Lab 02: User Management

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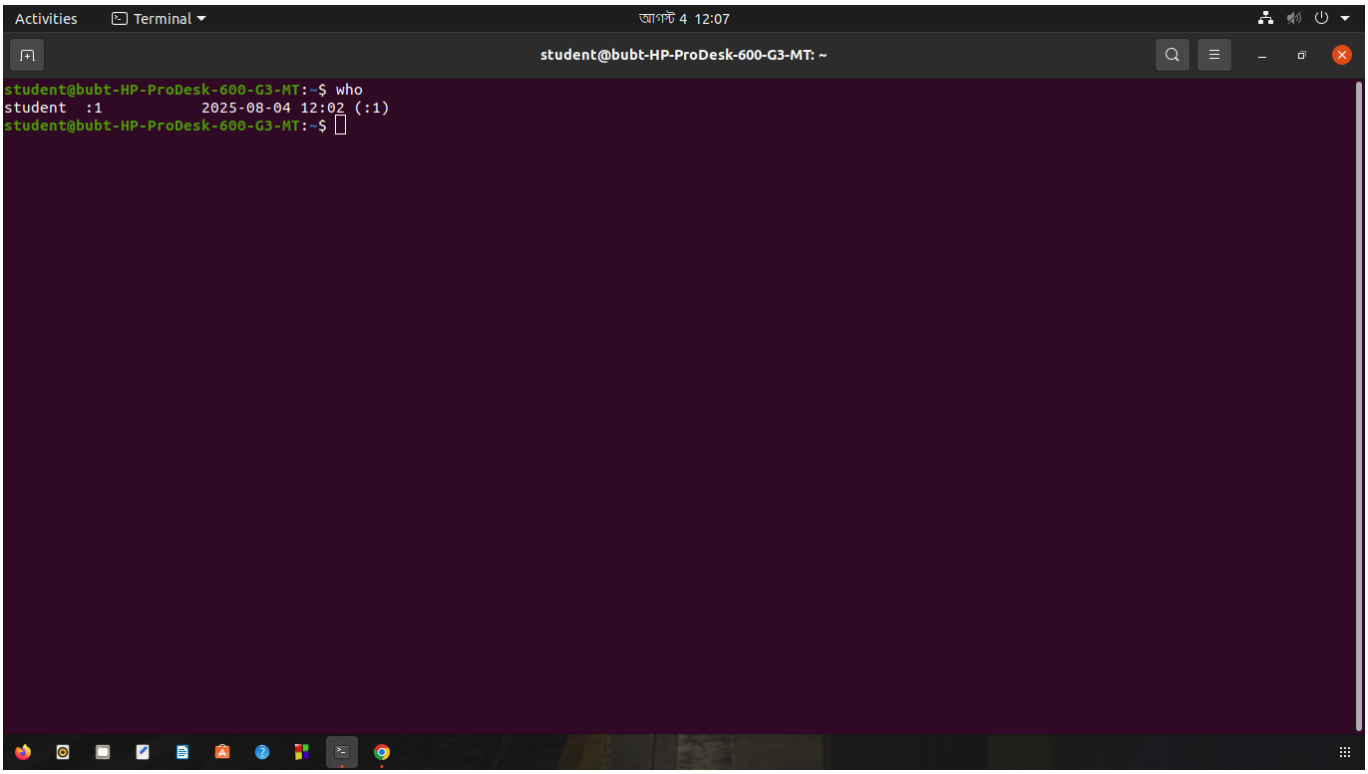
Summary of Commands Used

Command	Description
`who`	Show currently logged-in users
`useradd -m developer2`	Create a new user with a home directory
`passwd`	Set user password
`groupadd development2`	Create a new group
`usermod -aG group user`	Add user to group
`chown` / `chgrp`	Change ownership and group of a file/dir
`chmod 740`	Set permissions for owner, group, others
`cat`	Display file contents
`tar -czvf` / `tar -xzvf`	Archive and extract files
`ps aux`	View running processes
`ping google.com`	Test network connectivity

1. Troubleshooting

Task 1.1: Use the `who` command to identify the currently logged-in users on the system.

