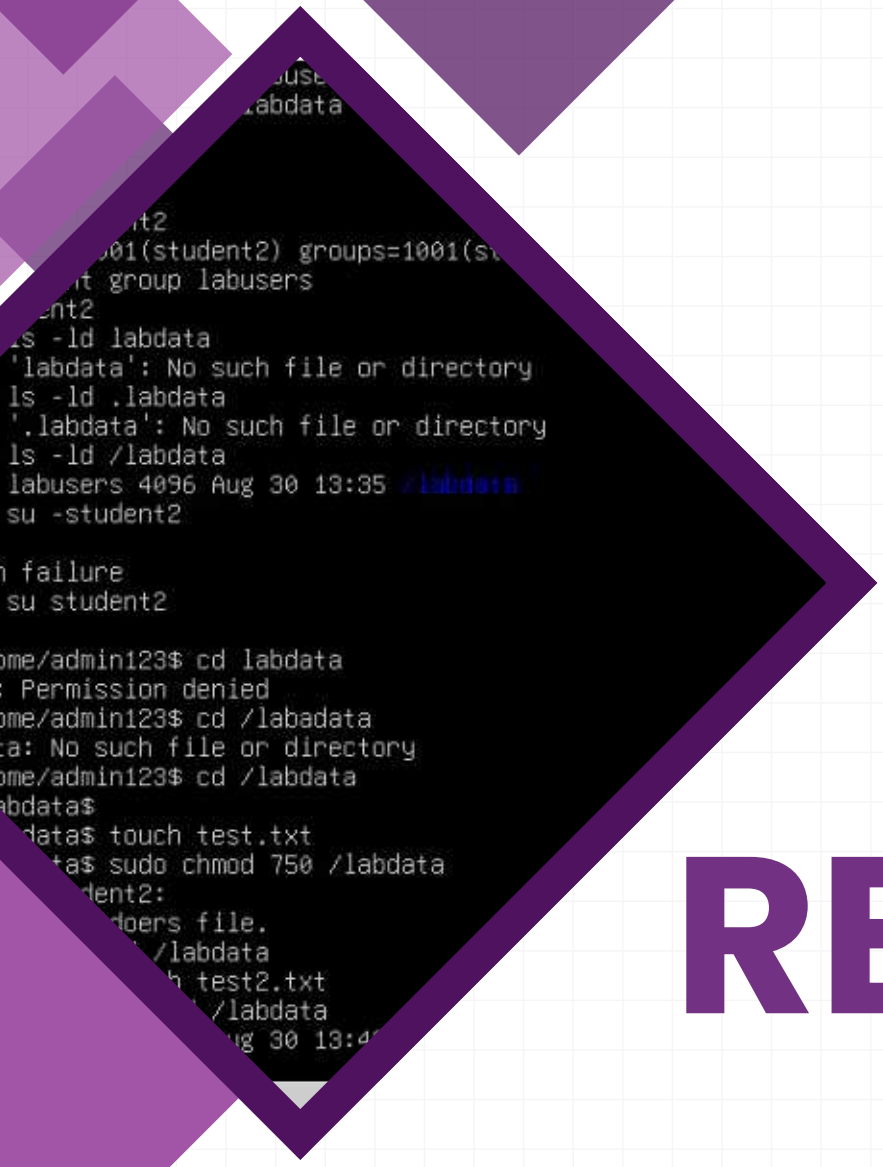

Republic of the Philippines
Bicol University
POLANGUI CAMPUS

WEEK 3
LAB REPORT

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IT 123 - WEEK 3 LABORATORY

Lab Objectives

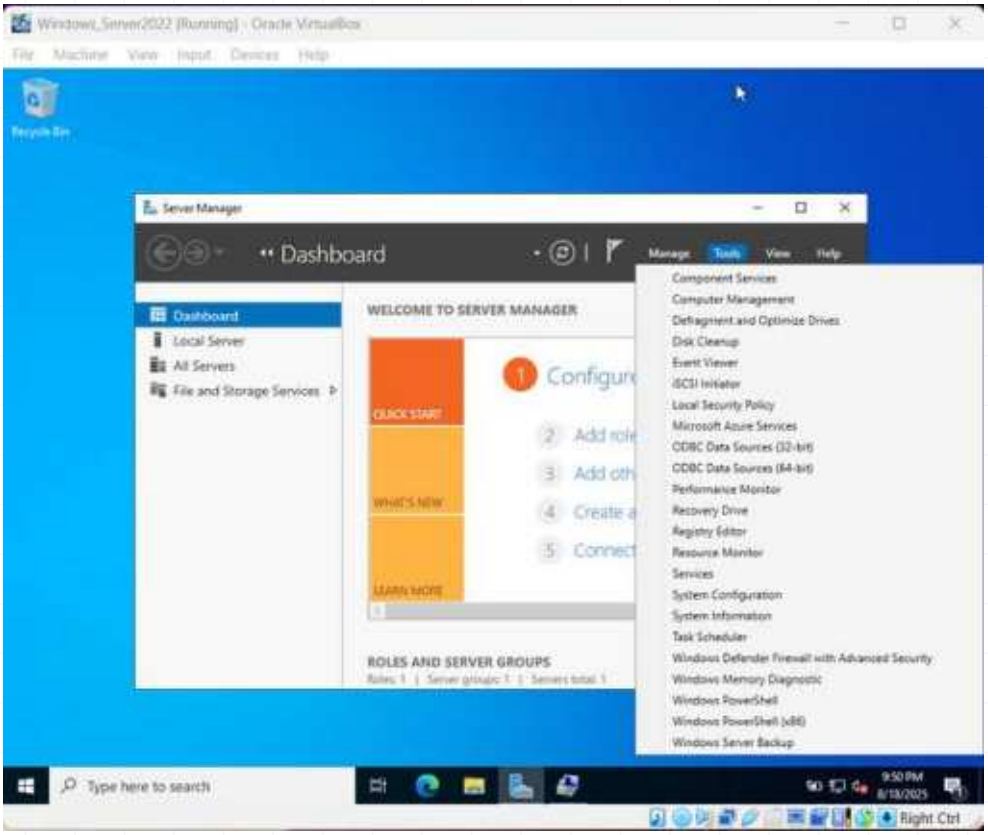
By the end of this lab, students will be able to:

1. Create, modify, and delete user accounts on Windows and Linux.
2. Configure groups and assign users to groups.
3. Apply and test permissions on files and directories.
4. Troubleshoot common user-related issues.

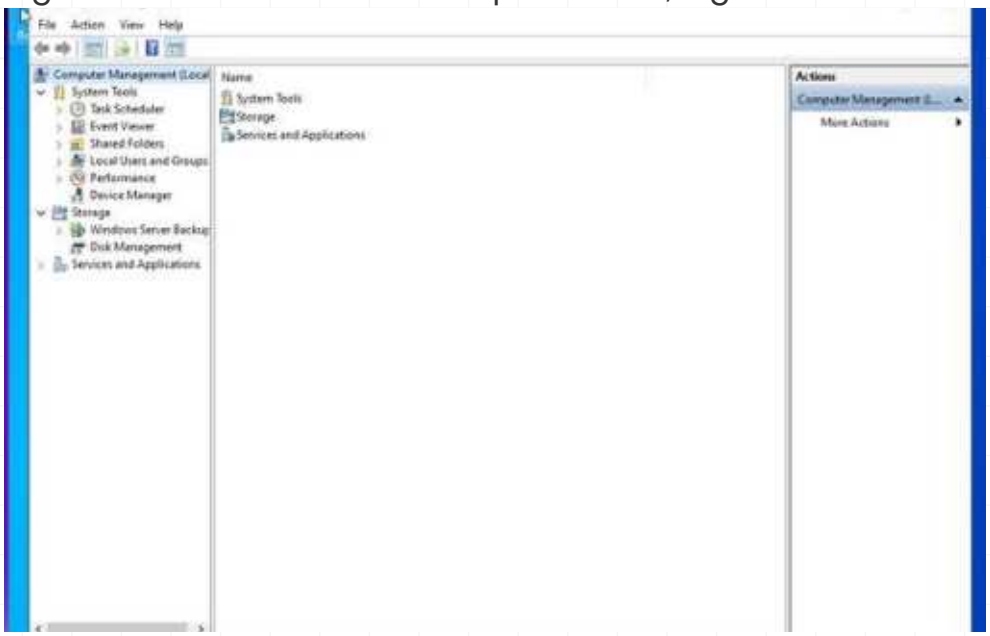
Part 1 – User & Group Management in Windows Server

1. **Create a New User**

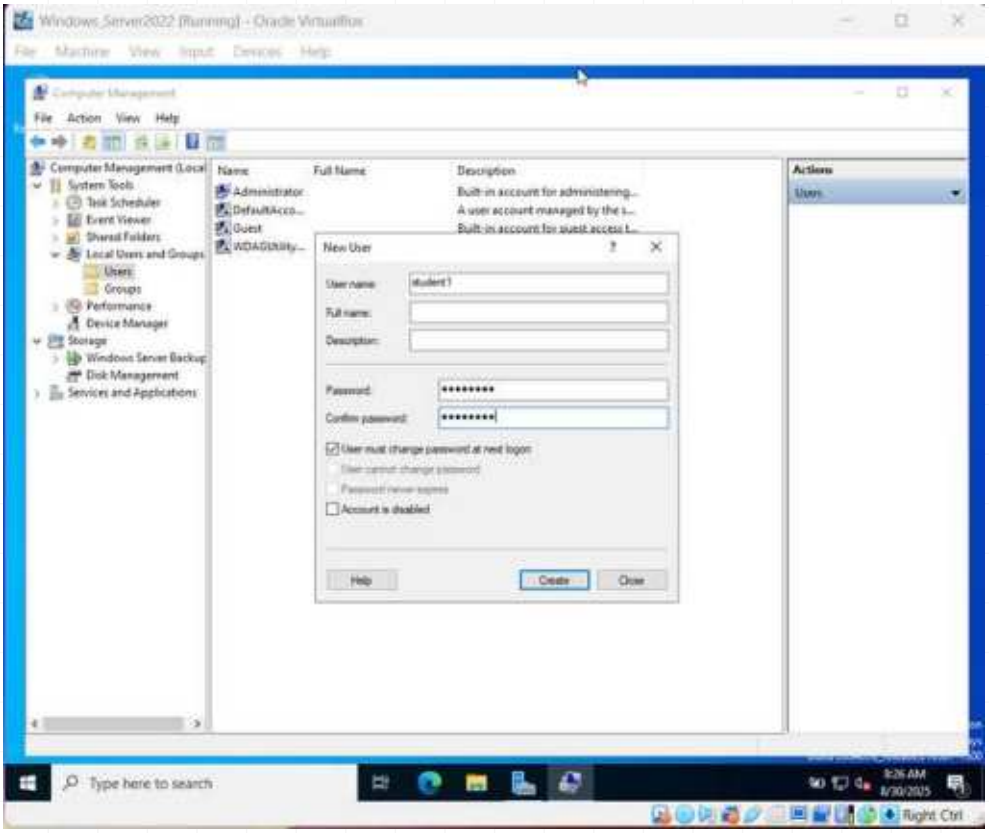
Open Server Manager → Tools → Computer Management



