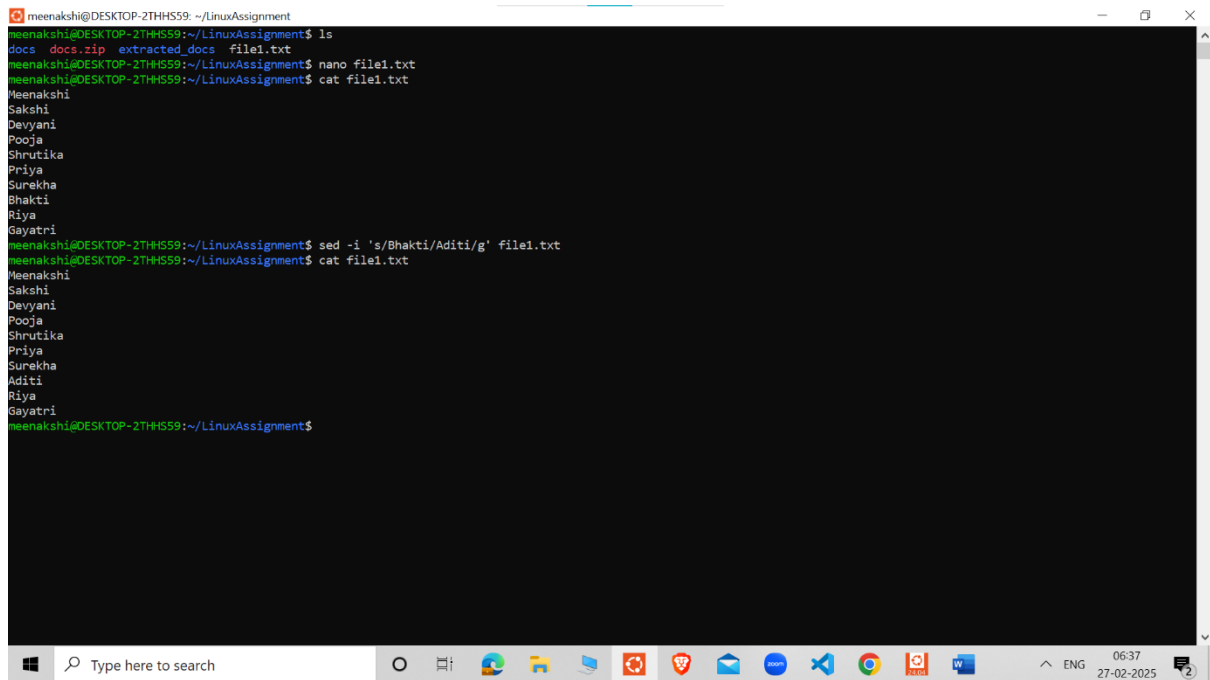


```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment/extracted_docs
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ zip -r docs.zip docs
  adding: docs/ (stored 0%)
  adding: docs/file2.txt (deflated 7%)
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ mkdir extracted_docs
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cd extracted_docs/
meenakshi@DESKTOP-2THH559:~/LinuxAssignment/extracted_docs$ unzip ../docs.zip
Archive:  ../docs.zip
  creating: docs/
  inflating: docs/file2.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment/extracted_docs$
```

The image shows a Windows terminal window with a dark background. The title bar indicates the user is meenakshi@DESKTOP-2THH559 and the current directory is ~/LinuxAssignment/extracted_docs. The terminal output shows the following sequence of commands and results: 1. Running 'zip -r docs.zip docs' creates a zip file named docs.zip in the current directory, containing the 'docs' directory and its contents. 2. Running 'mkdir extracted_docs' creates a new directory named extracted_docs. 3. Running 'cd extracted_docs/' changes the current directory to extracted_docs. 4. Running 'unzip ../docs.zip' extracts the contents of docs.zip into the current directory, creating a 'docs' subdirectory and a 'file2.txt' file. The Windows taskbar is visible at the bottom, showing the Start button, a search bar, and several application icons including File Explorer, Edge, and Word. The system clock shows 06:23 on 27-02-2025.

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).