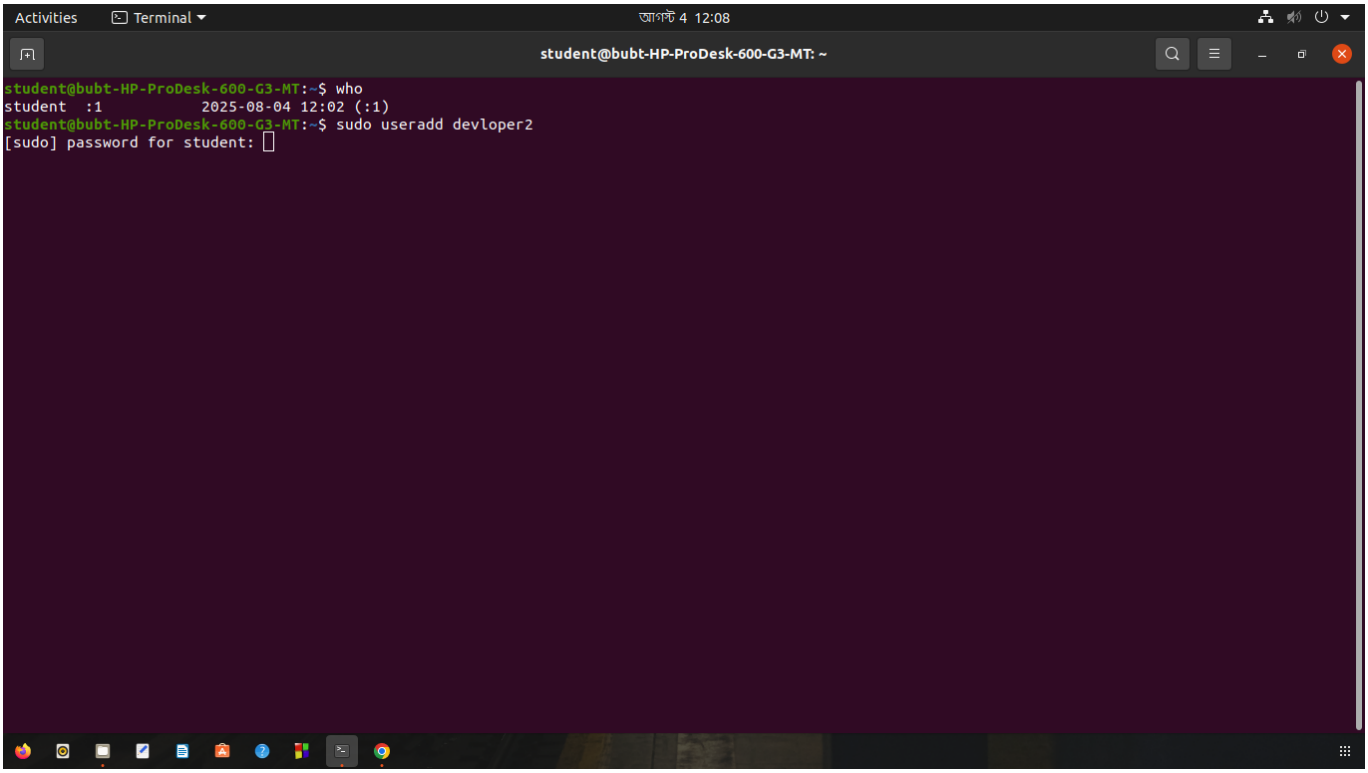
```
who
```



2. User Management

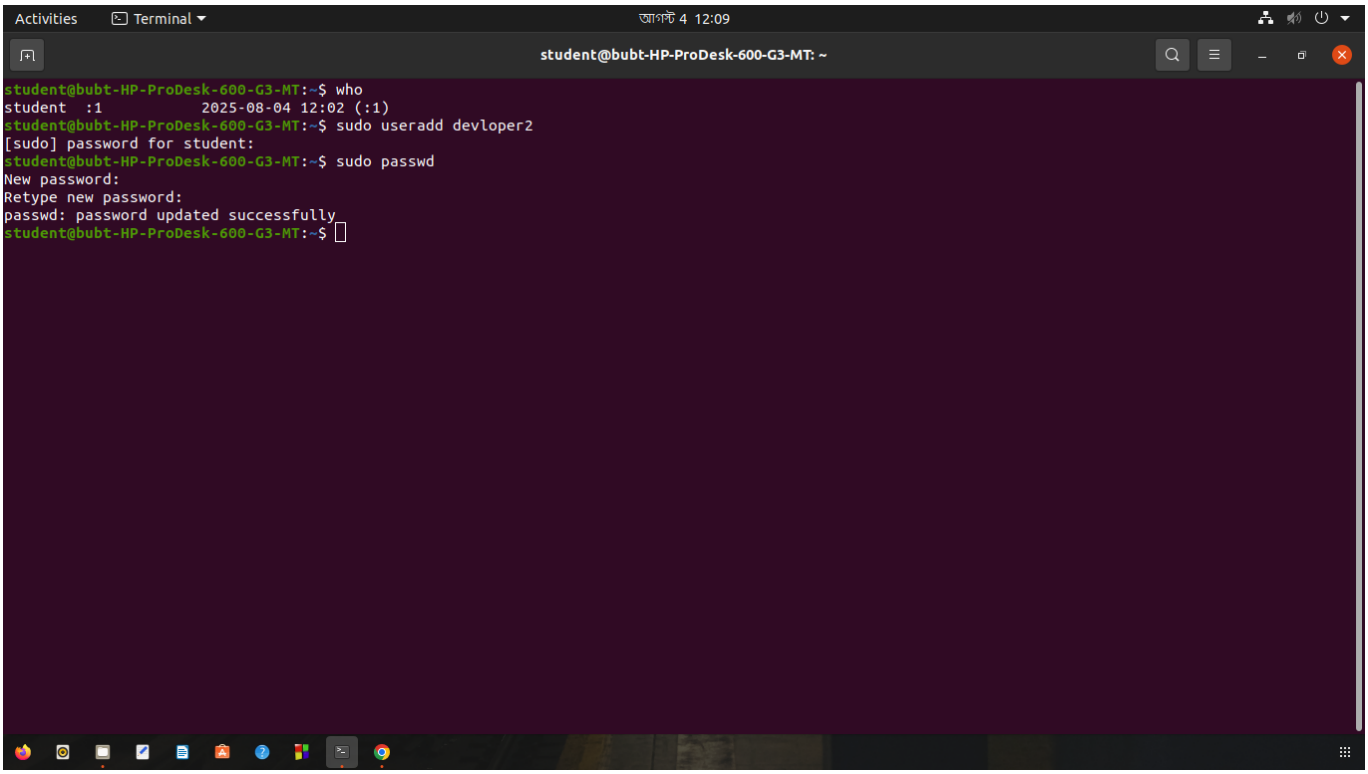
Task 2.1: Create a new user named **developer2** using the `useradd` command.

```
sudo useradd -m developer2
```



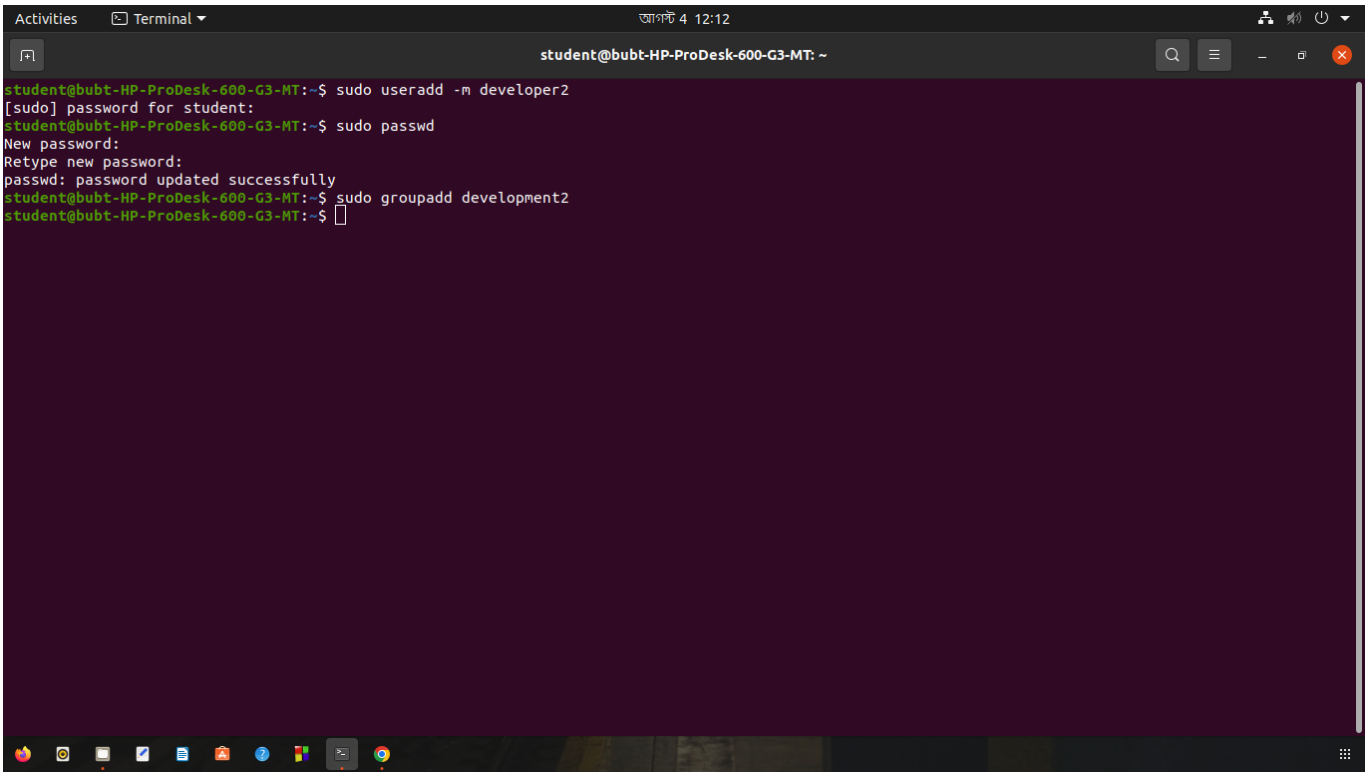
Task 2.2: Set a password for the newly created user using the `passwd` command.

```
sudo passwd
```



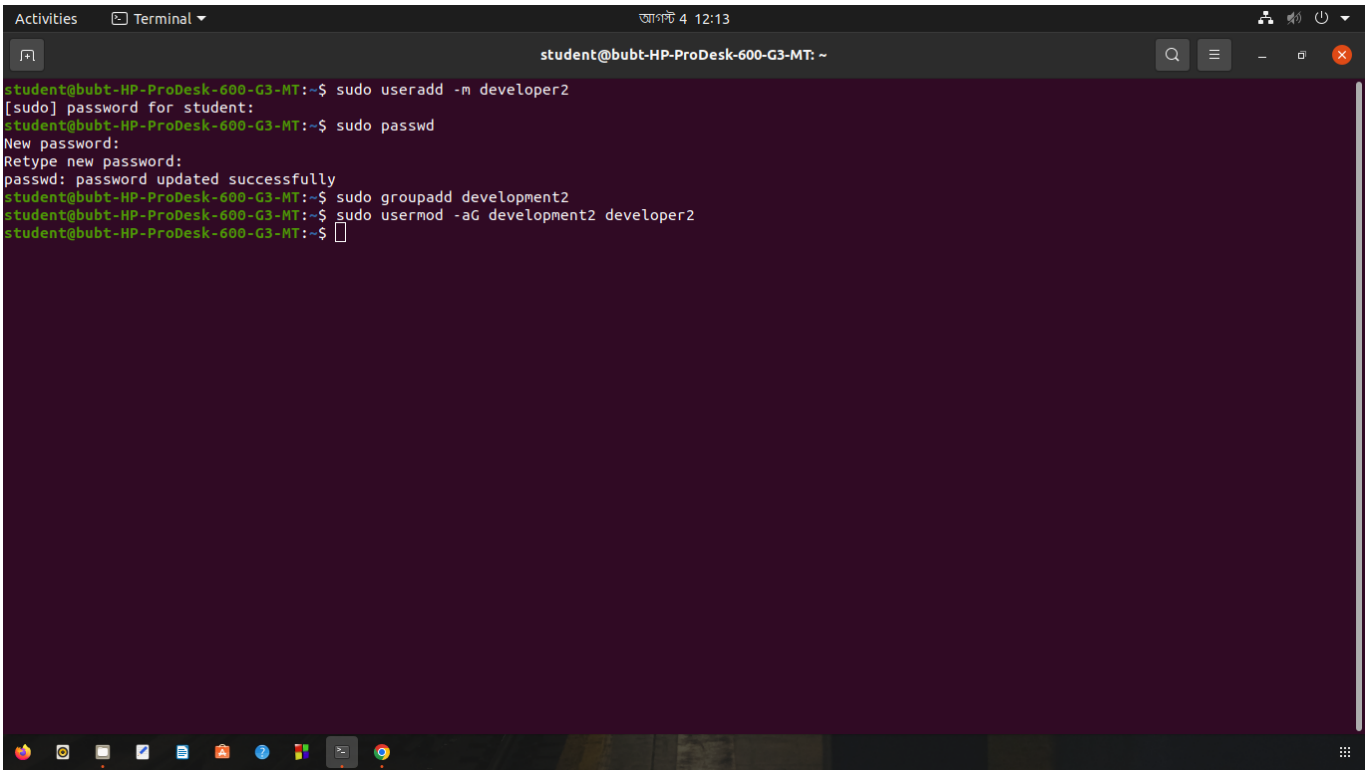
Task 2.3: Create a new group named **development2** using the `groupadd` command.

```
sudo groupadd development2
```