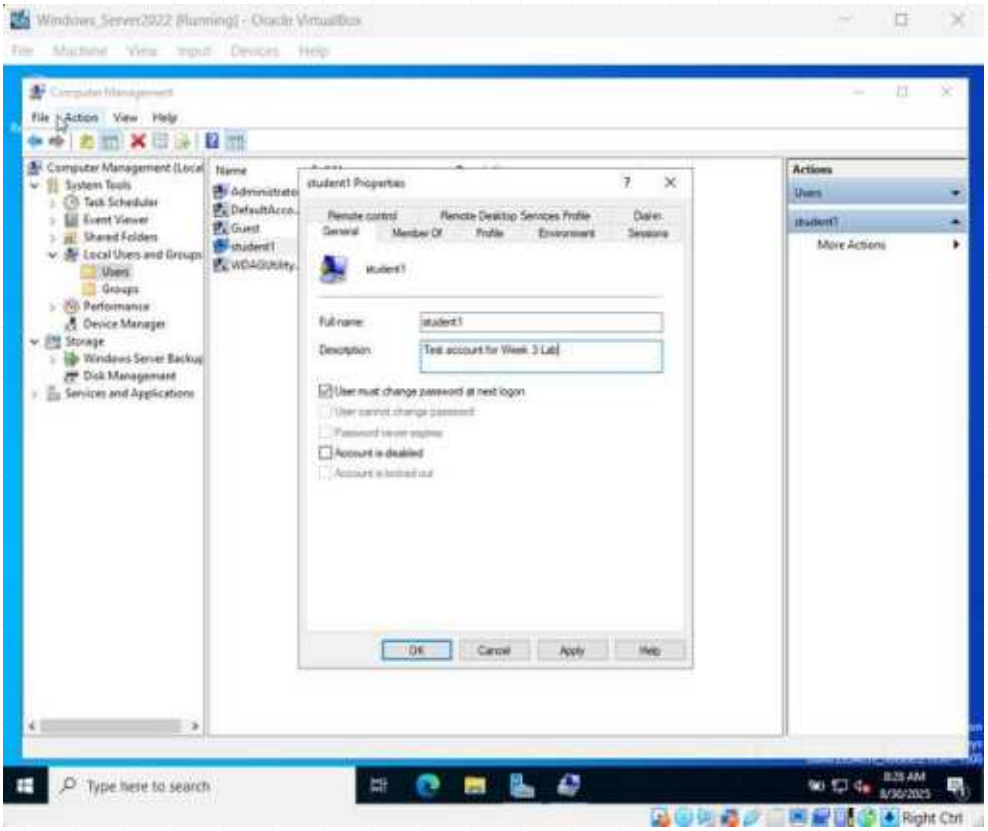
Navigate to Local Users and Groups → Users, Right-click → New User...



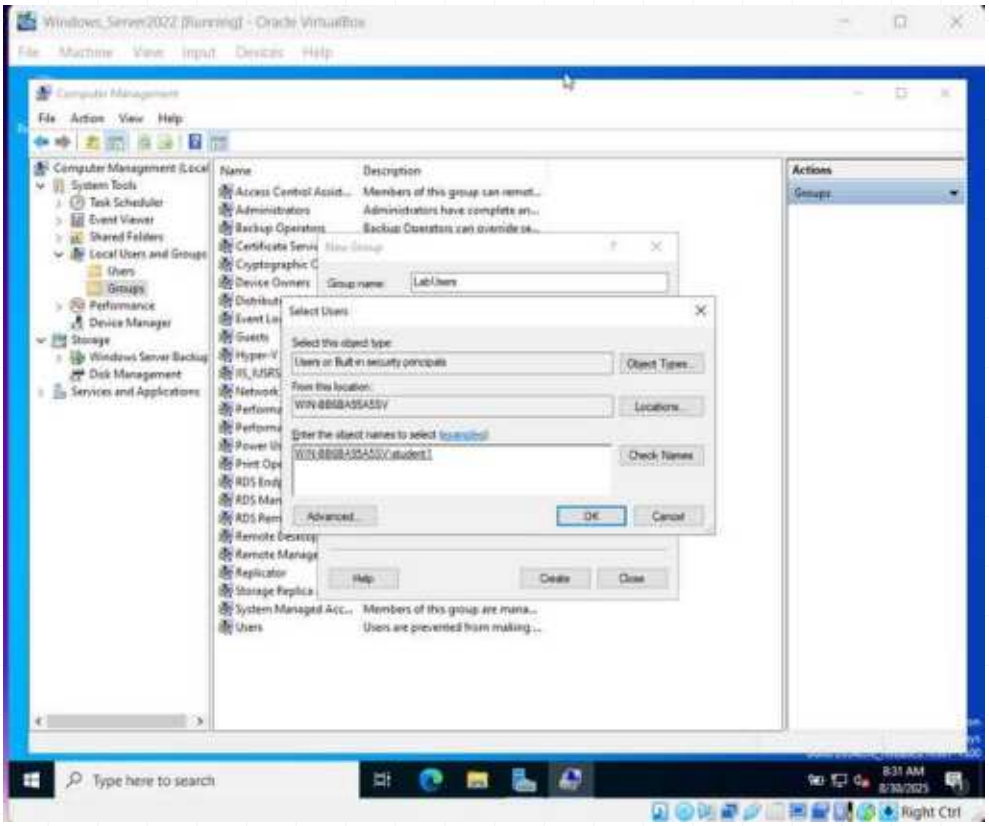
Username: student1, Password: User@123



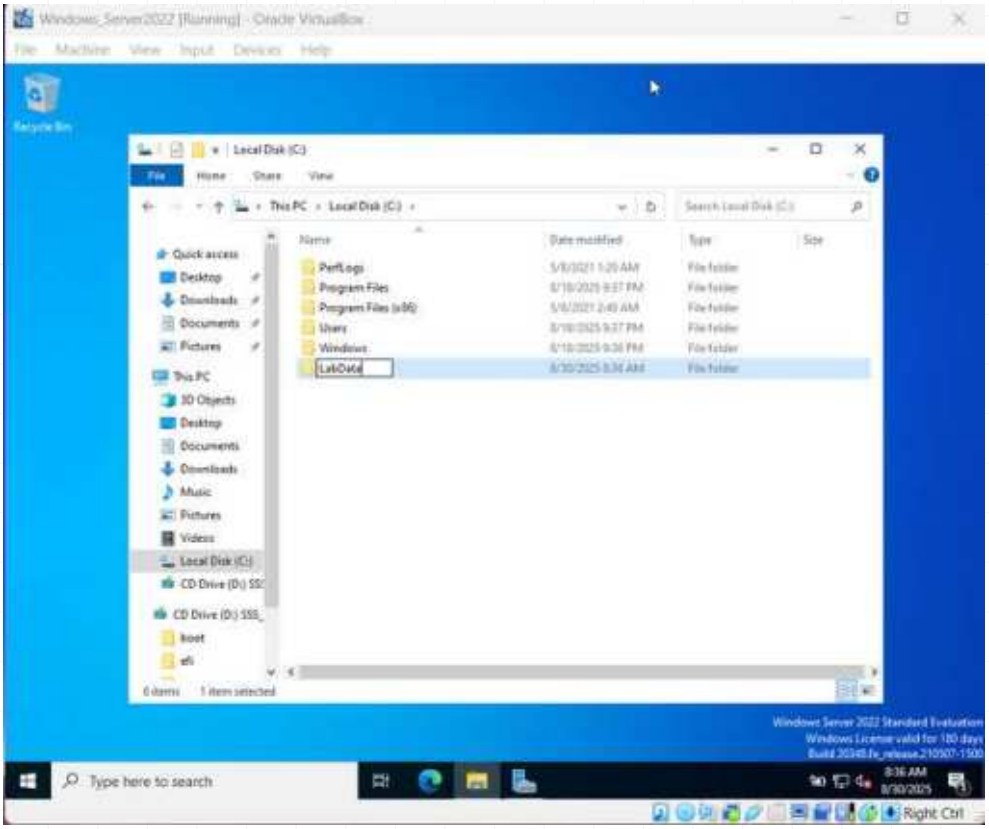
2. Right-click student1 → Properties and add description "Test account for Week 3 Lab". Require password change at next login.