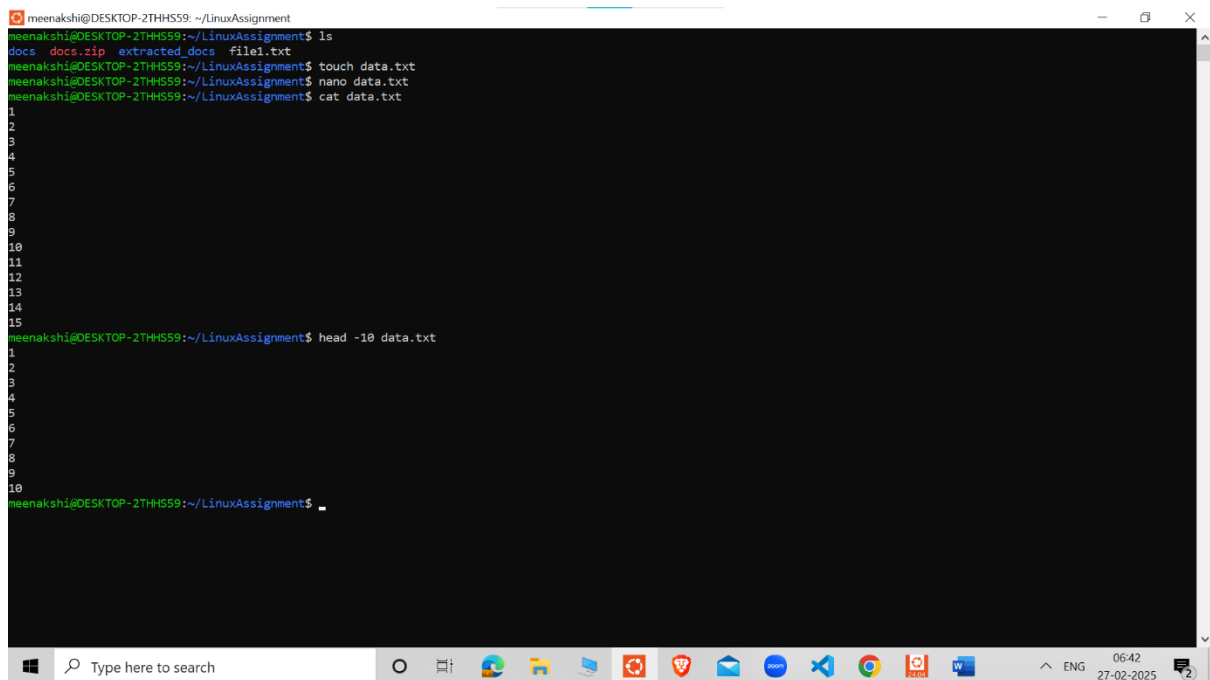


```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls
docs  docs.zip  extracted_docs  file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ nano file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat file1.txt
Meenakshi
Sakshi
Devyani
Pooja
Shrutika
Priya
Surekha
Bhakti
Riya
Gayatri
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ sed -i 's/Bhakti/Aditi/g' file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat file1.txt
Meenakshi
Sakshi
Devyani
Pooja
Shrutika
Priya
Surekha
Aditi
Riya
Gayatri
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$
```

The screenshot shows a terminal window with a dark background. The user 'meenakshi' is at a desktop named 'DESKTOP-2THH559' in the directory '~/LinuxAssignment'. They list files, showing 'file1.txt'. They open it with 'nano', then use 'cat' to view its contents. The file initially contains names: Meenakshi, Sakshi, Devyani, Pooja, Shrutika, Priya, Surekha, Bhakti, Riya, and Gayatri. They then use the 'sed' command to replace 'Bhakti' with 'Aditi'. Finally, they use 'cat' again to show the updated file contents, where 'Aditi' has replaced 'Bhakti'. The Windows taskbar is visible at the bottom with the search bar and various application icons.