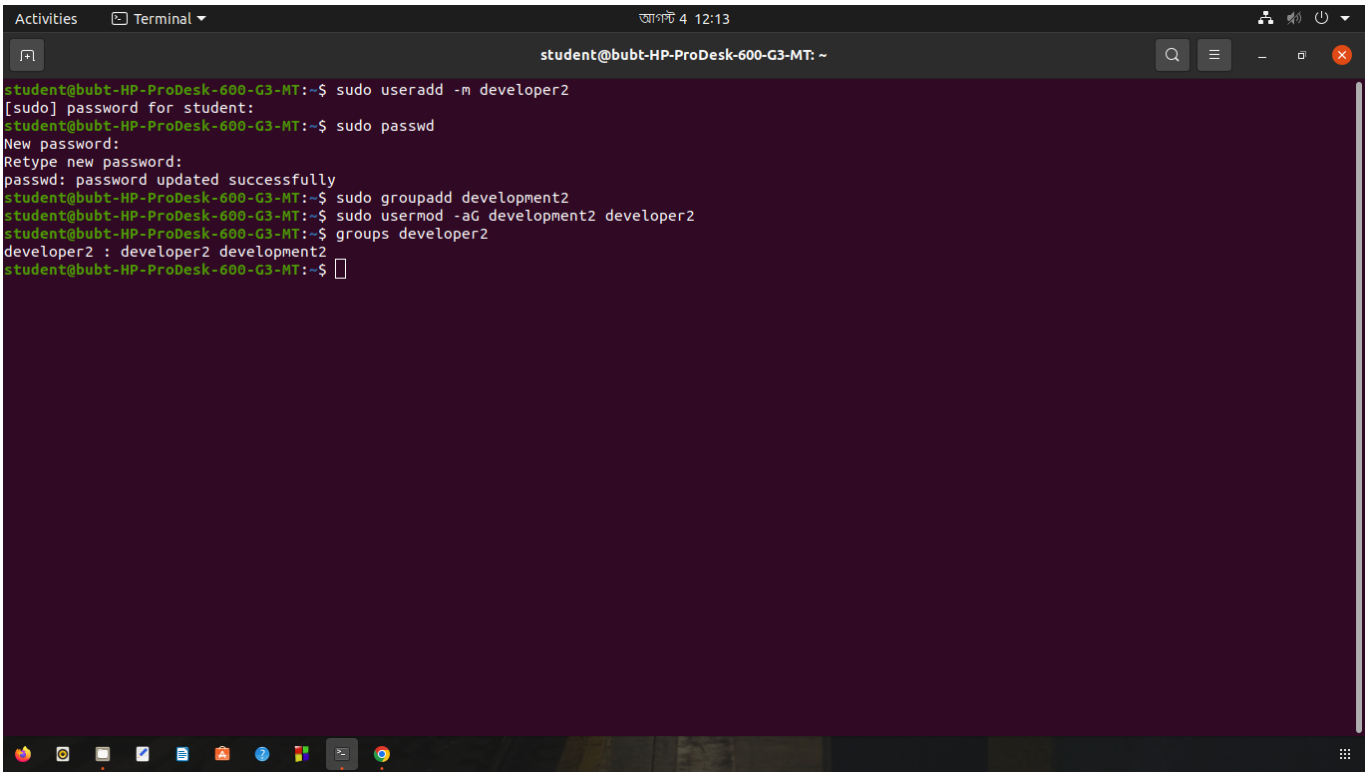
Task 2.4: Add the user **developer2** to the **development2** group using the `usermod` command.

```
sudo usermod -aG development2 developer2
```



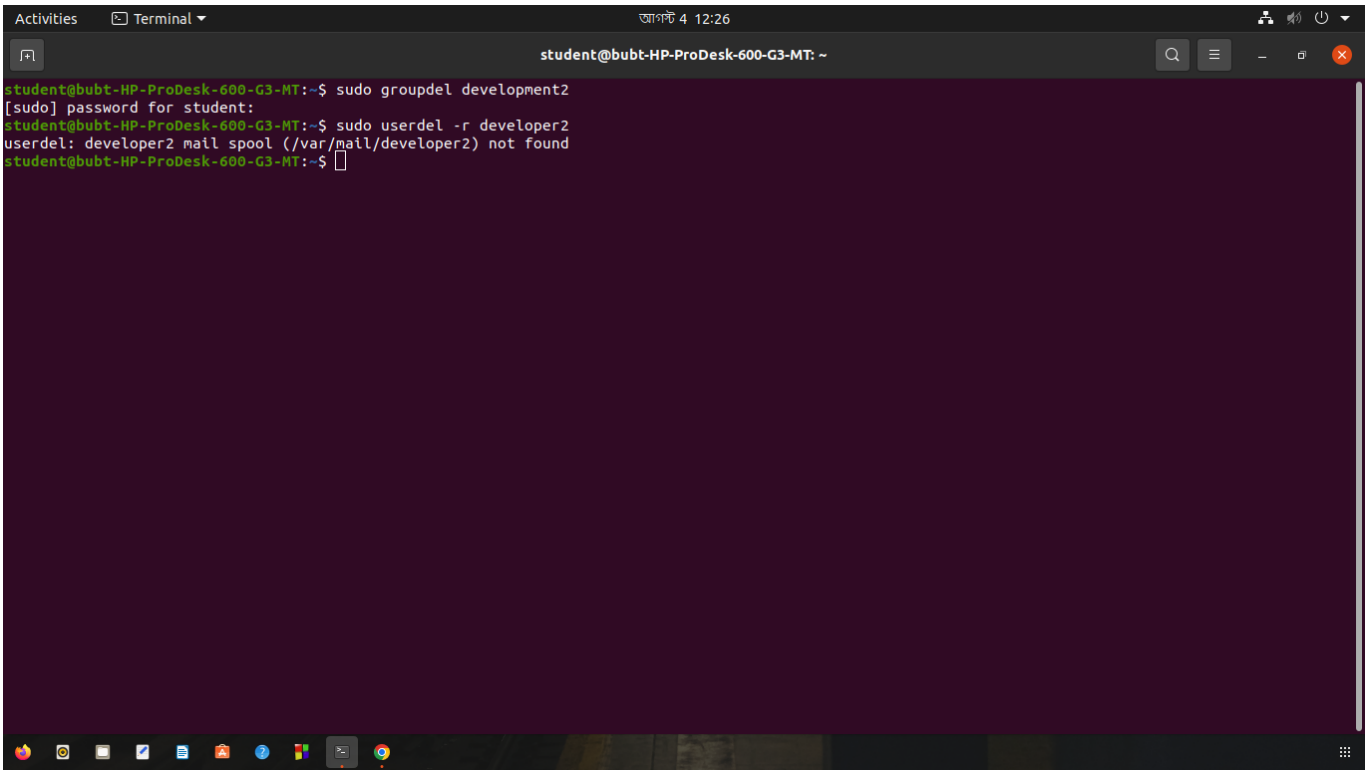
Task 2.5: Check and display the group memberships of the user **developer2** using the `groups` command.

```
groups developer2
```



Task 2.6: Deletion of created group and user **developer2** using the `groupdel userdel` command.

```
sudo groupdel development2
sudo userdel -r developer2
```