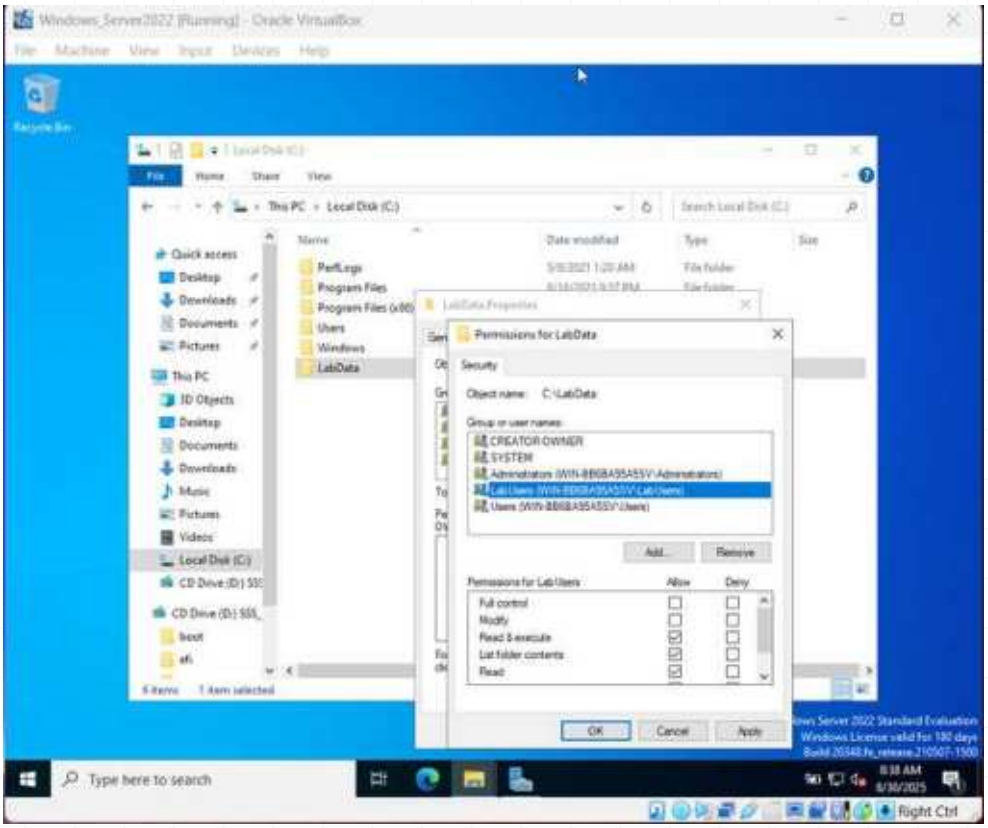
3. Create a group called LabUsers in Windows, go to "Computer Management," then "Local Users and Groups," and click on "Groups." Right-click and select "New Group," name it LabUsers, and click "Create." To add student1, right-click LabUsers, select "Add to Group," type student1, and click "OK."



4. Apply Permissions and create a folder: C:\LabData

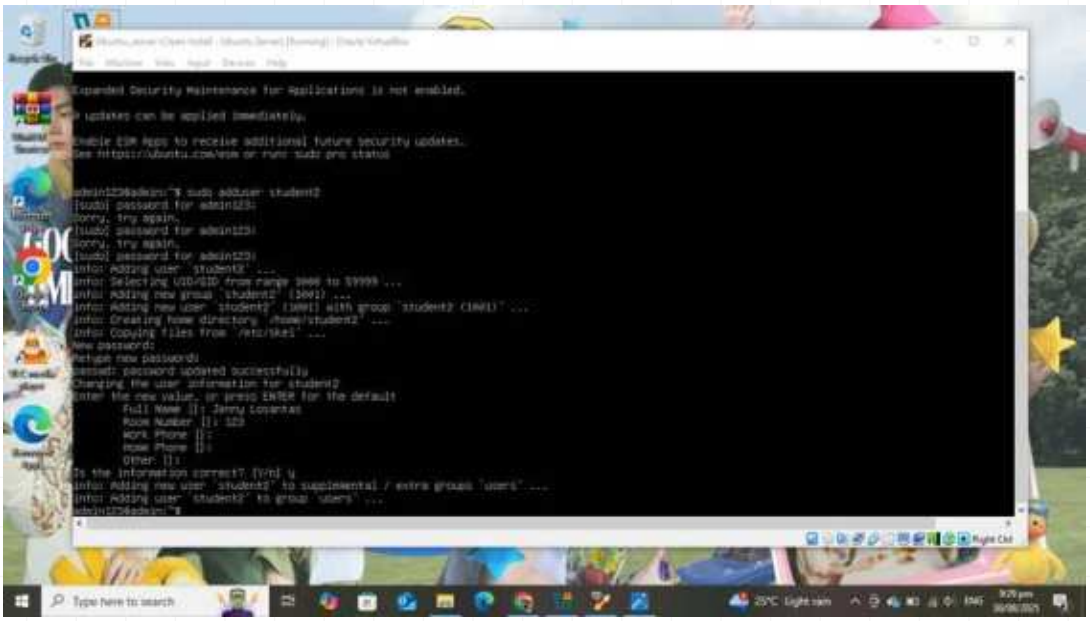


Right-click folder → Properties → Security → Add LabUsers → Grant Read & Execute only.

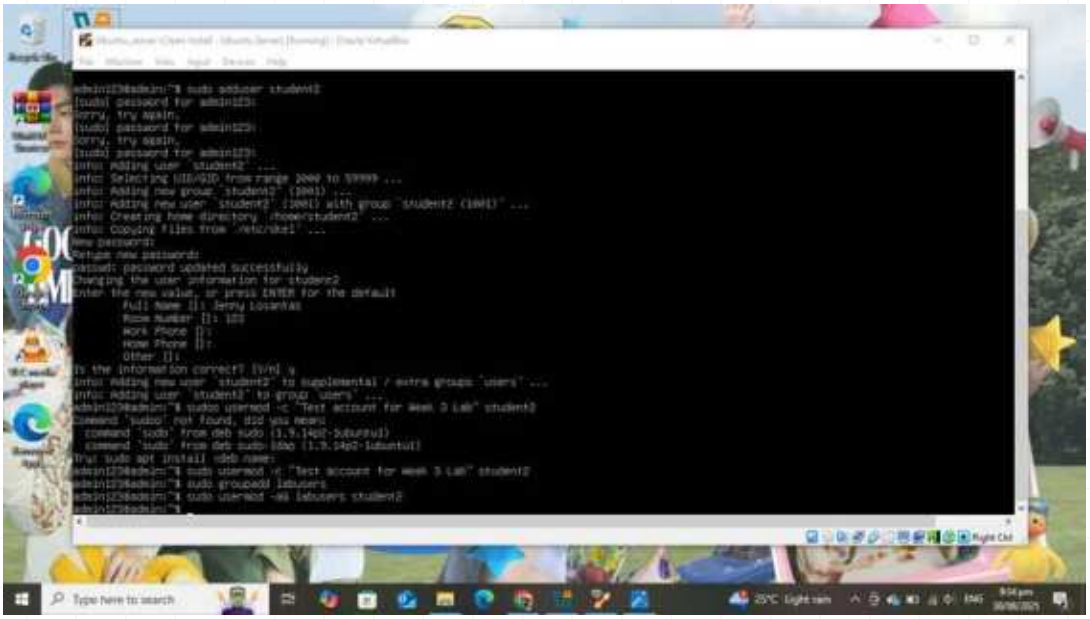


Part 2 – User & Group Management in Ubuntu Server

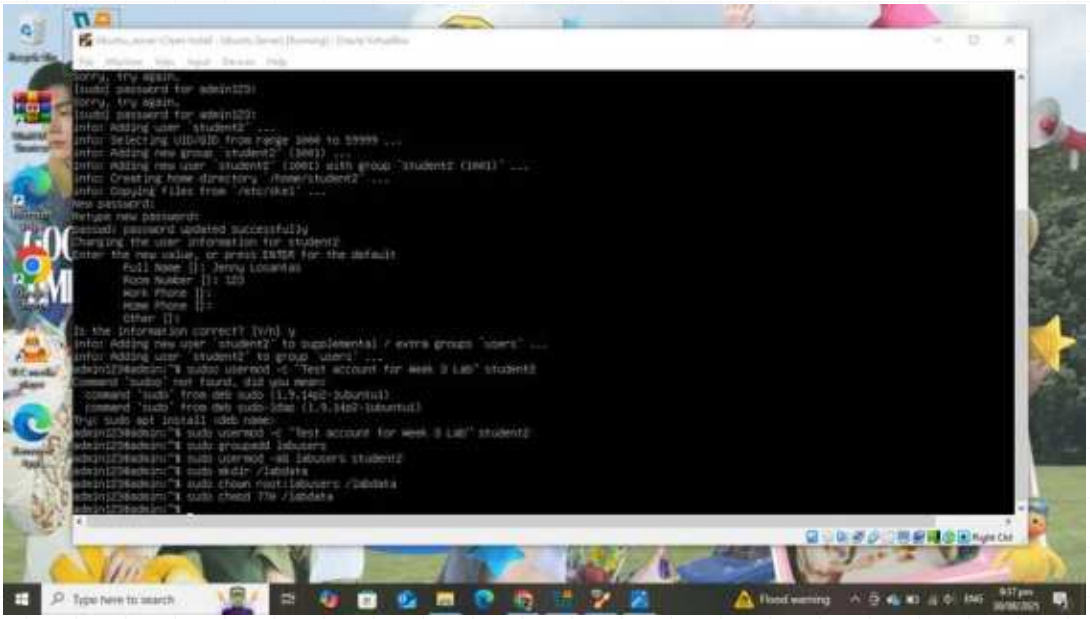
1. Create a new user on the system, enter “sudo adduser student2”. This command requires administrative privileges, which is why "sudo" is included. During the process, set a password for the new account, which is User@123. After entering the password, the system will ask for additional details, such as the user's full name and other optional information; users can press Enter to accept the default values for these fields. This straightforward process helps ensure proper user management and access control within the system.



