**✅ Assignment 1 Solutions**

**Problem 1**

**a) Navigate and List**

cdac@LAPTOP-25O661SR:~$ cd ~ # go to home directory

cdac@LAPTOP-25O661SR:~$ ls # list contents

aaa.txt dir1

cdac@LAPTOP-25O661SR:~$ mkdir -p LinuxAsssignment # create directory if it does not exist

**b) File Management**

cdac@LAPTOP-25O661SR:~/LinuxAsssignment$ touch file1.txt # create file

cdac@LAPTOP-25O661SR:~/LinuxAsssignment$ cat file1.txt # display contents (empty for now)

**c) Directory Management**

cdac@LAPTOP-25O661SR:~/LinuxAsssignment$ mkdir docs # create "docs" directory

**d) Copy and Move Files**

cdac@LAPTOP-25O661SR:~/LinuxAsssignment$ cp file1.txt docs/file2.txt #copy

mv file1.txt file2.txt #move file

**e) Permissions and Ownership**

chmod 744 docs/file2.txt # rwx for owner, r-- for group/others

chown $USER docs/file2.txt # change owner to current user

**f) Final Checklist**

cdac@LAPTOP-25O661SR:~$ ls

o/p:------------------------------------------------------------------------------------------------

LinuxAsssignment aaa.txt dir1 docs file1.txt

**g) File Searching:**

cdac@LAPTOP-25O661SR:~$ find . -name "\*.txt" # search for all .txt files

o/p:------------------------------------------------------------------------------------------------

./file2.txt

./cdac1/file1.txt

./file111.txt

./aaa.txt

./LinuxAsssignment/app.txt

./docs/file2.txt

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

word to search).

**ANS.**

cdac@LAPTOP-25O661SR:~$ grep "java" file.txt

o/p:------------------------------------------------------------------------------------------------

java

**h) System Information:**

a. Display the current system date and time.

**ANS.**

cdac@LAPTOP-25O661SR:~$ date

o/p:------------------------------------------------------------------------------------------------

Tue Aug 19 12:39:59 UTC 2025

**i) Networking:**

a. Display the IP address of the system.

**ANS.** ifconfig

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

**ANS.** ip addr show

**j) File Compression:**

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

**ANS.** zip -r docs.zip docs

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

**ANS.**  unzip docs.zip -d docs\_new

**k) File Editing:**

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

**ANS.** vi file1.txt

echo "This is some new text." >> file1.txt

b. Replace a specific word in the "file1.txt" file with another word (provide the original

word and the word to replace it with).

**ANS.** sed -i 's/oldword/newword/g' file1.txt

**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.

**ANS.**

cdac@LAPTOP-25O661SR:~$ head file.txt

o/p:-------------------------------------------------------------------------------------

hello

welcome

intro

java

python

public

ubuntu

red

orange

White

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

"data.txt" using another command

**ANS.**

cdac@LAPTOP-25O661SR:~$ tail -n 5 file.txt

o/p:------------------------------------------------------------------------------------------------

Purple

ZP

12334

good morning!!

what a evening, it feels so cool broo.lets take a selfie with sunset.

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

this file to analyze the initial data set.

**ANS.**

cdac@LAPTOP-25O661SR:~$ head -n 15 numbers.txt

o/p:------------------------------------------------------------------------------------------------

1

4

8

67

324

2255

5

54

96

25

94

76

2351

64

94

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

**ANS.**

cdac@LAPTOP-25O661SR:~$ tail -n 3 numbers.txt

o/p:------------------------------------------------------------------------------------------------

66

65

55

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."

**ANS.**

tr 'a-z' 'A-Z' < input.txt > output.txt

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."

**ANS.**

cdac@LAPTOP-25O661SR:~$ sort -u duplicate.txt

o/p:------------------------------------------------------------------------------------------------

Gpay

Hello

OS

Upi

Write

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."

**ANS.** sort fruit.txt | uniq -c

cdac@LAPTOP-25O661SR:~$ sort file.txt | uniq -c

o/p:------------------------------------------------------------------------------------------------

2 ZP 1 good morning! 2 hello