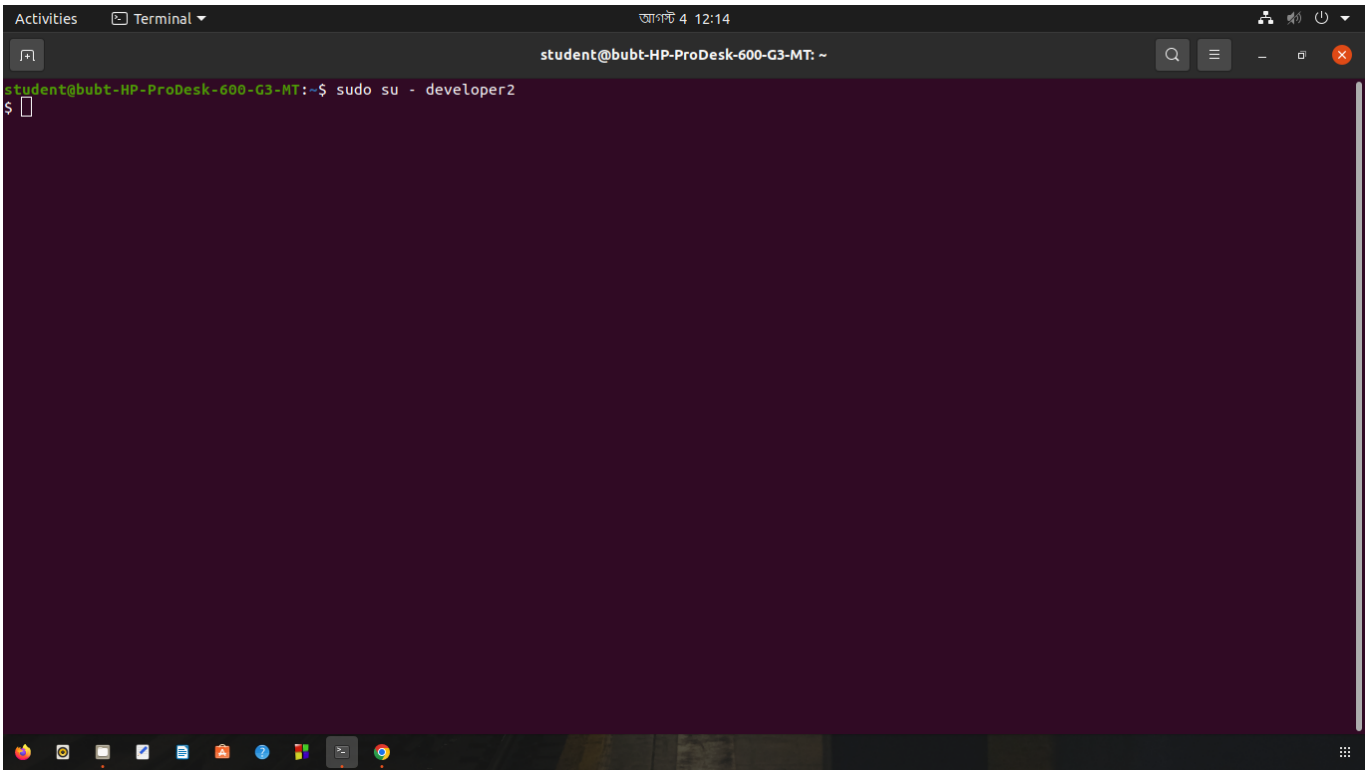


3. File Permission Adjustment

Task 3.1: Create a directory named **project_files** in the home directory of **developer1** using the `mkdir` command.

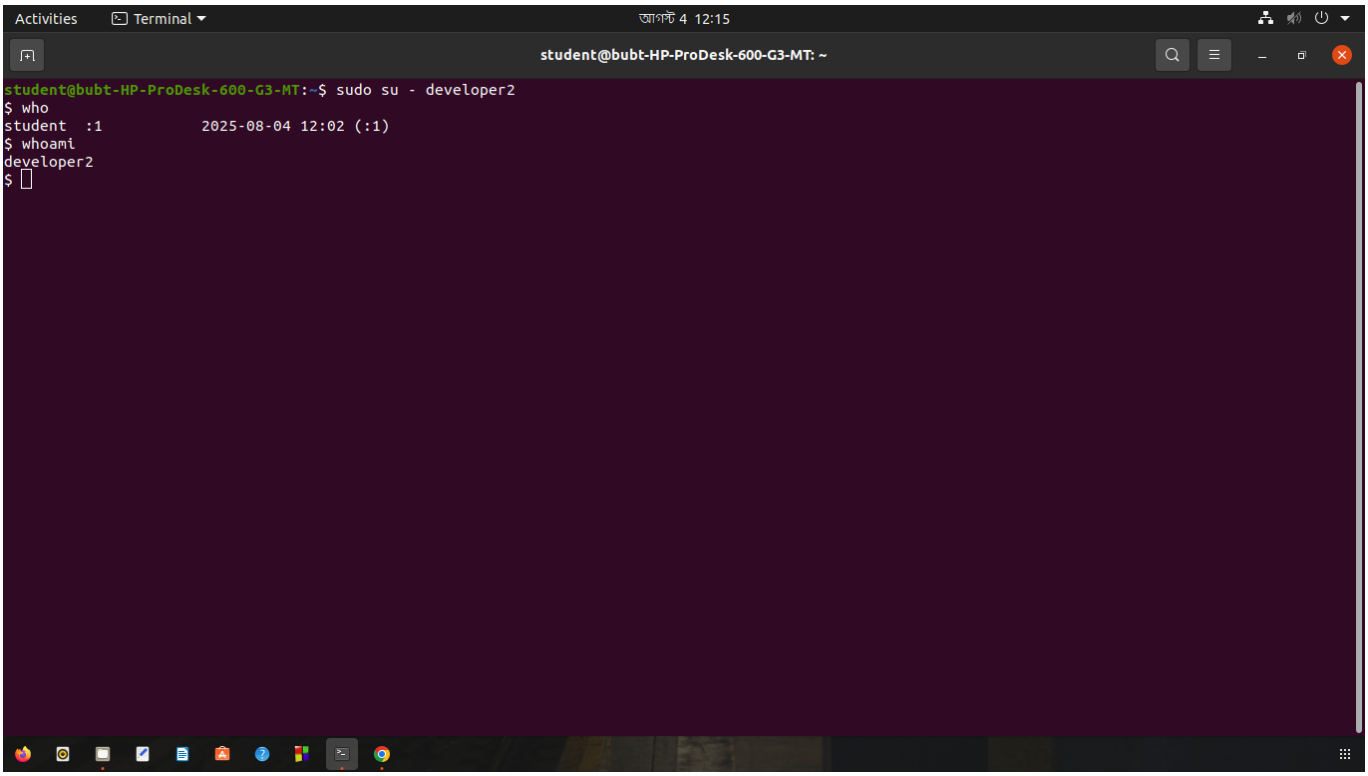
Logging into the **developer2** account:

```
sudo su - developer2
```



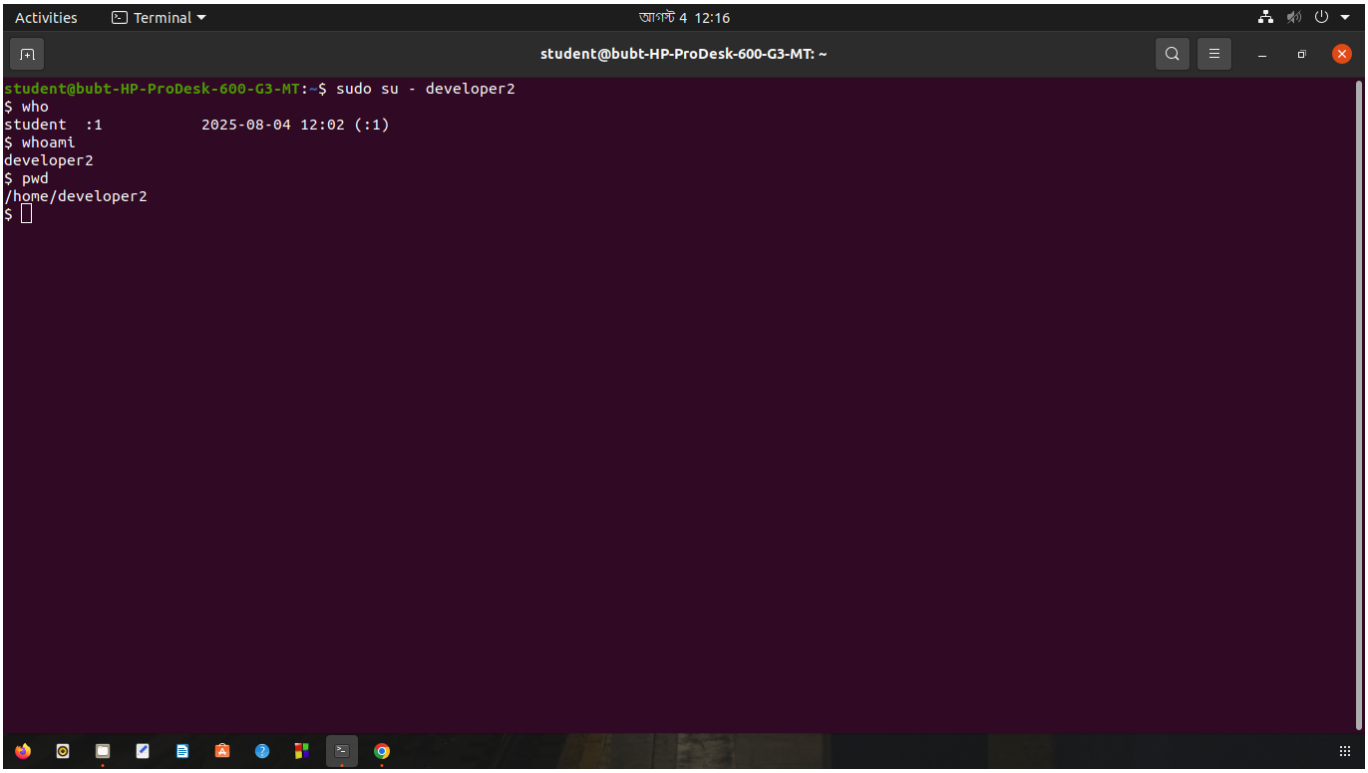
Verifying that we are logged in as **developer2**:

```
who
whoami
```