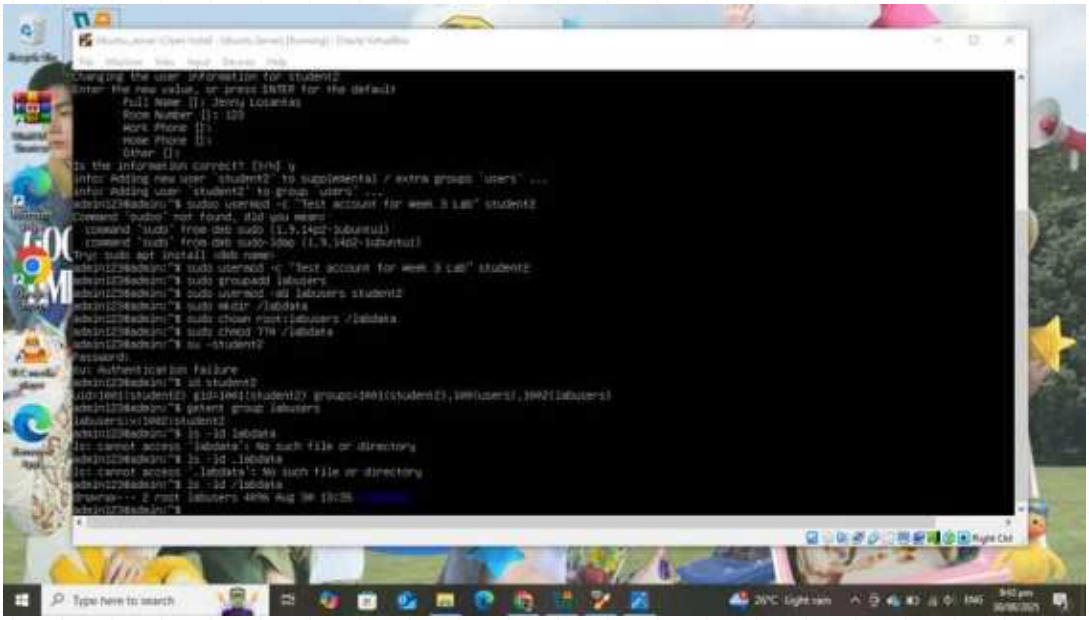
2. To modify a user account, enter the command sudo usermod -c "Test account for Week 3 Lab" student2. This command updates the user information for student2 by adding a comment that describes the account, in this case, "Test account for Week 3 Lab."



3. To create a new group, use the command sudo groupadd labusers. This command creates a group named labusers, requiring administrative privileges, which is why "sudo" is included. After creating the group, the next step is to add the user student2 to this group by executing sudo usermod -aG labusers student2. The -aG option appends the user to the specified group without removing them from any other groups they may belong to. This process helps in organizing users and managing permissions effectively within the system.



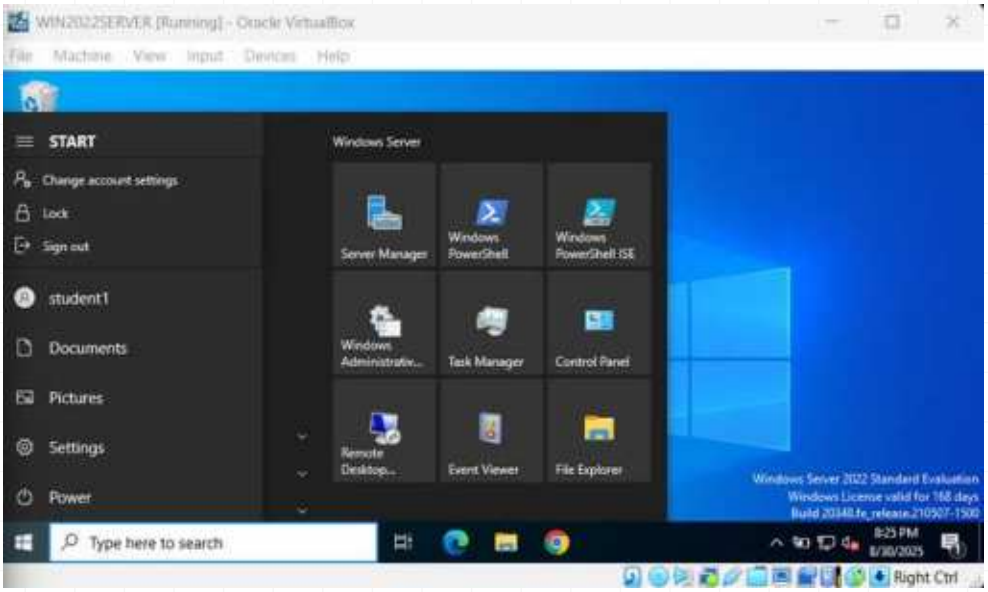
4. To apply permissions for a new directory, first create it with sudo mkdir /labdata. Then, change the ownership to the root user and labusers group using sudo chown root:labusers /labdata. Finally, set the permissions with sudo chmod 770 /labdata, granting read, write, and execute access to the owner and group while denying access to others. This setup ensures secure collaboration among group members.



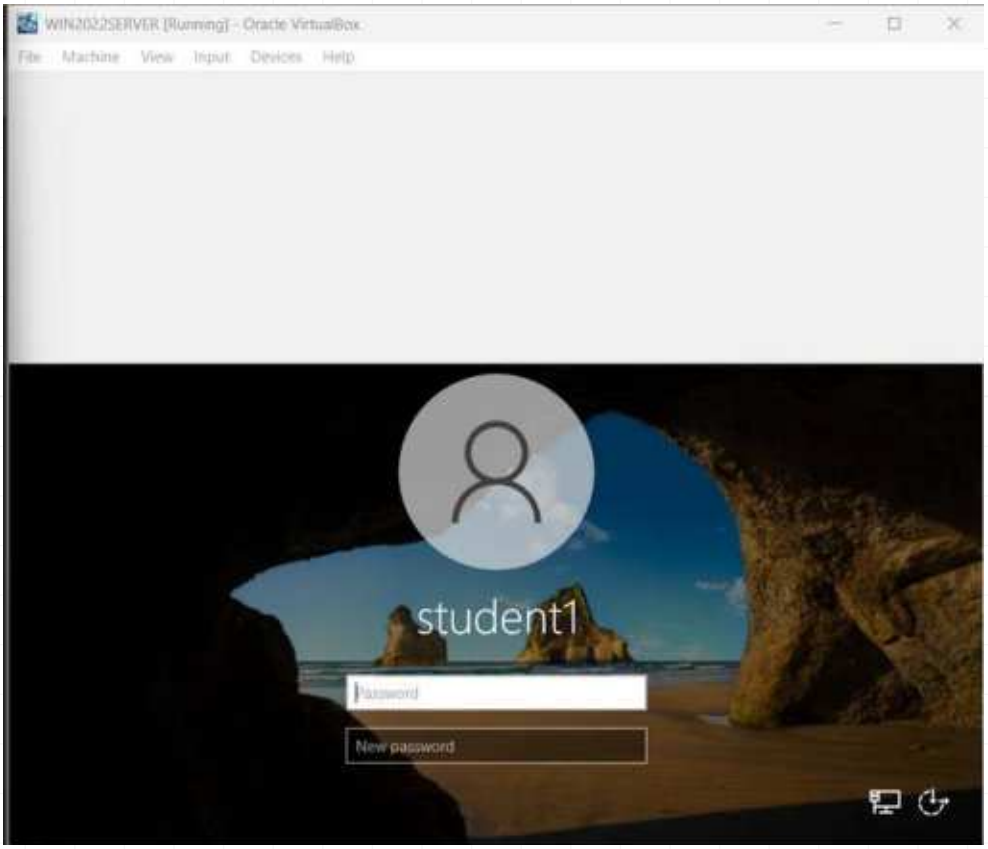
Part 3 – Verification & Troubleshooting

1. **Windows**

   Log out and log in as student1.

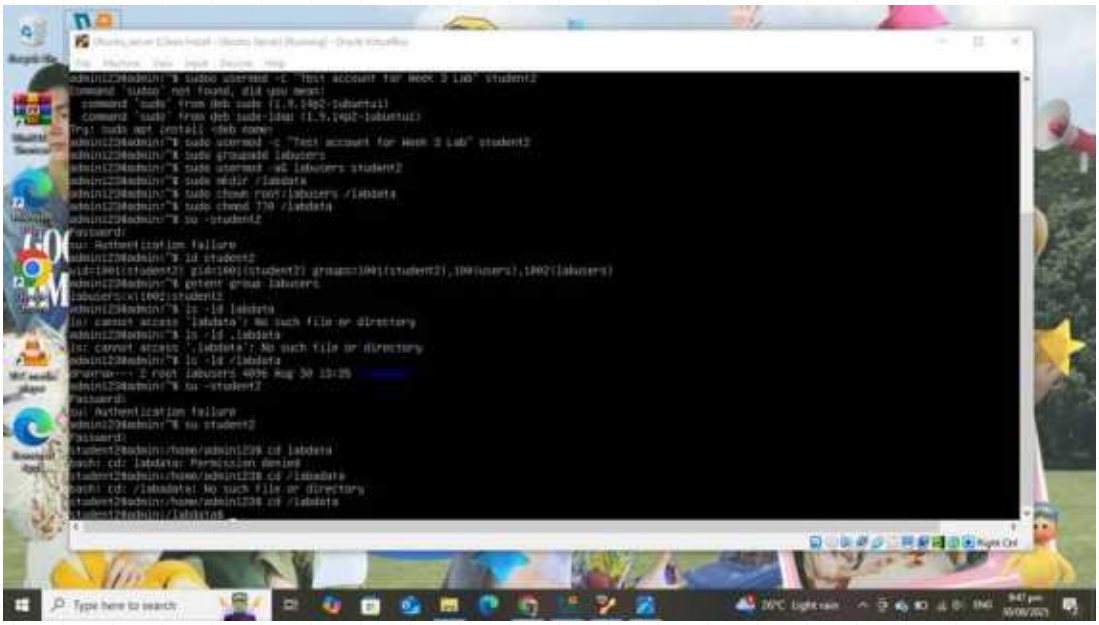


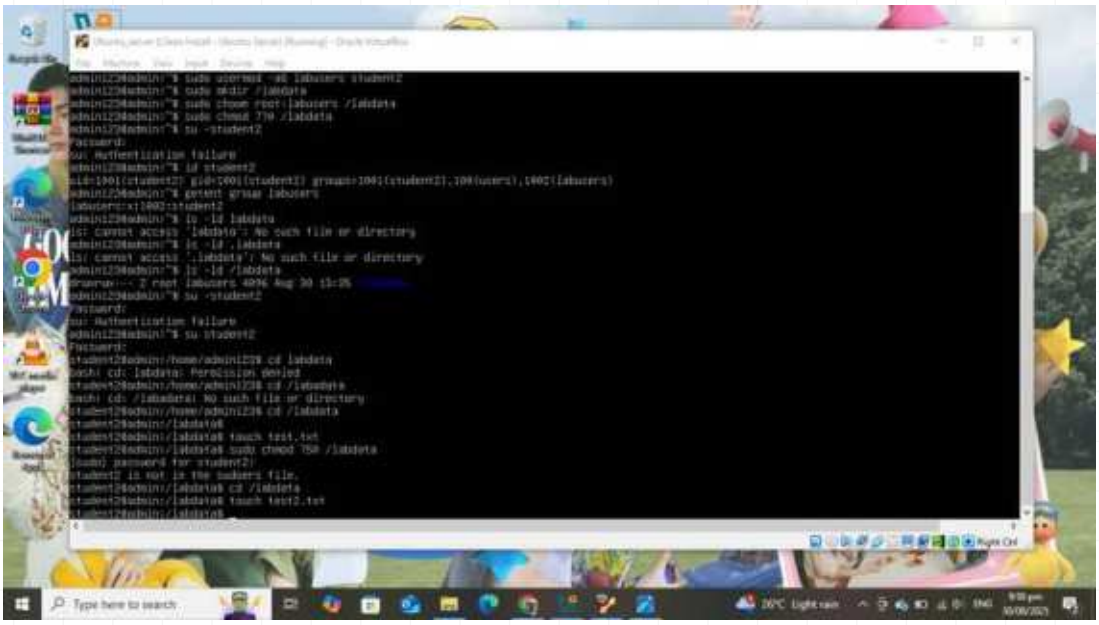
   Require password change at next login.