Problem 2:

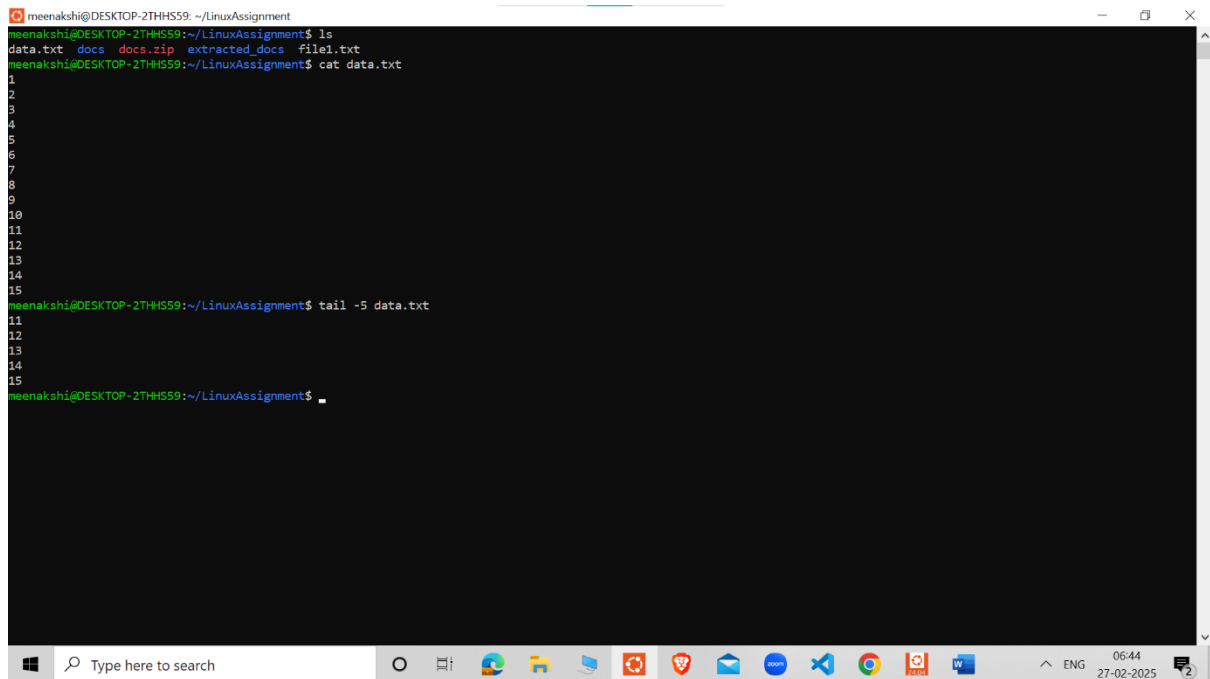
a. Suppose you have a file named "data.txt" containing important information. Display the first 10 lines of this file to quickly glance at its contents using a command.



```
meenakshi@DESKTOP-2THHS59: ~/LinuxAssignment
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ ls
docs  docs.zip  extracted_docs  file1.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ touch data.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ nano data.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cat data.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ head -10 data.txt
1
2
3
4
5
6
7
8
9
10
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$
```

The screenshot shows a Windows desktop environment with a terminal window titled "meenakshi@DESKTOP-2THHS59: ~/LinuxAssignment". The terminal displays a series of commands and their outputs. The user lists the contents of the current directory, creating a new file "data.txt", and then uses the "cat" command to display the contents of "data.txt", which are numbered lines 1 through 15. Finally, the user uses the "head -10" command to display the first 10 lines of "data.txt", which are numbered lines 1 through 10. The Windows taskbar is visible at the bottom, showing the search bar, task view button, and several application icons.