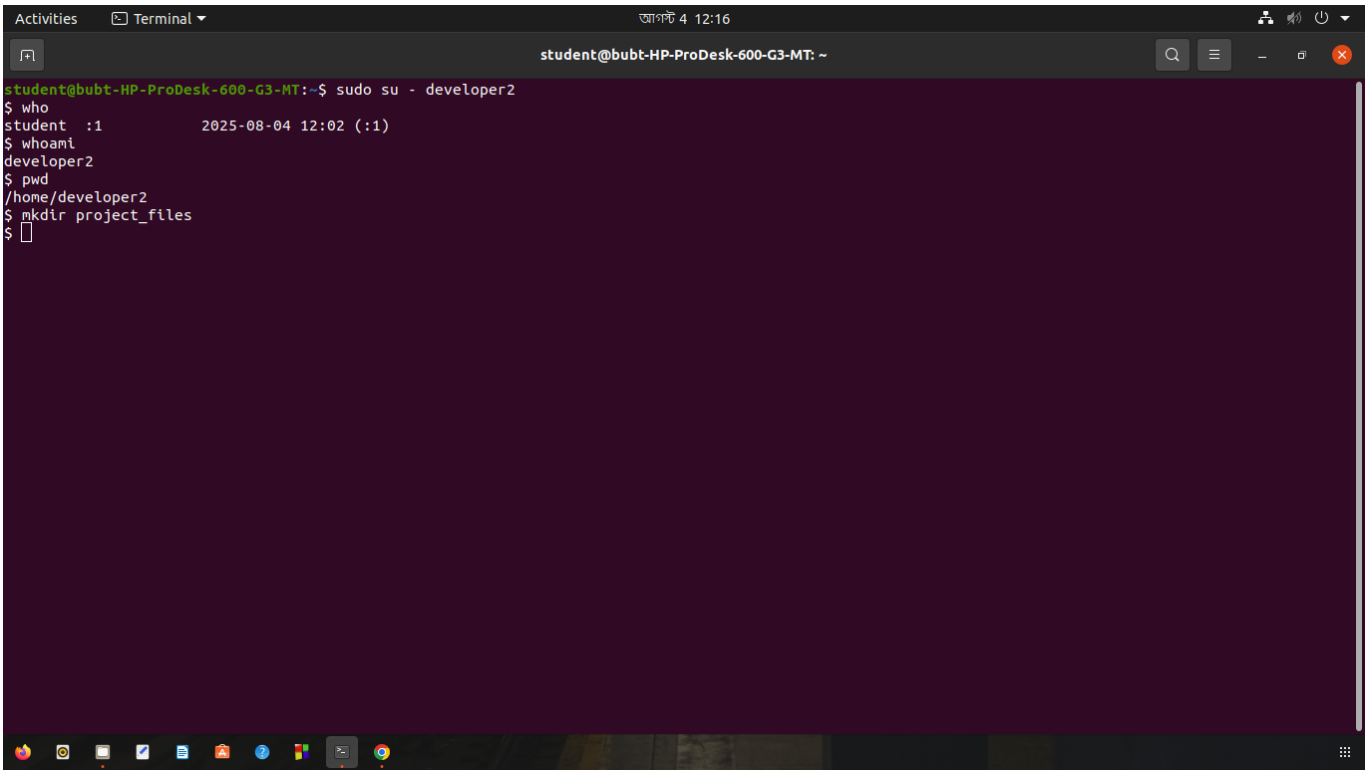
Verifying that we are in the correct working directory:

```
pwd
```



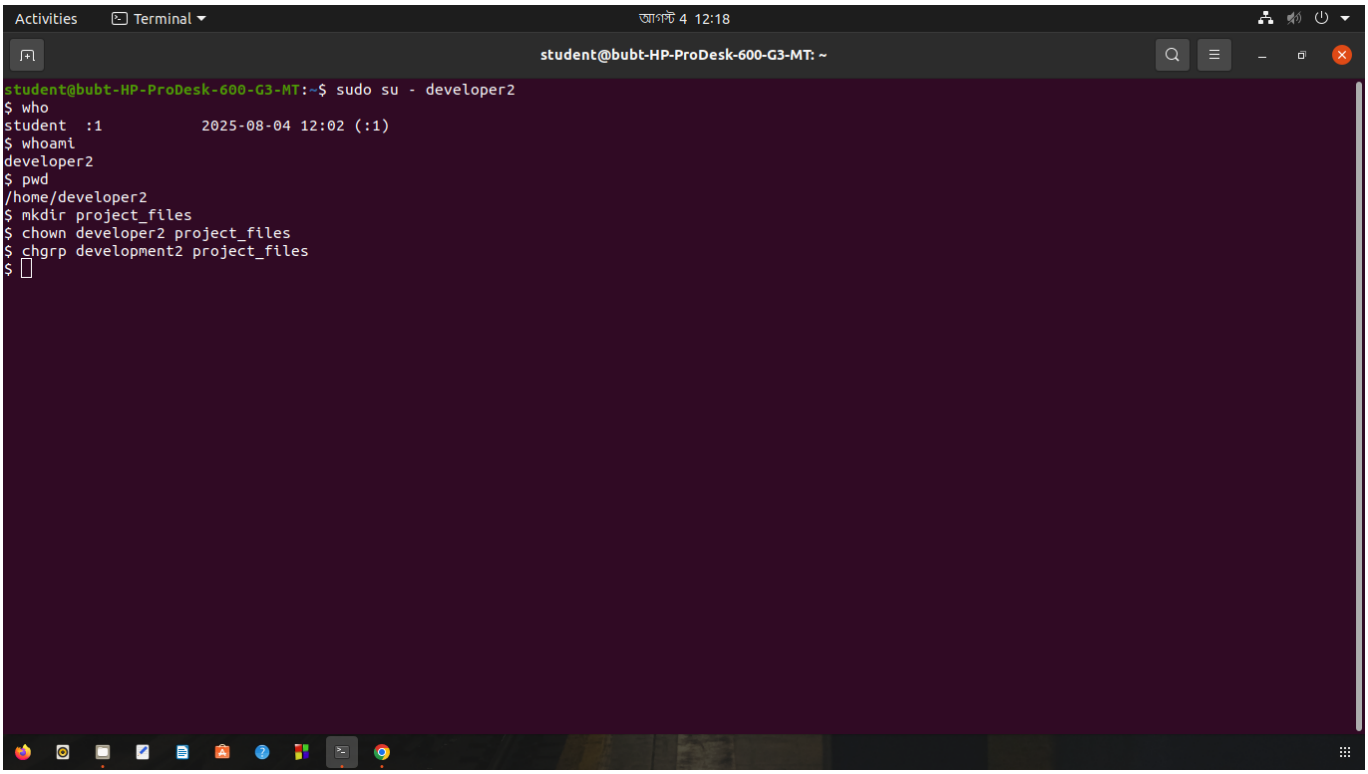
Creating the **project_files** directory:

```
mkdir project_files
```