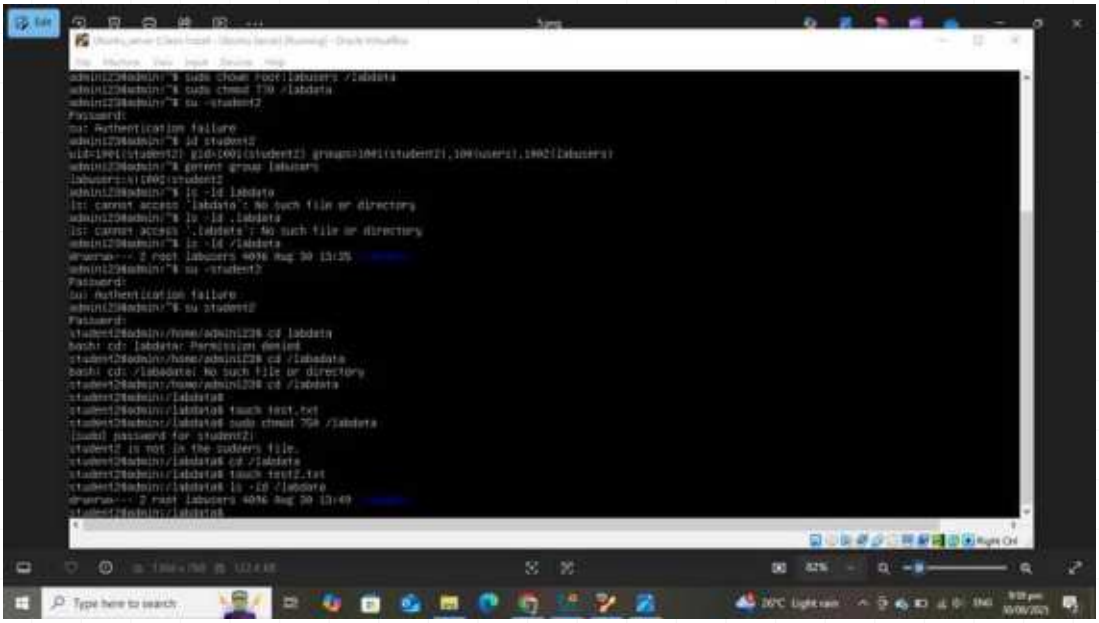


2. Linux

- To switch to the user student2, use the command su - student2, which provides access to that user's environment. Once switched, you can access the directory /labdata and create a file with touch testfile.txt, which should succeed since student2 is part of the labusers group. After that, remove write permission from the directory using sudo chmod 750 /labdata. Attempting to create the file again will result in a permission denied error, confirming that write access has been restricted.







Part 4 – Exercise for Students

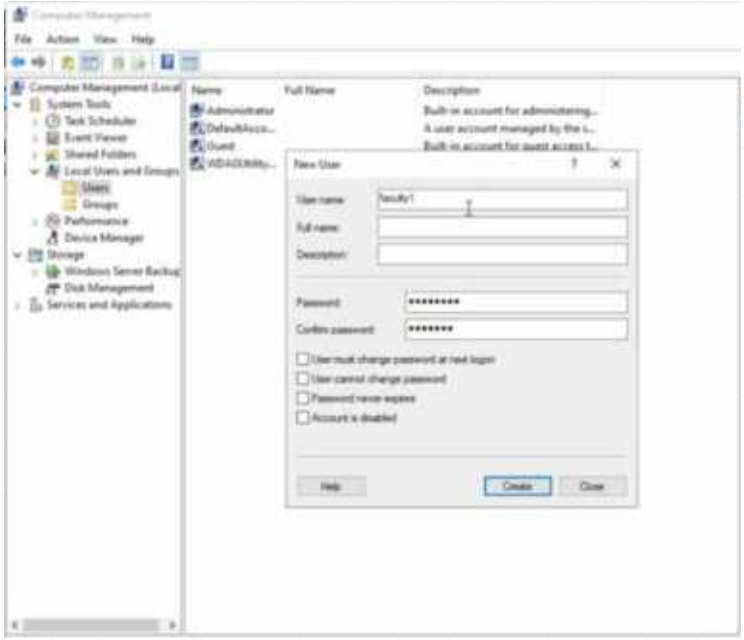
💡 **Scenario:**

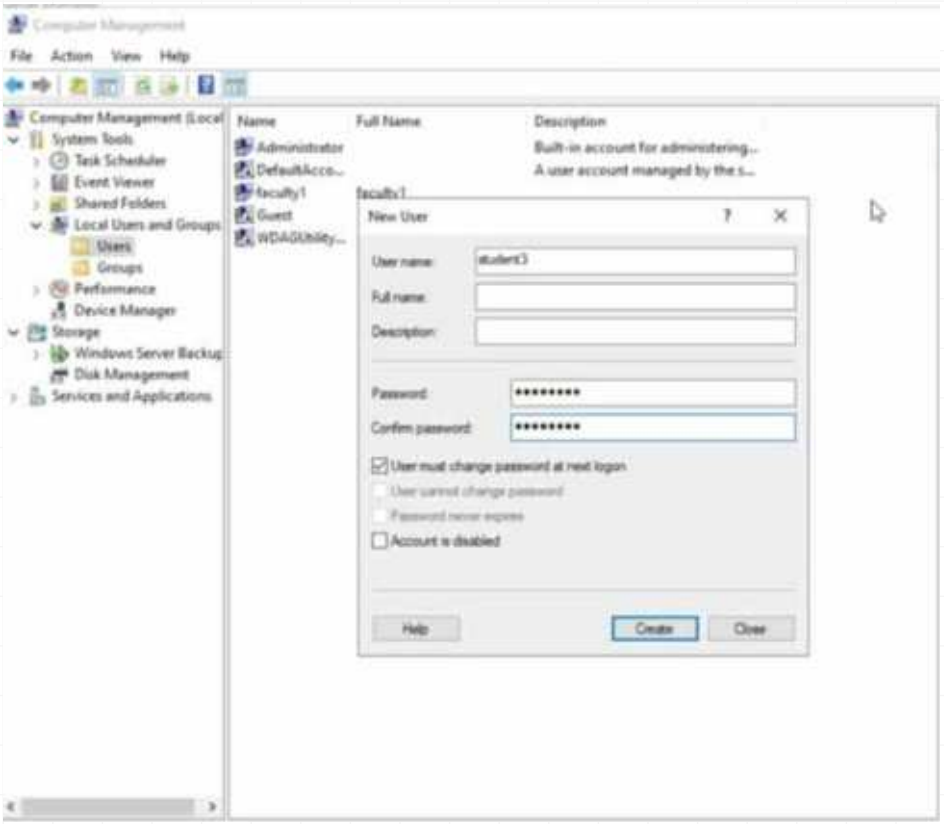
You are the newly appointed system administrator of a university lab. You need to prepare both Windows and Linux servers so that different groups of users (faculty and students) have proper access.

Exercise Tasks:

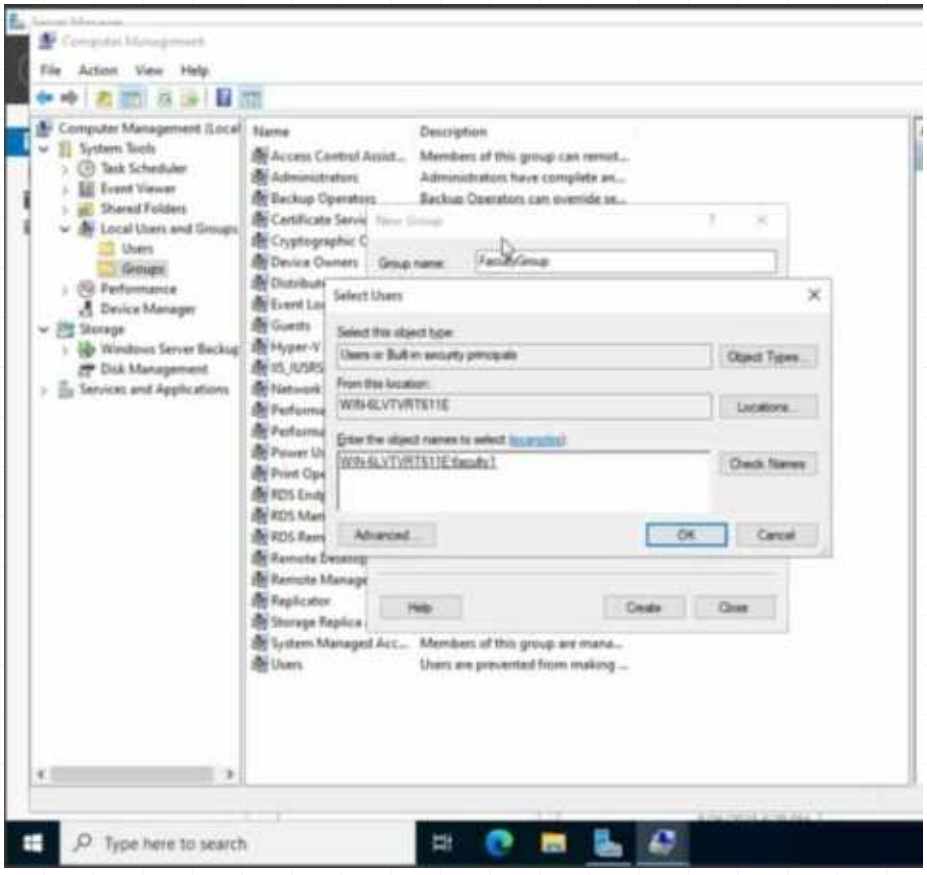
1. On Windows Server:

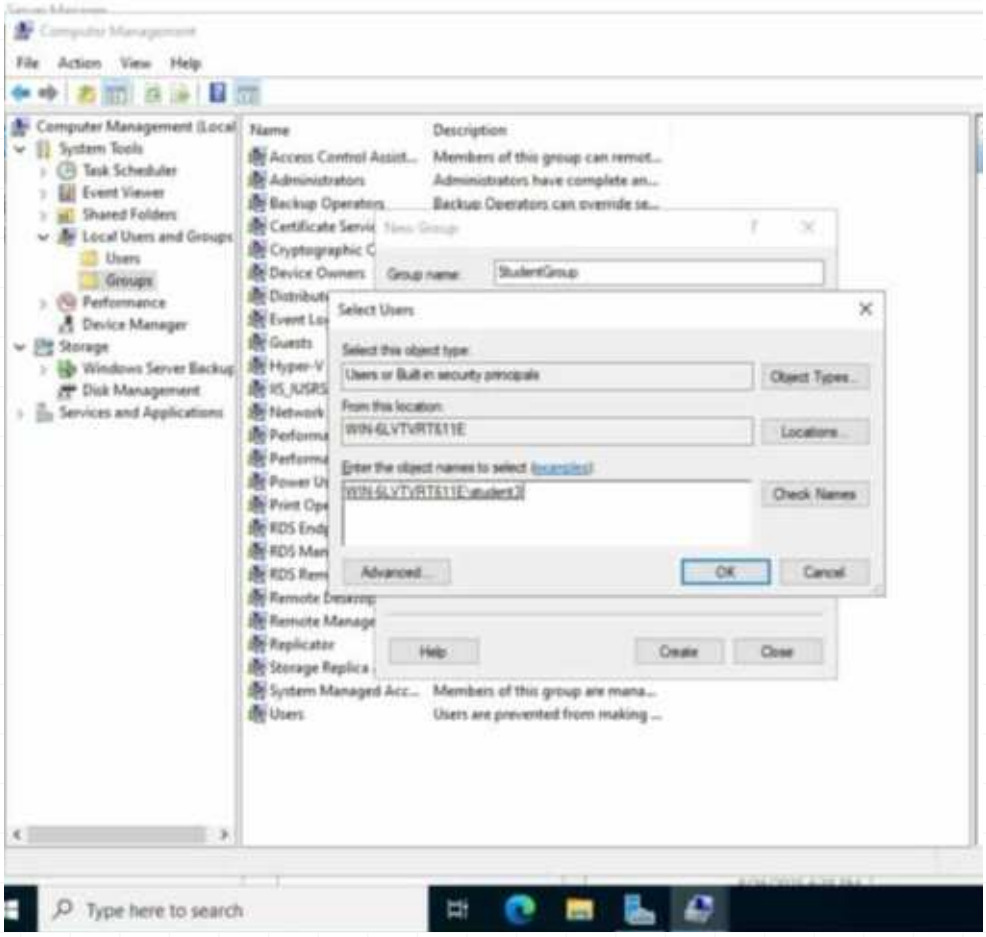
   Create two users: faculty1, student3 and password



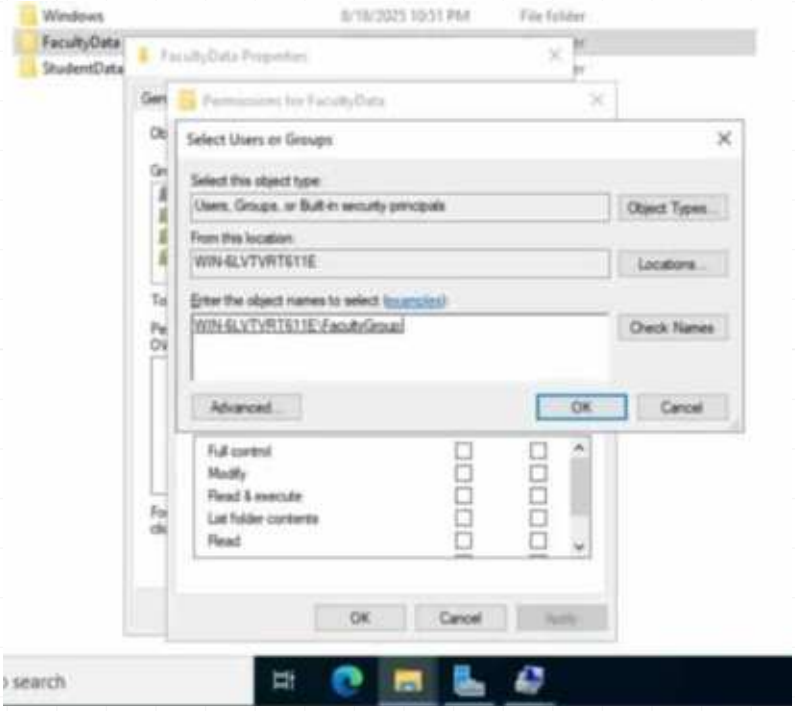


Create two groups: FacultyGroup, StudentGroup and assign each user to their respective group.

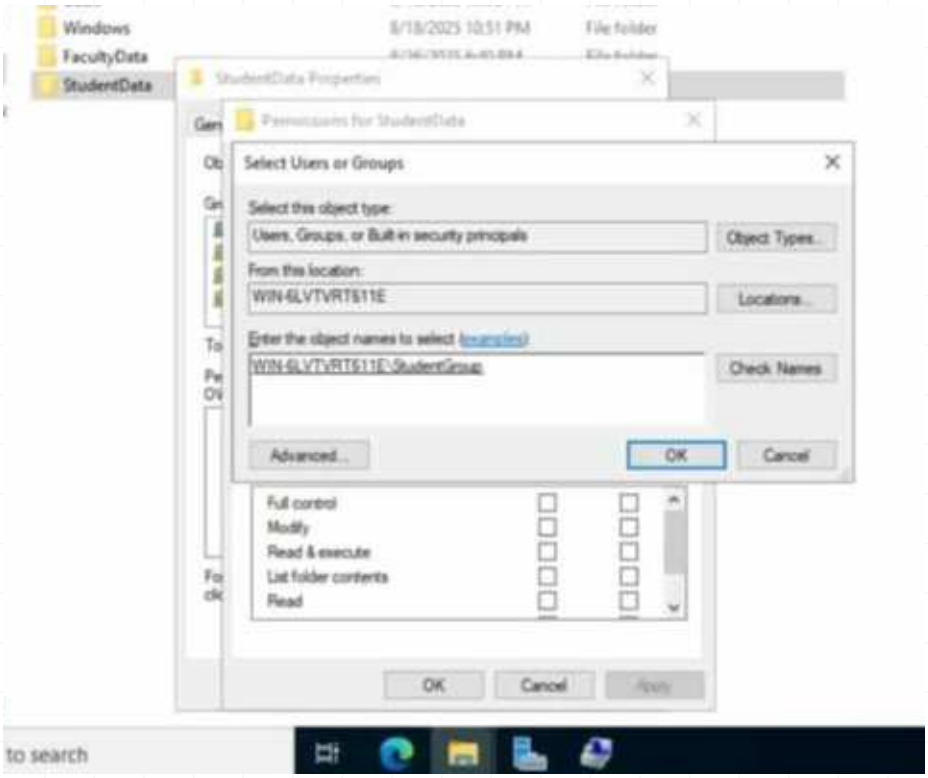




C:\FacultyData → Only FacultyGroup has Modify rights.

