

**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.

Ans =>for navigating to home directory we can check by command- **cd home/shreyakes**

For listing content command is – **ls**

For creating directory named "LinuxAssingment" command is- **mkdir LinuxAssingment**

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**b) File Management:**

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

Ans =>For creating a new inside the LlinuxAssingment directory first type command **cd LinuxAssingment**

Then type command **touch file1.txt**

To display its content you can type command **cat file1.txt**

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**c) Directory Management:**

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

Ans =>for creating new directory inside the LinuxAssingment do – **cd LinuxAssingment/**

By this command you will get inside the LinuxAssingment directory now type command- **mkdir docs**

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**d) Copy and Move Files:**

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

**Ans** =>For copying the file1.txt into doc write command **cp file1.txt docs/**

For renaming it in docs directory first go into docs directory by command **cd docs/**

Now forrenaming file1.txt into file2.txt by command **mv file1.txt file2.txt**

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**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.

Ans =>for changing the permission we can use chmod command , and for changing permission according to que we write command **chmod 744 file2.txt**

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f) **Final Checklist:**

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

Ans => for listing out the LinuxAssignment directory we can write command in LinuxAssignment folder **ls**

Output : docs file1.txt

For listing down the root directory first we have to reach there from this use command **cd ..**

Now write command **ls**

Output : LinuxAssignment

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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).

Ans=> for searching all file with extension .txt we can use command **ls \*.txt**

For display line containing specific word we need to run command **grep "shreya's" file1.txt**

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h) **System Information:**

- a. Display the current system date and time.

Ans => for this just write command **date**

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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)..

Ans => to display ip address we need to run command **ifconfig -a**

To check remote server connectivity we can use command **ping www.google.com**

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j) **File Compression:**

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

Ans => use this command for converting docs file into zip file **zip Docs.zip docs**

If you want to check you can write ls command you will get output Docs.zip

For extracting the content of Docs.zip file write command **Docs.zip -d decompress.txt**

Here Docs.zip is zip file and decompress.txt is a file where content is extracted

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**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).

Ans => for adding some data use cat command cat file1.txt

For replacing some text from upper file use command **sed -i 's/new/edited/g' file1.txt**

Here "new" is word that will be replaced and "edited" word will be add in file1.txt

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