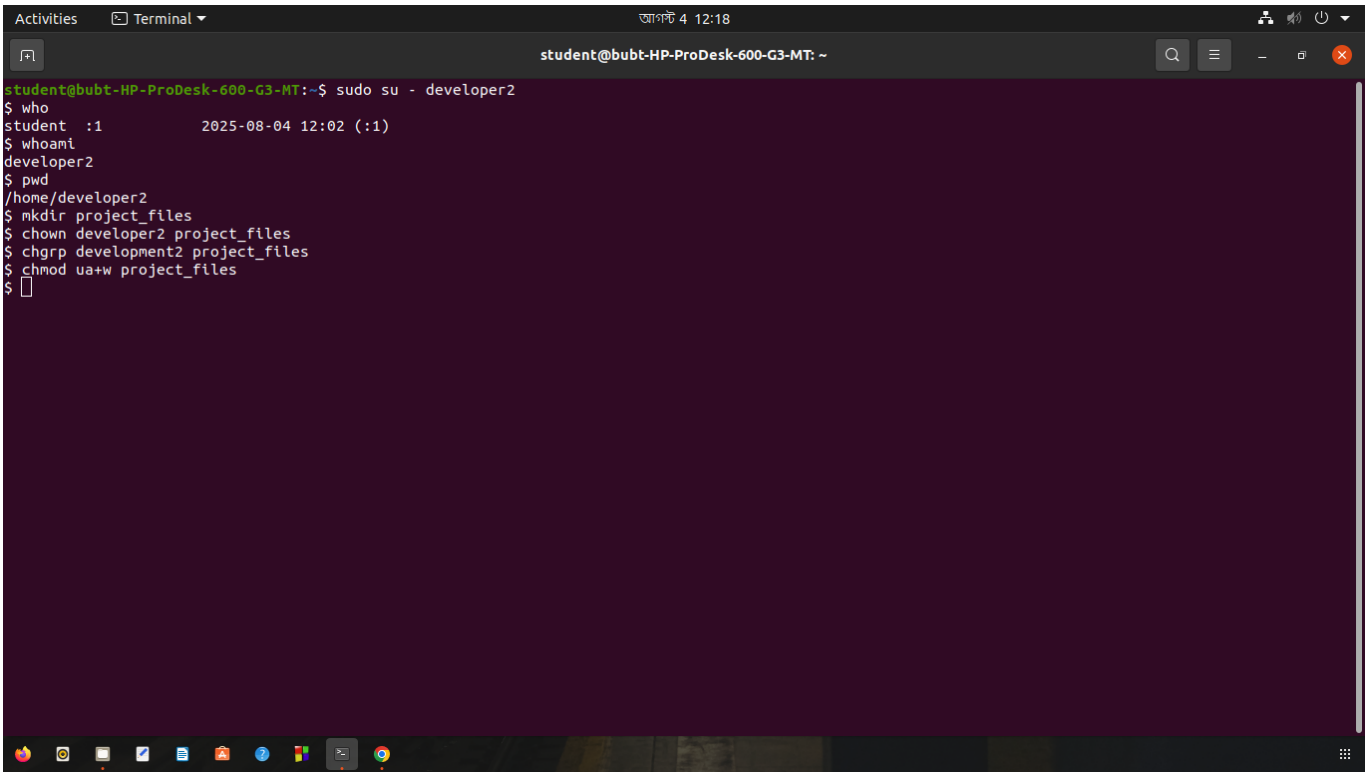
Task 3.2: Change the ownership of the **project_files** directory to **developer2** and the group to **development2** using the `chown` and `chgrp` commands.

```
chown developer2 project_files
chgrp development2 project_files
```



Task 3.3: Ensure that only the owner (**developer2**) has write permissions in the **project_files** directory.

```
chmod ua+w project_files
```



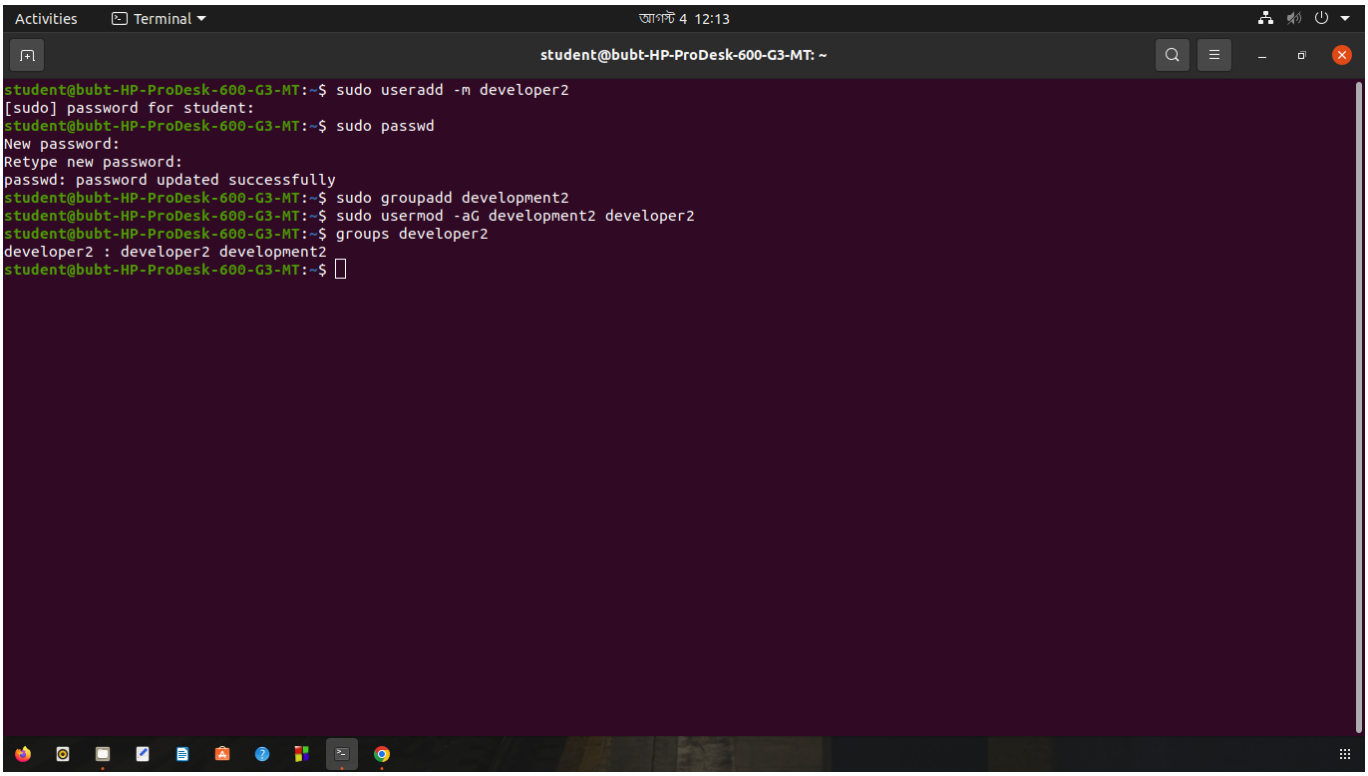
4. Conclusion

Task 4.1: Summarize your troubleshooting findings and the actions taken to resolve any issues.

During the setup process, commands such as `useradd`,`groupadd` and `usermod` required administrative access. To execute these commands, we used `sudo` along with the user's password to gain the necessary privileges.

```
sudo groupdel development2
sudo userdel -r developer2
```

Task 4.2: Confirm that the new user developer1 has been successfully created, added to the development group, and that file permissions are set correctly.