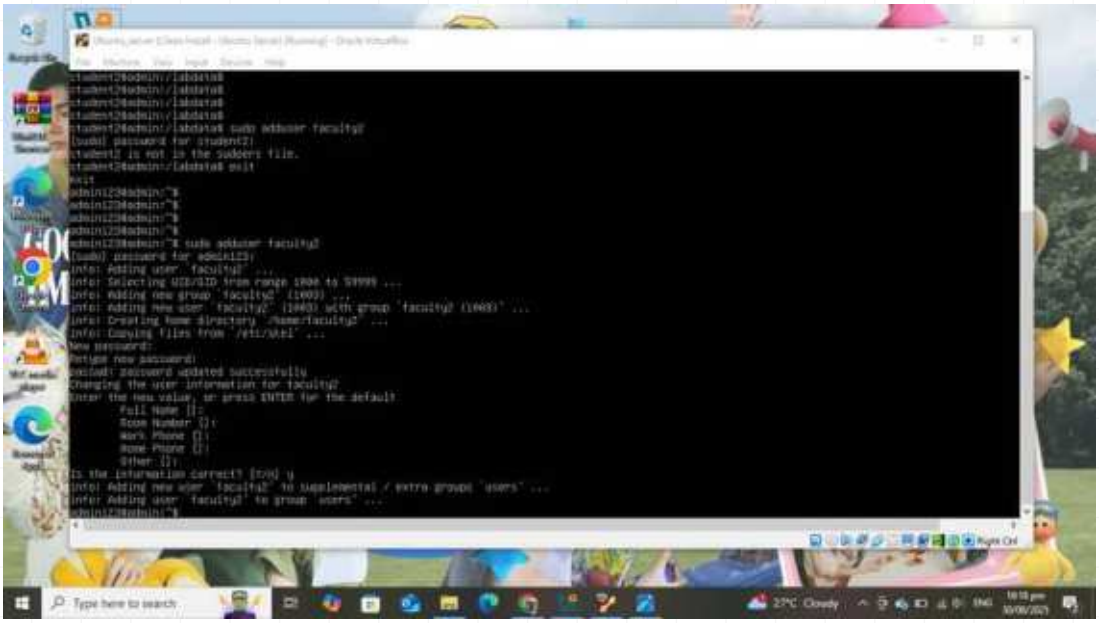


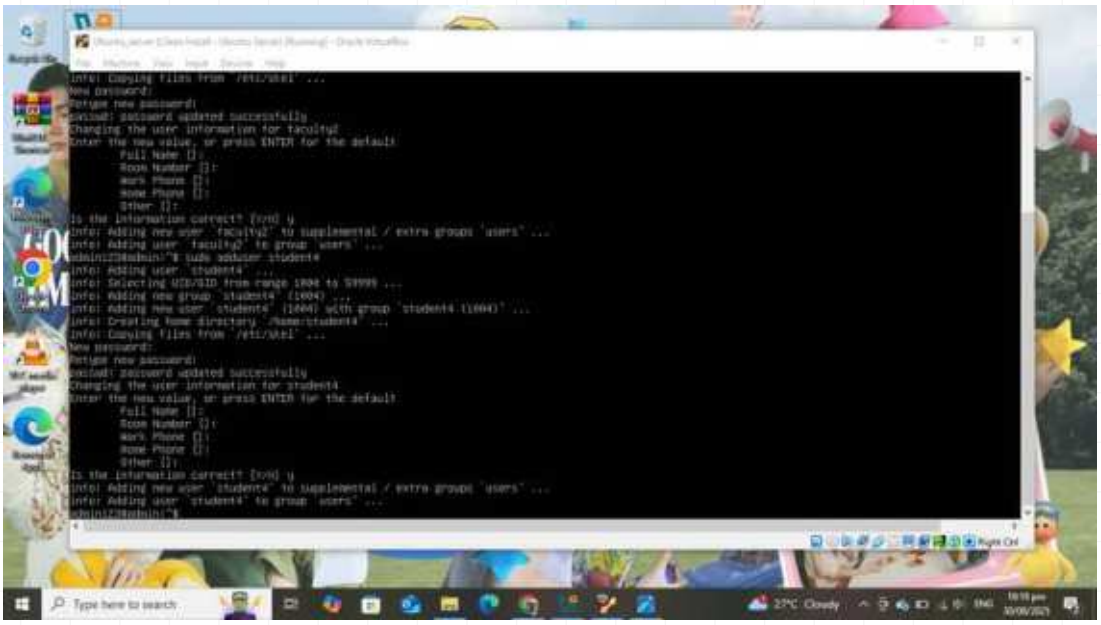
C:\StudentData → Only StudentGroup has Read rights.



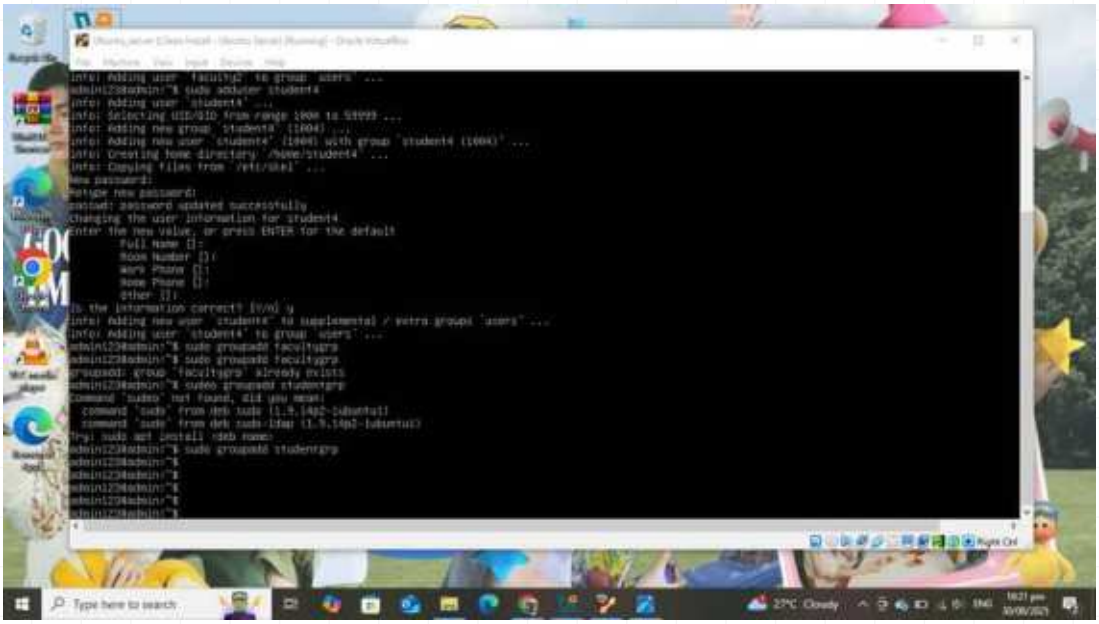
2. On Ubuntu Server:

Create the users faculty2 and student4, use the commands sudo useradd faculty2 and sudo useradd student4. This will add both users to the system.

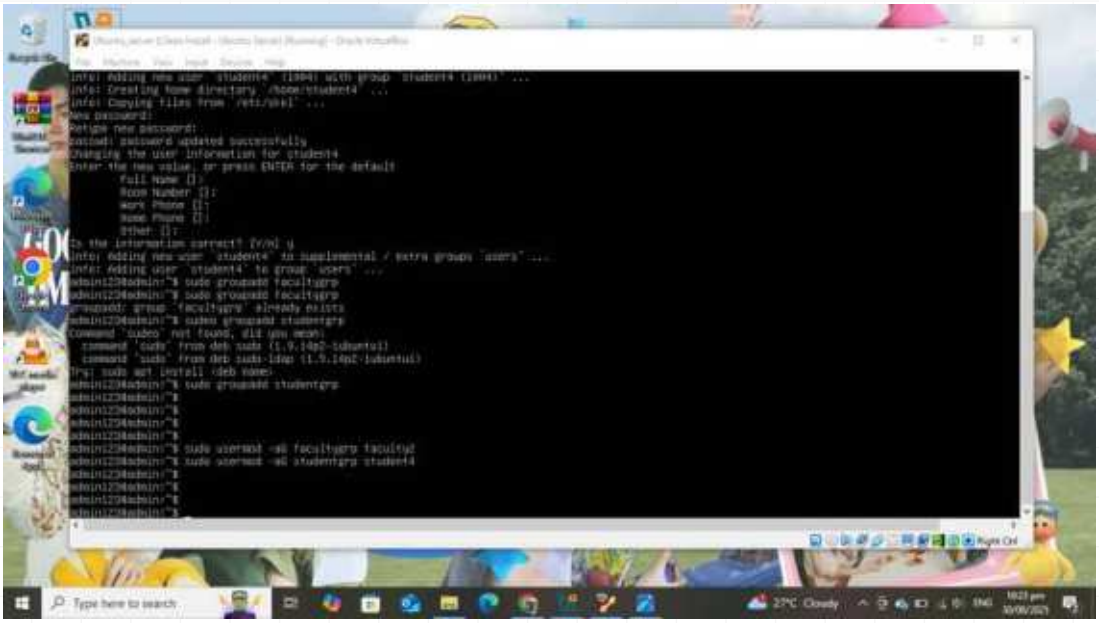




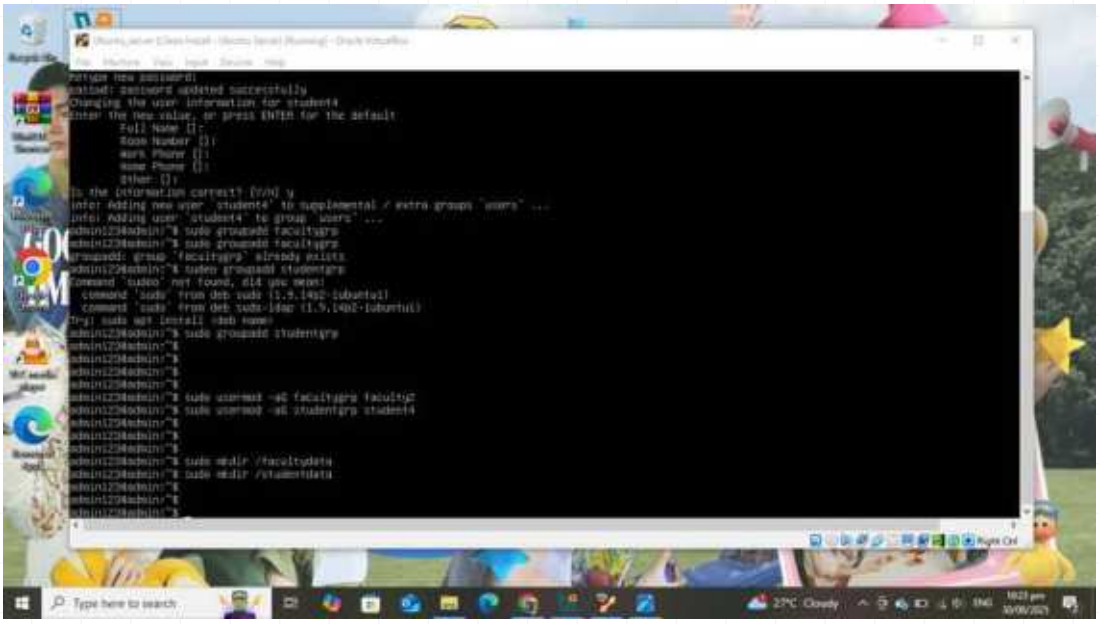
Next, to create the groups facultygrp and studentgrp, use the commands sudo groupadd facultygrp and sudo groupadd studentgrp, effectively establishing the groups for faculty and students.



