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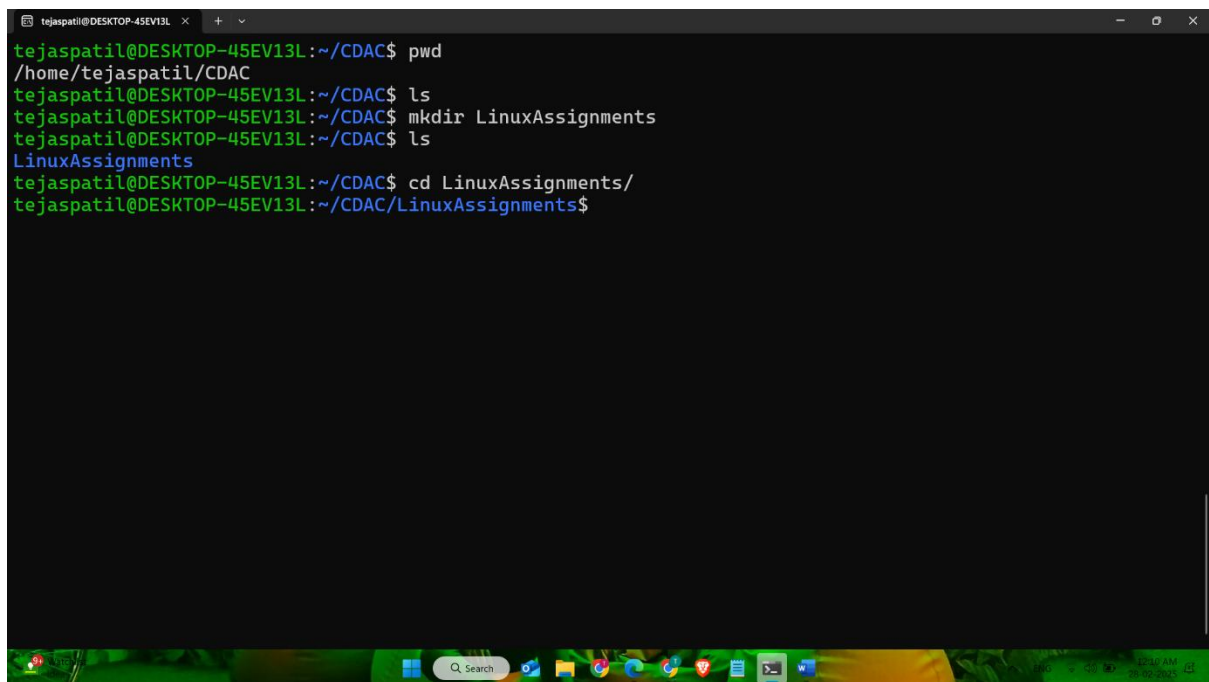
## Concepts of Operating System

### Assignment 1

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.

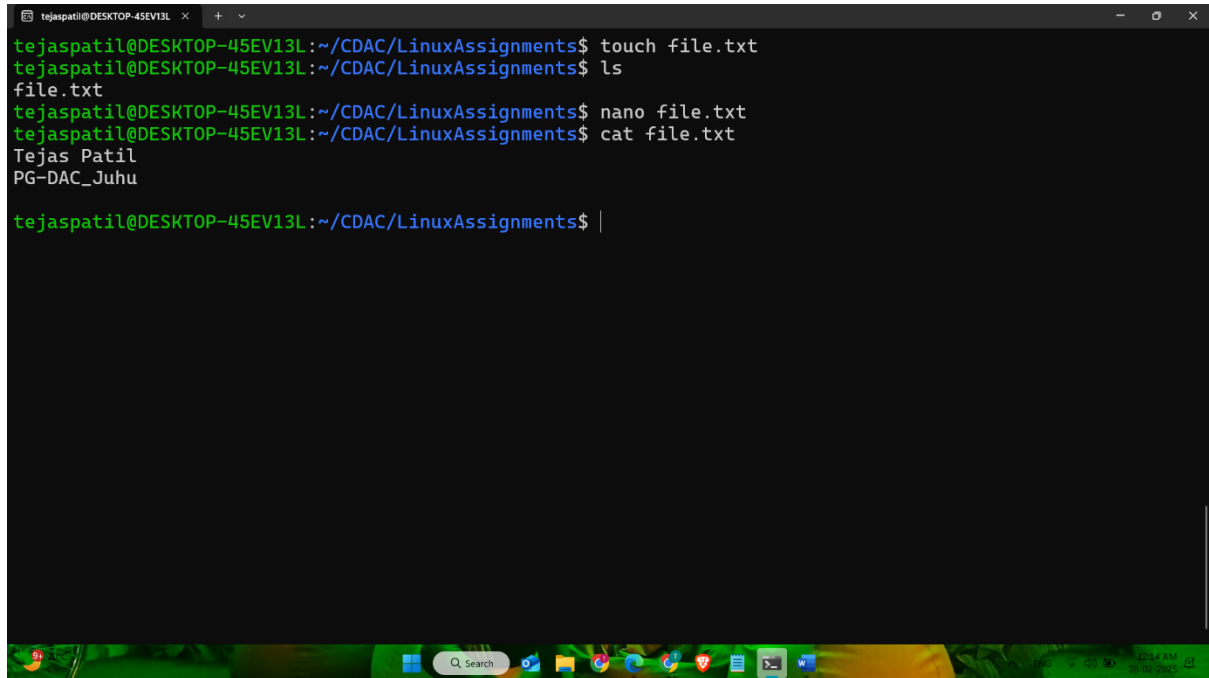
A screenshot of a Windows desktop with a terminal window open. The terminal window has a title bar that reads 'tejaspatil@DESKTOP-45EV13L'. The terminal shows the following commands and output:

```
tejaspatil@DESKTOP-45EV13L:~/CDAC$ pwd
/home/tejaspatil/CDAC
tejaspatil@DESKTOP-45EV13L:~/CDAC$ ls
tejaspatil@DESKTOP-45EV13L:~/CDAC$ mkdir LinuxAssignments
tejaspatil@DESKTOP-45EV13L:~/CDAC$ ls
LinuxAssignments
tejaspatil@DESKTOP-45EV13L:~/CDAC$ cd LinuxAssignments/
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$
```