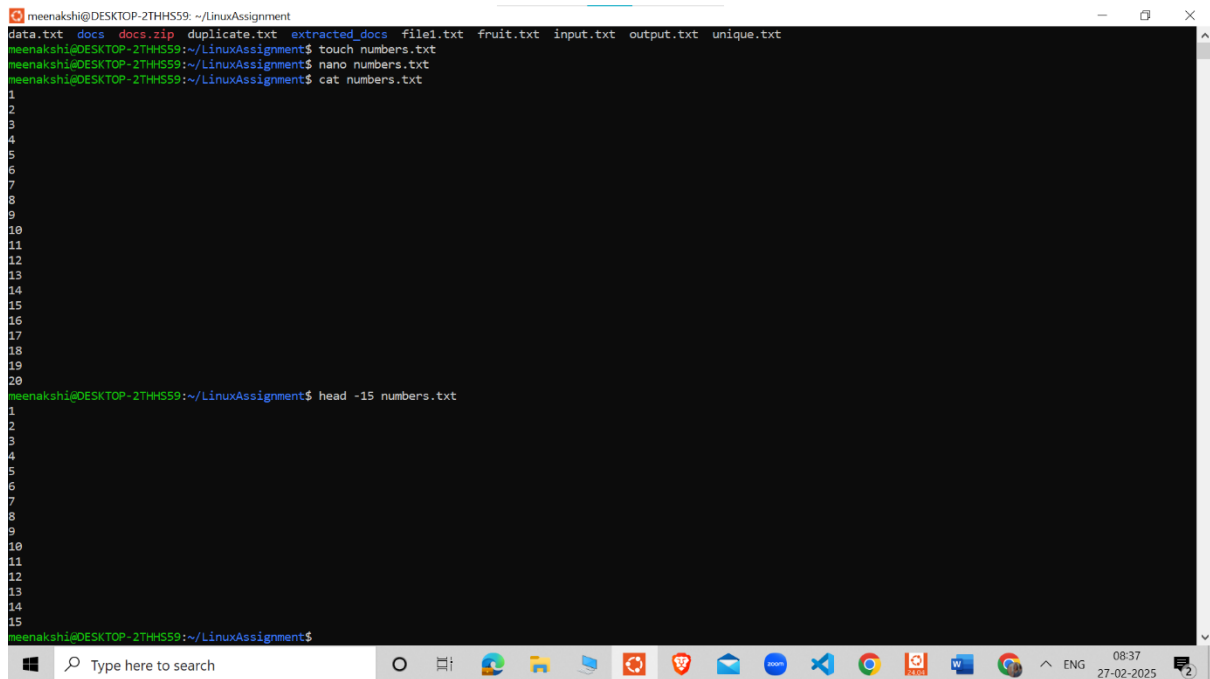
b. Now, to check the end of the file for any recent additions, display the last 5 lines of "data.txt" using another command.



```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls
data.txt  docs  docs.zip  extracted_docs  file1.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat data.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ tail -5 data.txt
11
12
13
14
15
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$
```

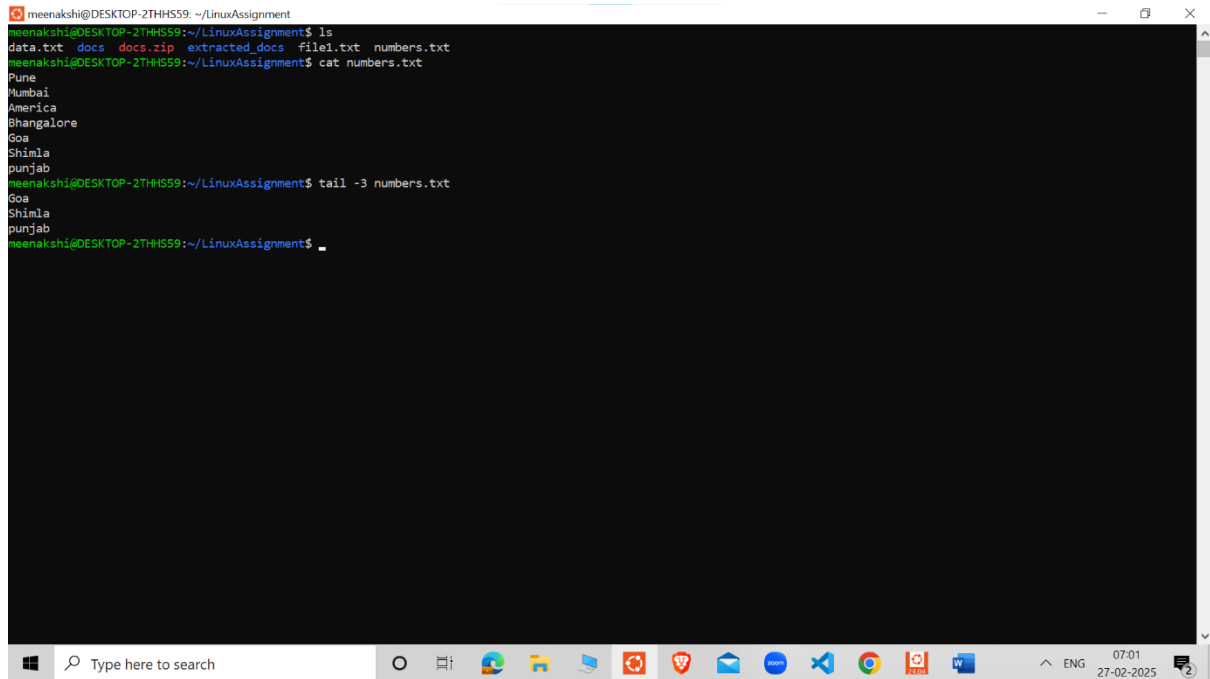
The screenshot shows a Windows desktop environment with a terminal window open. The terminal window has a title bar that reads "meenakshi@DESKTOP-2THH559: ~/LinuxAssignment". The terminal content shows the user running the 'ls' command, which lists files in the current directory: 'data.txt', 'docs', 'docs.zip', 'extracted_docs', and 'file1.txt'. Then, the user runs 'cat data.txt', which displays lines 1 through 15 of the file. Finally, the user runs 'tail -5 data.txt', which displays the last five lines of the file (lines 11 through 15). The terminal window is positioned over a Windows taskbar at the bottom of the screen, which includes a search bar and various application icons. The system clock in the bottom right corner shows the time as 06:44 on 27-02-2025.