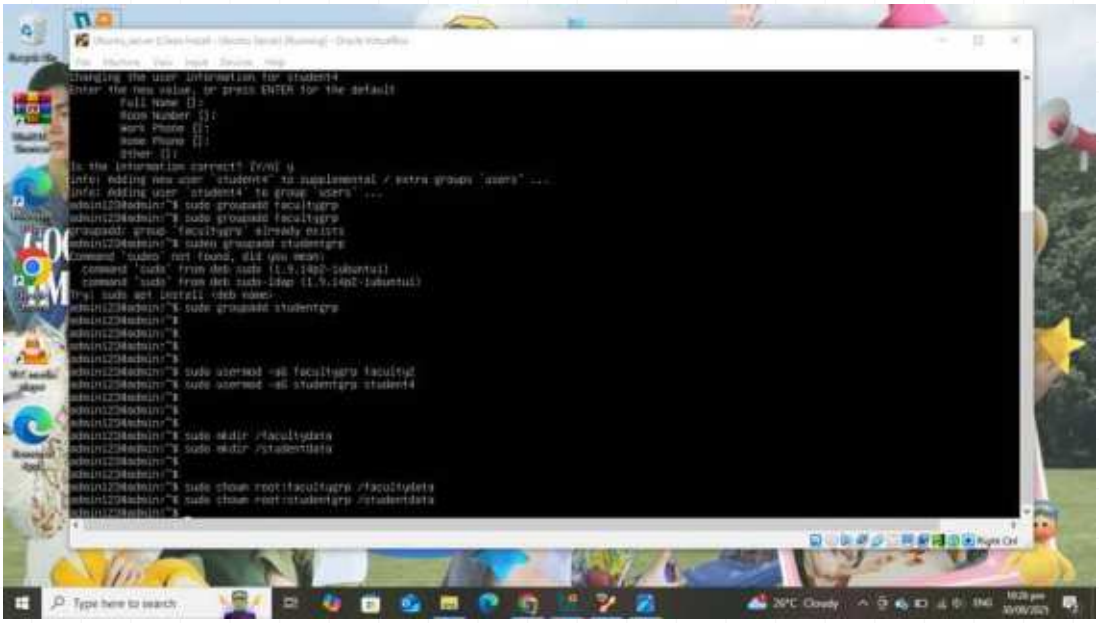
After creating the users and groups, assign each user to their respective group by executing sudo usermod -aG facultygrp faculty2 for the faculty user and sudo usermod -aG studentgrp student4 for the student user. This ensures that faculty2 is part of facultygrp and student4 is part of studentgrp.

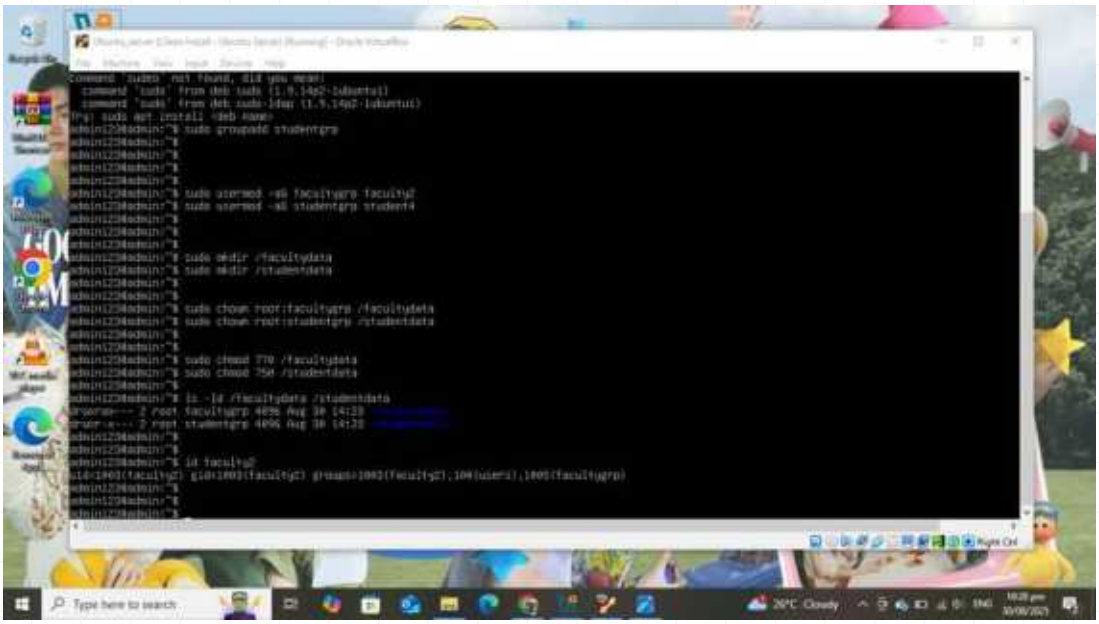


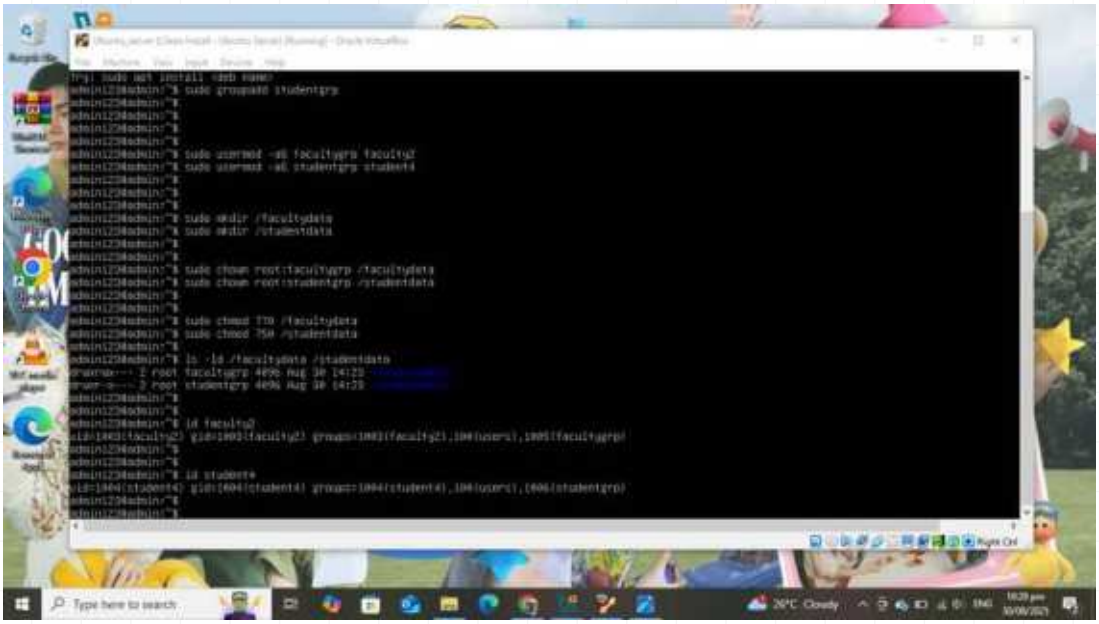
Next, create the directories /facultydata and /studentdata using the commands sudo mkdir /facultydata and sudo mkdir /studentdata. This will set up the necessary directories for faculty and student data.



Finally, set the permissions for these directories by running sudo chown :facultygrp /facultydata followed by sudo chmod 770 /facultydata to grant only facultygrp read/write permissions. For /studentdata, use sudo chown :studentgrp /studentdata and sudo chmod 750 /studentdata to allow studentgrp read-only access.

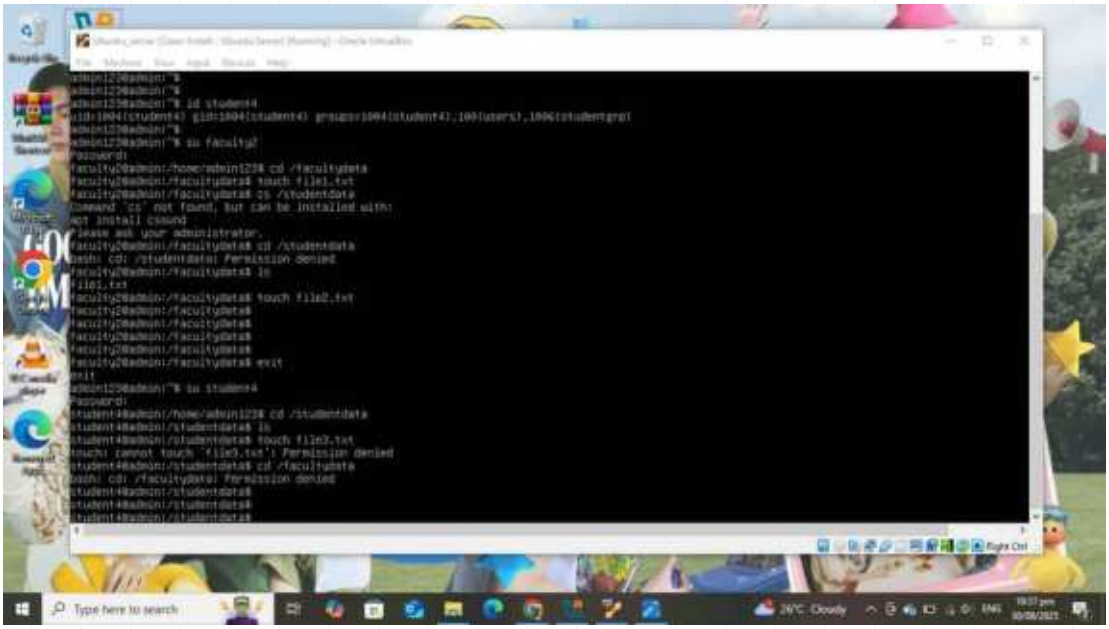






To test the setup, log in as faculty2 and student4 to verify their access permissions.

- First, log in as faculty2. Once logged in, try to create a file in /facultydata using the command touch /facultydata/testfile.txt. This should succeed, confirming that faculty2 has read/write access. Next, attempt to create a file in /studentdata using touch /studentdata/testfile.txt. This should fail with a permission denied error, indicating that faculty2 does not have access to the student directory.



- Next, log in as student4. Try to create a file in /studentdata using the command touch /studentdata/testfile.txt. This should succeed, confirming that student4 has read access. Then, attempt to create a file in /facultydata using touch /facultydata/testfile.txt, which should fail with a permission denied error, showing that student4 does not have access to the faculty directory.