The desktop background is a green and yellow abstract image. The taskbar at the bottom shows various application icons including File Explorer, Edge, and the terminal itself. The system clock in the bottom right corner shows 12:18 AM on 08/10/2023.

## b) File Management:

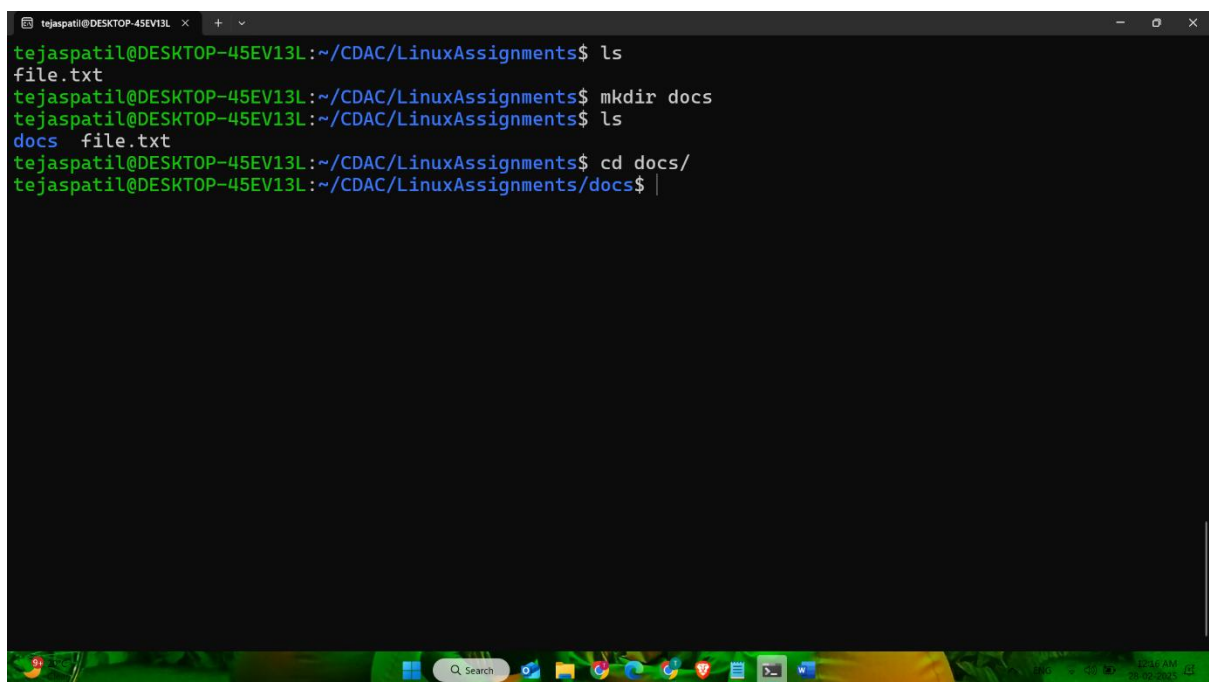
- a. Inside the "LinuxAssignment" directory, create a new file named "file1.txt". Display its contents.

A terminal window titled 'tejaspatil@DESKTOP-45EV13L' with a dark background. The user is in the directory ~/CDAC/LinuxAssignments. The commands and their outputs are: 'touch file.txt' (no output), 'ls' (output: file.txt), 'nano file.txt' (no output), and 'cat file.txt' (output: Tejas Patil, PG-DAC\_Juhu). The prompt is currently at the end of the 'cat' command line.

```
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ touch file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ ls
file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ nano file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ cat file.txt
Tejas Patil
PG-DAC_Juhu
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ |
```

## c) Directory Management:

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

A terminal window titled 'tejaspatil@DESKTOP-45EV13L' with a dark background. The user is in the directory ~/CDAC/LinuxAssignments. The commands and their outputs are: 'ls' (output: file.txt), 'mkdir docs' (no output), 'ls' (output: docs file.txt), and 'cd docs/' (no output). The prompt is currently at the end of the 'cd' command line.

```
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ ls
file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ mkdir docs
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ ls
docs  file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ cd docs/
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ |
```

## d) Copy and Move Files:

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

```
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ cd ..
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ ls
docs  file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ cp file.txt docs/
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ ls
docs  file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ cd docs/
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ ls
file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ cd ..
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ mv file.txt file2.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ ls
docs  file2.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ |
```

## 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.

```
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments$ cd docs/
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ chmod 744 file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ ls -l
total 4
-rwxr--r-- 1 tejaspatil tejaspatil 25 Feb 28 00:20 file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ chmod $(whoami) file.txt
chmod: invalid mode: 'tejaspatil'
Try 'chmod --help' for more information.
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ chown $(whoami) file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ ls -l
total 4
-rwxr--r-- 1 tejaspatil tejaspatil 25 Feb 28 00:20 file.txt
tejaspatil@DESKTOP-45EV13L:~/CDAC/LinuxAssignments/docs$ |
```

**f) Final Checklist:**

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