5. Additional Tasks

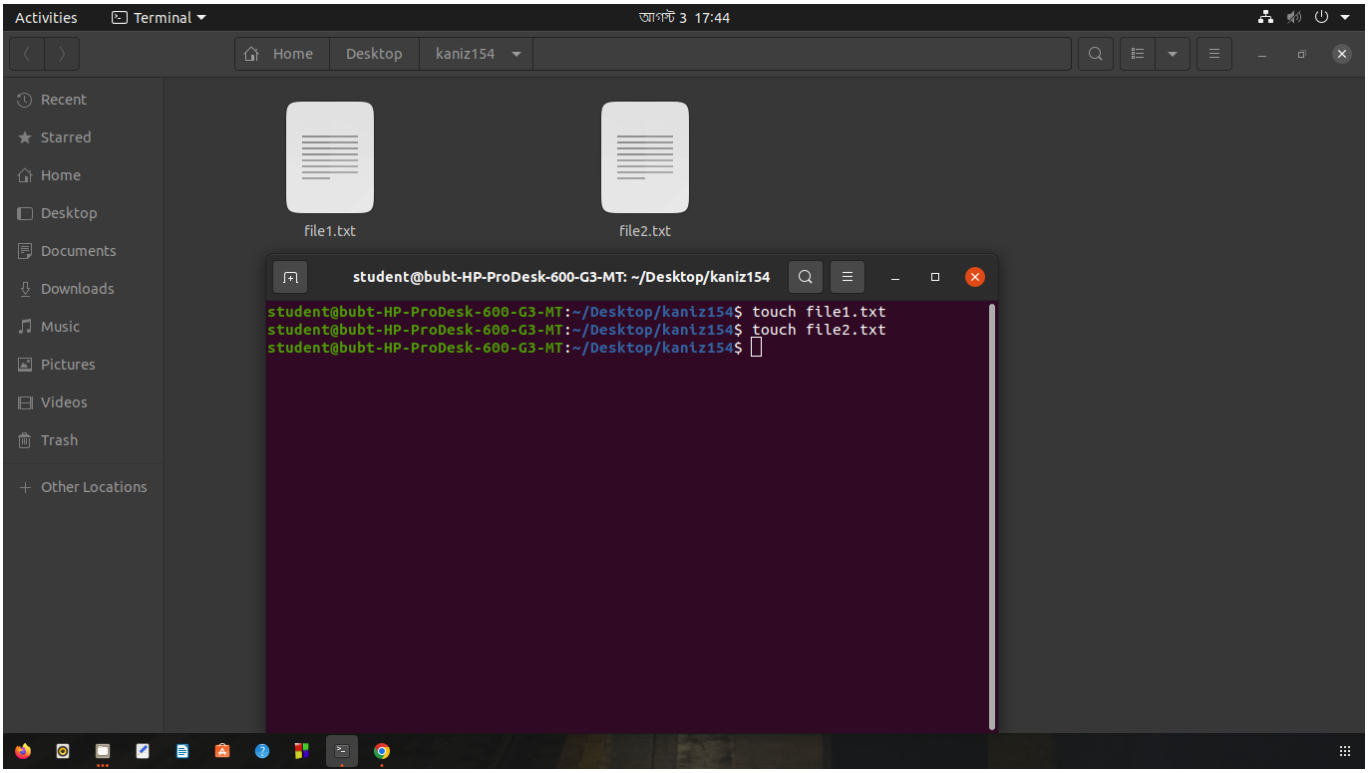
Task 5.1: Concatenate **file1.txt** and **file2.txt** to make a **file3.txt** with all the contents of **file1.txt** and **file2.txt**.

Creating a subdirectory named **kaniz154** in the **home directory** and navigating into it:

```
mkdir kaniz154
cd kaniz154
```

Creating two new files:

```
touch file1.txt
touch file2.txt
```

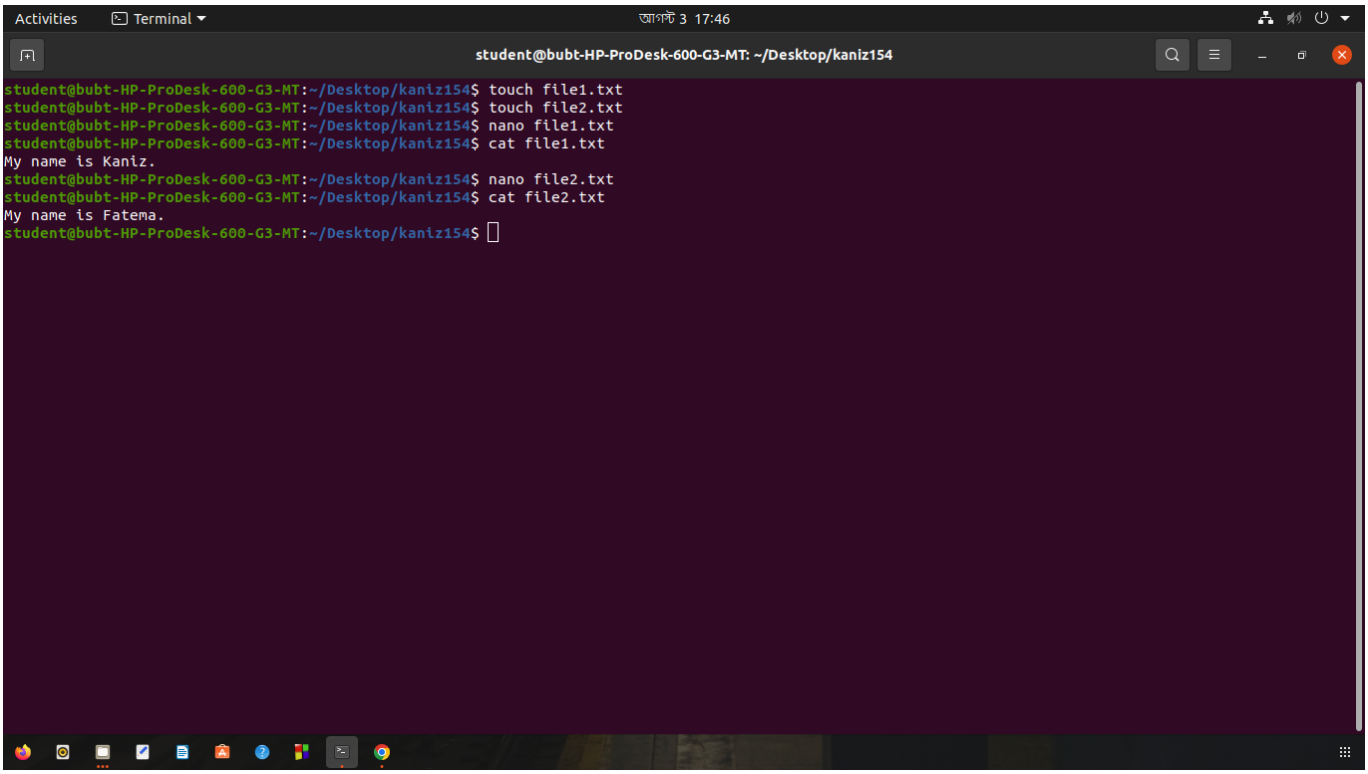


Adding contents to the newly created files using nano:

```
nano file1.txt
nano file2.txt
```

Verifying the contents of **file1.txt** and **file2.txt**:

```
cat file1.txt
cat file2.txt
```

