



Republic of the
Philippines
Bicol University
POLANGUI CAMPUS

WEEK 3 LAB REPORT

```
student2$ cd /labdata
student2$ ls -ld labdata
'labdata': No such file or directory
student2$ ls -ld .labdata
'.labdata': No such file or directory
student2$ ls -ld /labdata
labusers 4096 Aug 30 13:35 /labdata
student2$ su -student2

student2$ cd /labdata
Permission denied
student2$ cd /labdata
'labdata': No such file or directory
student2$ cd /labdata
labdata$ touch test.txt
labdata$ sudo chmod 750 /labdata
student2:
student2$ cd /labdata
student2$ touch test2.txt
student2$ cd /labdata
Aug 30 13:4
```

SUBMITTED BY:
JENNY E. LOSANTAS
DIVINE GRACE L. CARR
SHERYL ANN P. BASONG
BSIT-4A

SUBMITTED TO:
GUILLERMO V. RED, JR, DIT
INSTRUCTOR

IT 123 – WEEK 3 LABORATORY

Lab Objectives

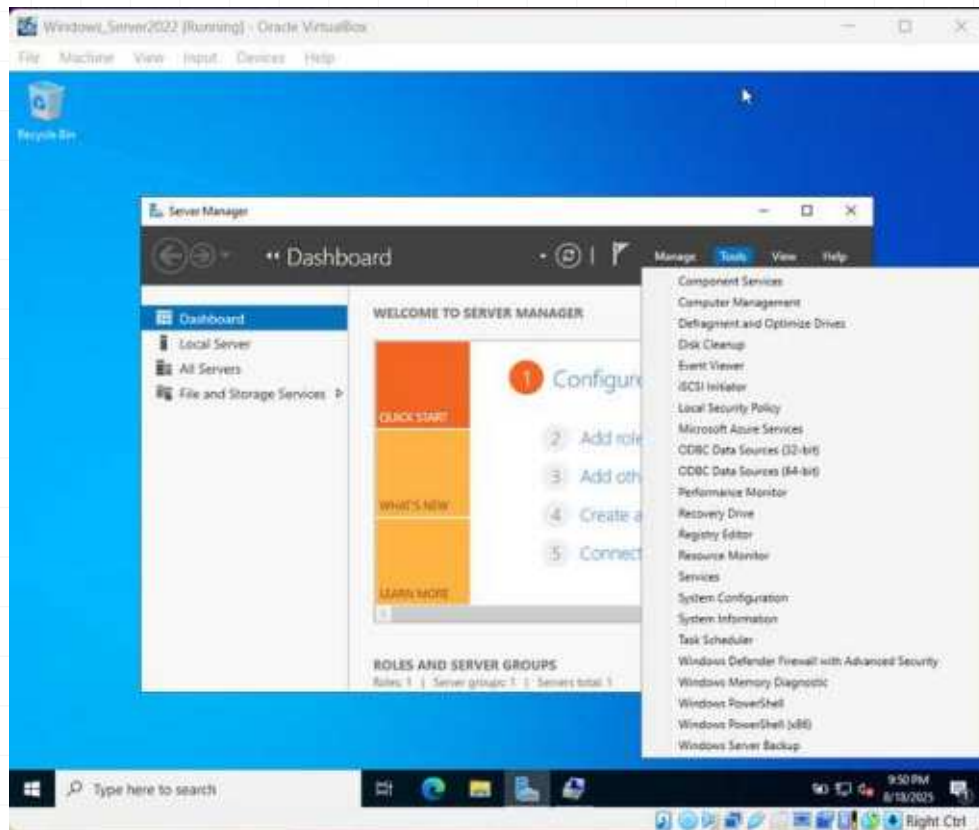
By the end of this lab, students will be able to:

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.

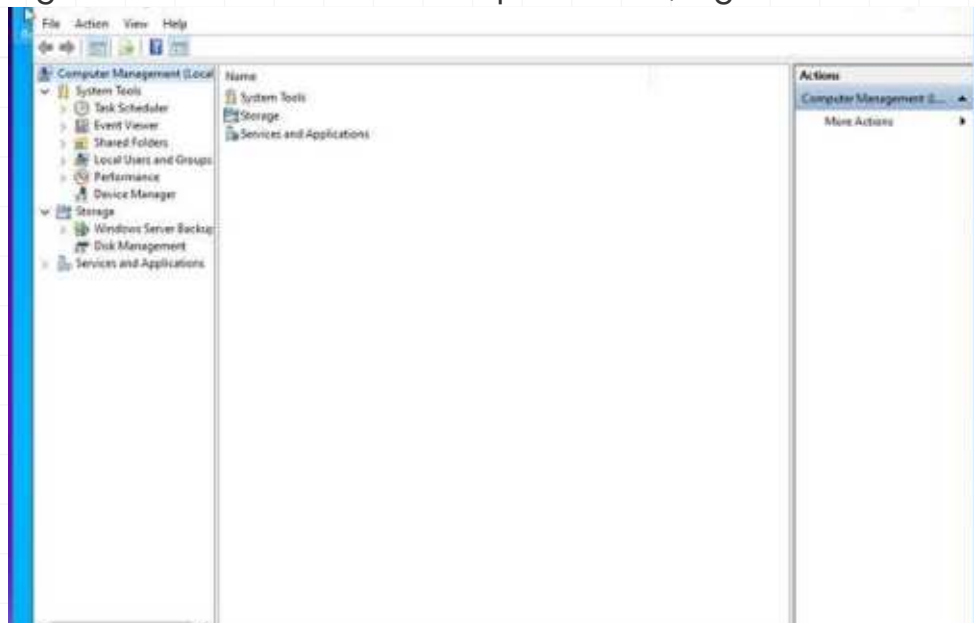
Part 1 – User & Group Management in Windows Server

