Assignment 1

Question 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.

Answer:

cdac@DESKTOP-4QJ255D:~$ pwd

/home/cdac

cdac@DESKTOP-4QJ255D:~$ ls

Feb25 abc.txt abcd.txt.save file1.txt file1.txt.save.1 xyz.txt.save

LinuxAssignment abc.txt.save file.txt file1.txt.save xyz.txt

cdac@DESKTOP-4QJ255D:~$ cd

cdac@DESKTOP-4QJ255D:~$ cd LinuxAssignment

cdac@DESKTOP-4QJ255D:~/LinuxAssignment$

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

Answer:

cdac@DESKTOP-4QJ255D:~/LinuxAssignment$ touch LinuxAssignment file1.txt

cdac@DESKTOP-4QJ255D:~/LinuxAssignment$ ls

LinuxAssignment docs docs1 file1.txt

file1: line 4: good: command not found

cdac@DESKTOP-4QJ255D:~/LinuxAssignment$ nano file2

cdac@DESKTOP-4QJ255D:~/LinuxAssignment$ bash file2

file2: line 1: kajal:

file2: line 2: Anaya

file2: line 3: Arjun

file2: line 4: nikhil

file2: line 5: mayuri

c) Directory Management:

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

cdac@DESKTOP-4QJ255D:~$ mkdir docs

Feb25 LinuxAssignment docs file.txt file1.txt

d)Copy and Move Files:

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

cdac@DESKTOP-4QJ255D:~$ mv file1.txt file2.txt

cdac@DESKTOP-4QJ255D:~$ ls

Feb25 LinuxAssignment docs file.txt file2.txt

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.

Answer:

cdac@DESKTOP-4QJ255D:~$ chmod 744 file2.txt

cdac@DESKTOP-4QJ255D:~$ sudo chown $(whoami) file2.txt

f) Final Checklist:

a. Finally, list the contents of the "LinuxAssignment" directory and the root directory to ensure that

all operations were performed correctly

Answer:

cdac@DESKTOP-4QJ255D:~$ ls

Feb25 LinuxAssignment docs file.txt file2.txt

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).

h) System Information:

a. Display the current system date and time.

Answer:

cdac@DESKTOP-4QJ255D:~$ date

Thu Feb 27 18:25:59 UTC 2025

I) Networking:

a. Display the IP address of the system.

cdac@DESKTOP-4QJ255D: ~$ hostname -I

172.18.125.126

**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.

cdac@DESKTOP-4QJ255D: ~$ touch data.txt

cdac@DESKTOP-4QJ255D: ~$ ls

Feb25 LinuxAssignment data.txt docs file.txt file2.txt

cdac@DESKTOP-4QJ255D: ~$ nano data.txt

cdac@DESKTOP-4QJ255D: ~$ head -10 data.txt

hi

hello

how are you

nice

good

welcome

thank you

book

java

oracle

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@DESKTOP-4QJ255D:~$ tail -5 data.txt

thank you

book

java

oracle

android

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.

Answer:

cdac@DESKTOP-4QJ255D:~$ cat number.txt

cdac@DESKTOP-4QJ255D:~$ nano number.txt

cdac@DESKTOP-4QJ255D:~$ head -n 15 number.txt

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

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

Answer:

cdac@DESKTOP-4QJ255D:~$ tail -n 3 number.txt

90

95

100

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."

Answer:

cdac@DESKTOP-4QJ255D:~$ nano input.txt

cdac@DESKTOP-4QJ255D:~$ tr 'a-z' 'A-Z' <input.txt> output.txt

cdac@DESKTOP-4QJ255D:~$ cat output.txt

HI

HELLO

HOW ARE U

FINE

THANK U

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."

Answer:

cdac@DESKTOP-4QJ255D:~$ nano duplicate1.txt

cdac@DESKTOP-4QJ255D:~$ cat duplicate1.txt

hi

hello

hi

how are you

kajal

cdac@DESKTOP-4QJ255D:~$ uniq duplicate.txt

hi

hello

how are you

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@DESKTOP-4QJ255D:~$ nano fruit.txt

cdac@DESKTOP-4QJ255D:~$ cat fruit.txt

apple

banana

pineapple

apple

mango

mango

cdac@DESKTOP-4QJ255D:~$ uniq -c fruit.txt

1 apple

1 banana

1 pineapple

1 apple

2 mango