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

A screenshot of a Linux terminal window. The title bar reads 'meenakshi@DESKTOP-2THH559: ~/LinuxAssignment'. The terminal shows a series of commands: 'touch numbers.txt', 'nano numbers.txt', 'cat numbers.txt', and 'head -15 numbers.txt'. The output of 'cat numbers.txt' shows line numbers 1 through 20. The output of 'head -15 numbers.txt' shows line numbers 1 through 15. The terminal window has a dark background with light green text. The Windows taskbar is visible at the bottom with various application icons and a search bar.

```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
data.txt docs docs.zip duplicate.txt extracted_docs file1.txt fruit.txt input.txt output.txt unique.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ touch numbers.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ nano numbers.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ head -15 numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$
```

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



```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls
data.txt  docs  docs.zip  extracted_docs  file1.txt  numbers.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat numbers.txt
Pune
Mumbai
America
Bhargalore
Goa
Shimla
punjab
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ tail -3 numbers.txt
Goa
Shimla
punjab
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$
```

The image shows a Windows terminal window with a black background and green text. The user is in the directory ~/LinuxAssignment. They run 'ls' and see a list of files including 'numbers.txt'. Then they run 'cat numbers.txt' and see a list of locations: Pune, Mumbai, America, Bhargalore, Goa, Shimla, and punjab. Finally, they run 'tail -3 numbers.txt' and see the last three lines: Goa, Shimla, and punjab. The Windows taskbar is visible at the bottom with various application icons and a system clock showing 07:01 on 27-02-2025.