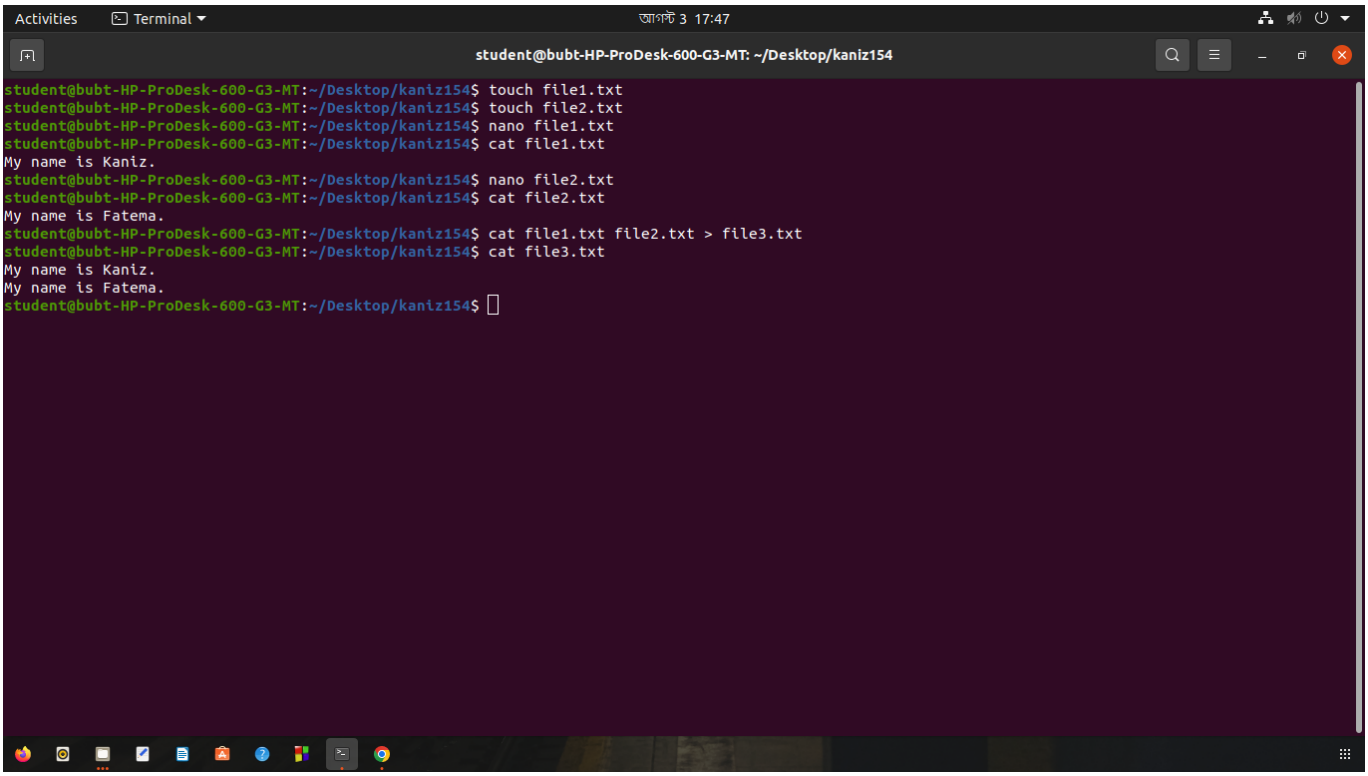


Concatenate the contents of these two files into **file3.txt**:

```
cat file1.txt file2.txt > file3.txt
```

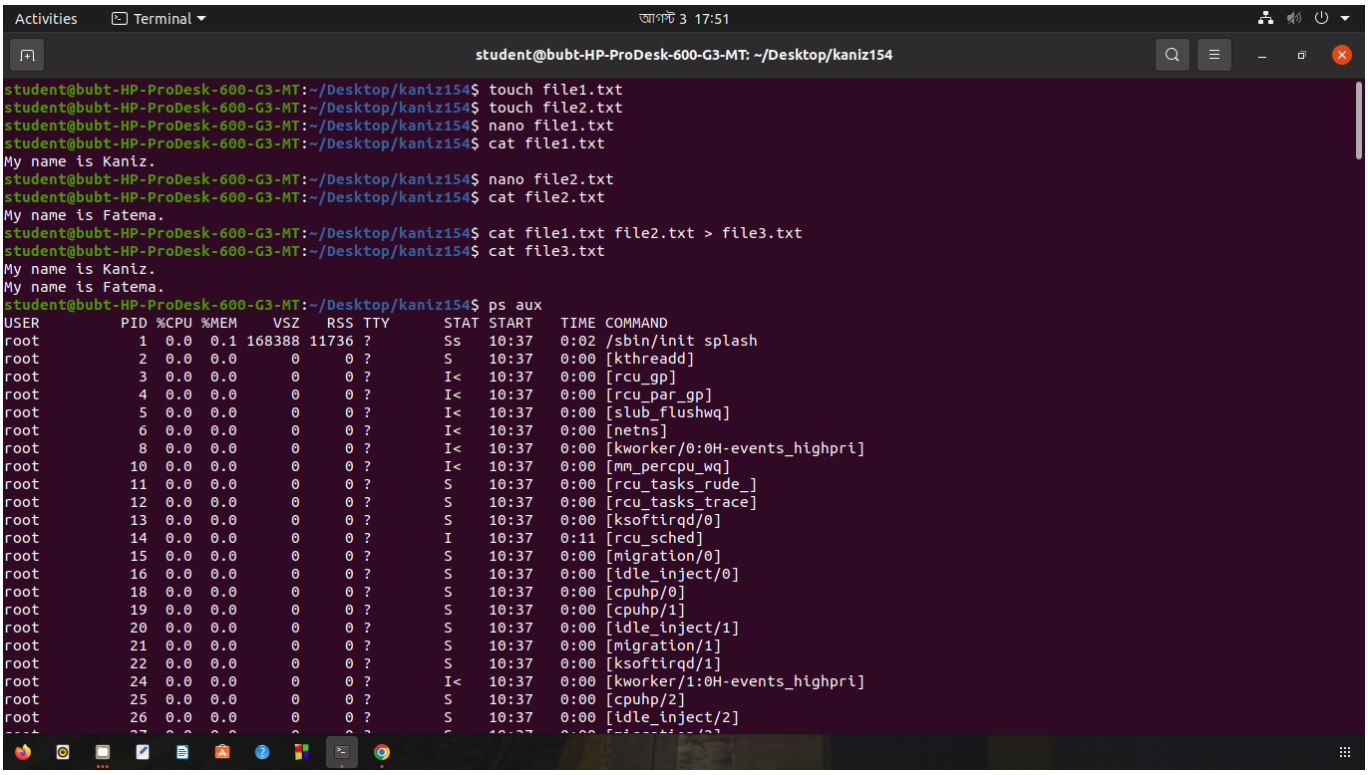
Verifying the contents of **file3.txt**:

```
cat file3.txt
```



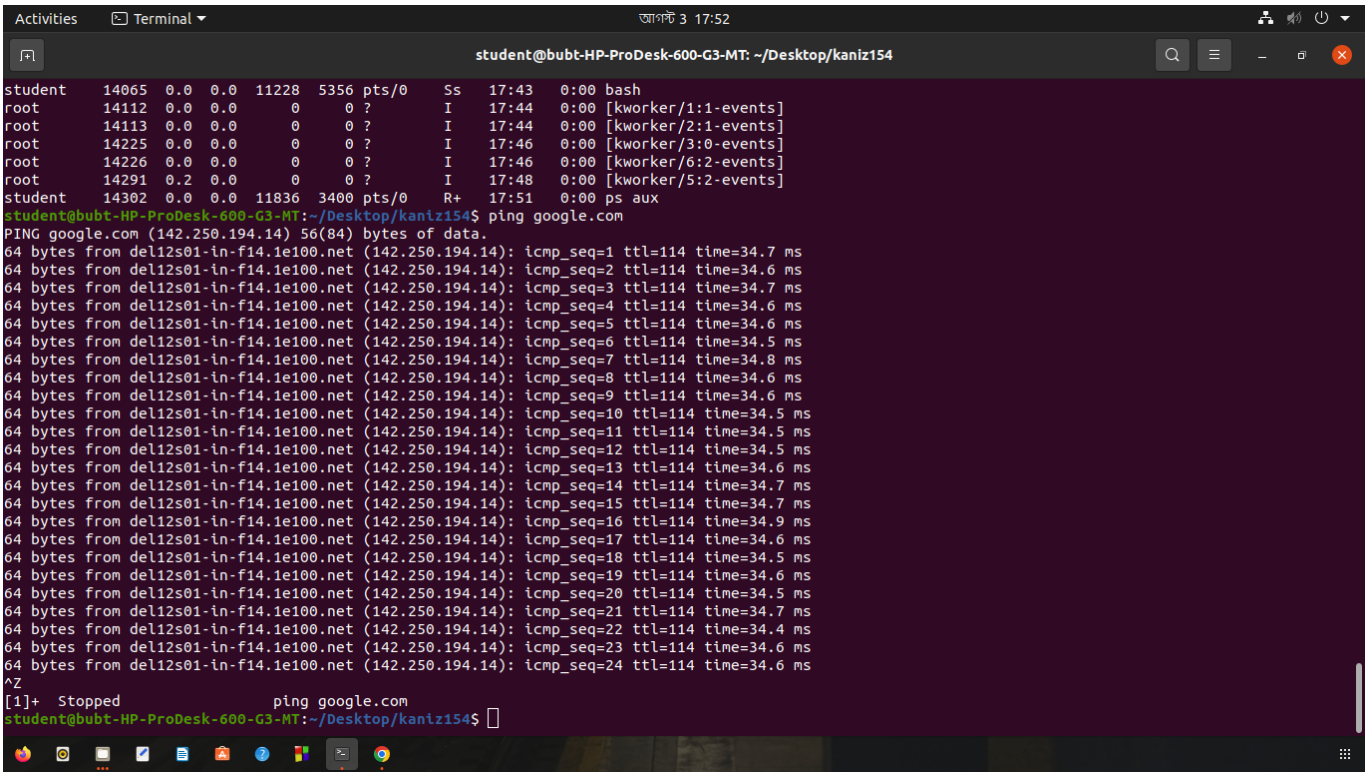
Task 4.2: Show the list of all running processes.

```
ps aux
```



Task 5.3: Ping google.com.

```
ping google.com
```



Task 5.4: Create an archive of the created folder.

```
tar -czvf archive.tar.gz *
```

Task 5.5: Decompress the archived folder.

```
tar -xzvf archive.tar.gz
```