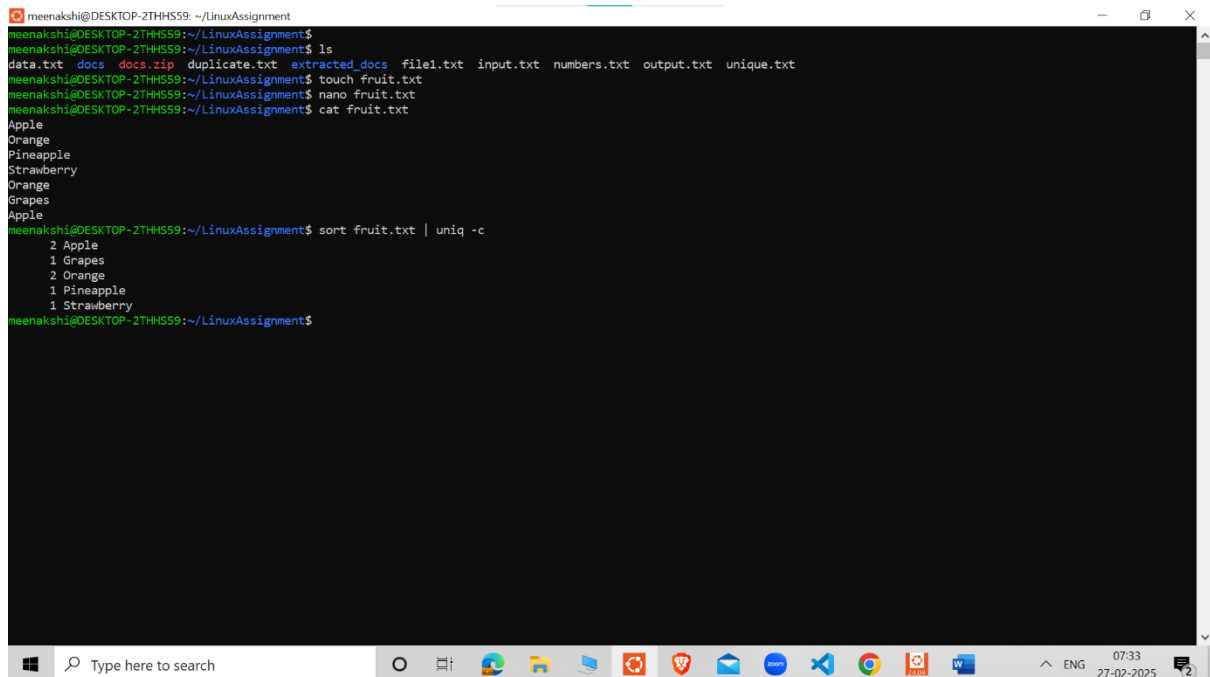
e. Imagine you have a file named "input.txt" with text content. Use a command to translate all lowercase letters to uppercase in "input.txt" and save the modified text in a new file named "output.txt."

```
meenakshi@DESKTOP-2THHS59: ~/LinuxAssignment
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ ls
data.txt docs docs.zip extracted_docs file1.txt numbers.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ touch input.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cat input.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ nano input.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cat input.txt
hello, my name is meenakshi
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ ls
data.txt docs docs.zip extracted_docs file1.txt input.txt numbers.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ touch output.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cat output.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ tr '[:lower:]' '[:upper:]' <input.txt> output.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cat output.txt
HELLO, MY NAME IS MEENAKSHI
meenakshi@DESKTOP-2THHS59:~/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."

```
meenakshi@DESKTOP-2THH559: ~/LinuxAssignment
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ ls
data.txt docs docs.zip duplicate.txt extracted_docs file1.txt input.txt numbers.txt output.txt unique.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat duplicate.txt
Pune
Mumbai
Goa
Mumbai
Bangalore
America
Lavasa City
Bangalore
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ sort duplicate.txt | uniq
America
Bangalore
Goa
Lavasa City
Mumbai
Pune
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ sort duplicate.txt | uniq > unique.txt
meenakshi@DESKTOP-2THH559:~/LinuxAssignment$ cat unique.txt
America
Bangalore
Goa
Lavasa City
Mumbai
Pune
meenakshi@DESKTOP-2THH559:~/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."



```
meenakshi@DESKTOP-2THHS59: ~/LinuxAssignment
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ ls
data.txt  docs  docs.zip  duplicate.txt  extracted_docs  file1.txt  input.txt  numbers.txt  output.txt  unique.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ touch fruit.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ nano fruit.txt
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ cat fruit.txt
Apple
Orange
Pineapple
Strawberry
Orange
Grapes
Apple
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$ sort fruit.txt | uniq -c
  2 Apple
  1 Grapes
  2 Orange
  1 Pineapple
  1 Strawberry
meenakshi@DESKTOP-2THHS59:~/LinuxAssignment$
```

The screenshot shows a Windows desktop environment with a terminal window open. The terminal displays the execution of several Linux commands: `ls` to list files, `touch fruit.txt` to create a file, `nano fruit.txt` to edit it, and `cat fruit.txt` to view its contents. The file `fruit.txt` contains a list of fruits with some repetitions: Apple, Orange, Pineapple, Strawberry, Orange, Grapes, and Apple. The final command, `sort fruit.txt | uniq -c`, sorts the file and uses `uniq -c` to count the occurrences of each unique fruit, resulting in: 2 Apple, 1 Grapes, 2 Orange, 1 Pineapple, and 1 Strawberry. The Windows taskbar at the bottom shows the search bar, task view button, and several application icons, with the system clock indicating 07:33 on 27-02-2025.