1. Create a New User

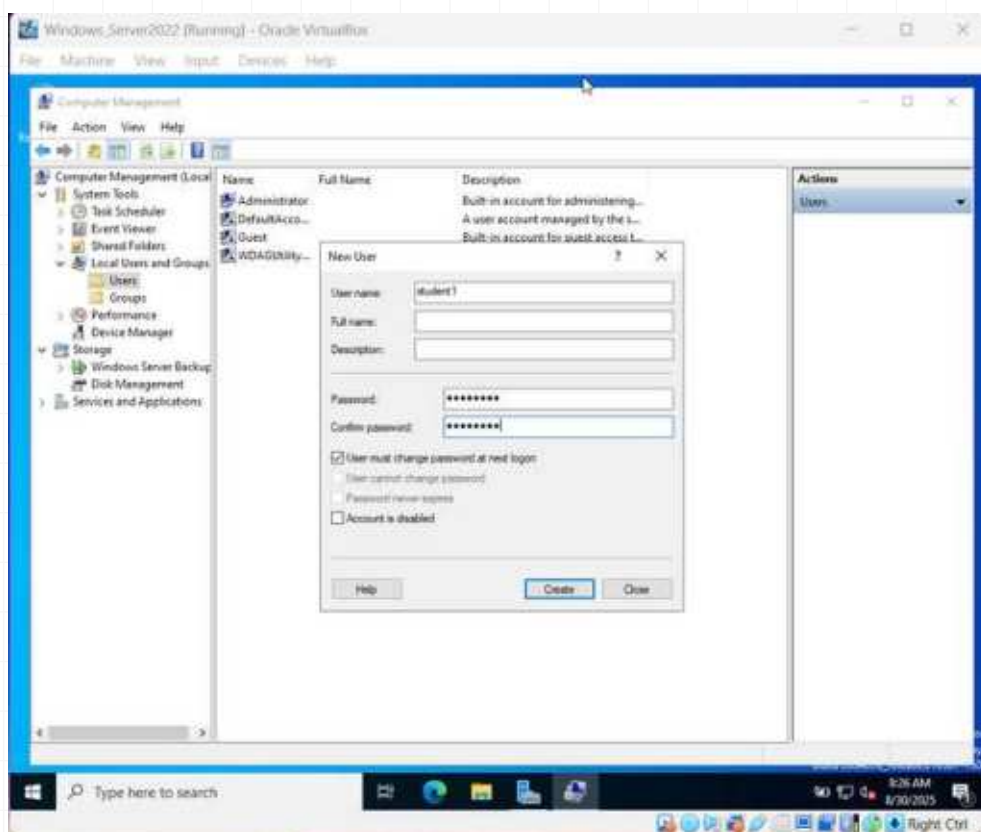
Open Server Manager → Tools → Computer Management



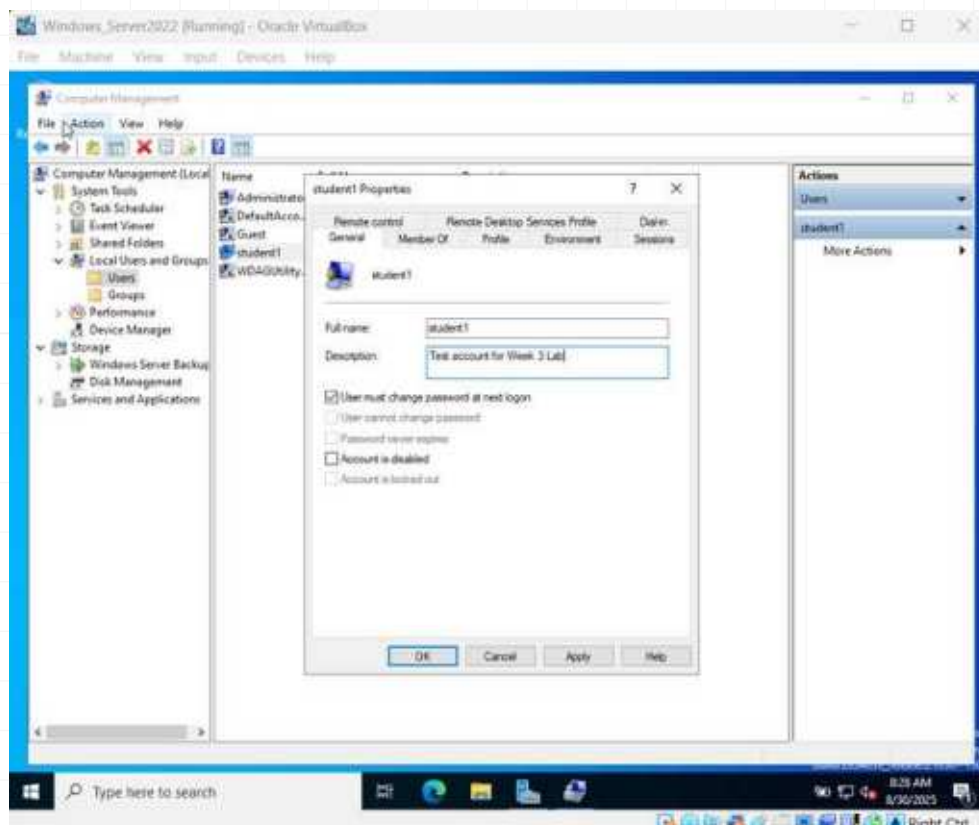
Navigate to Local Users and Groups → Users, Right-click → New User...



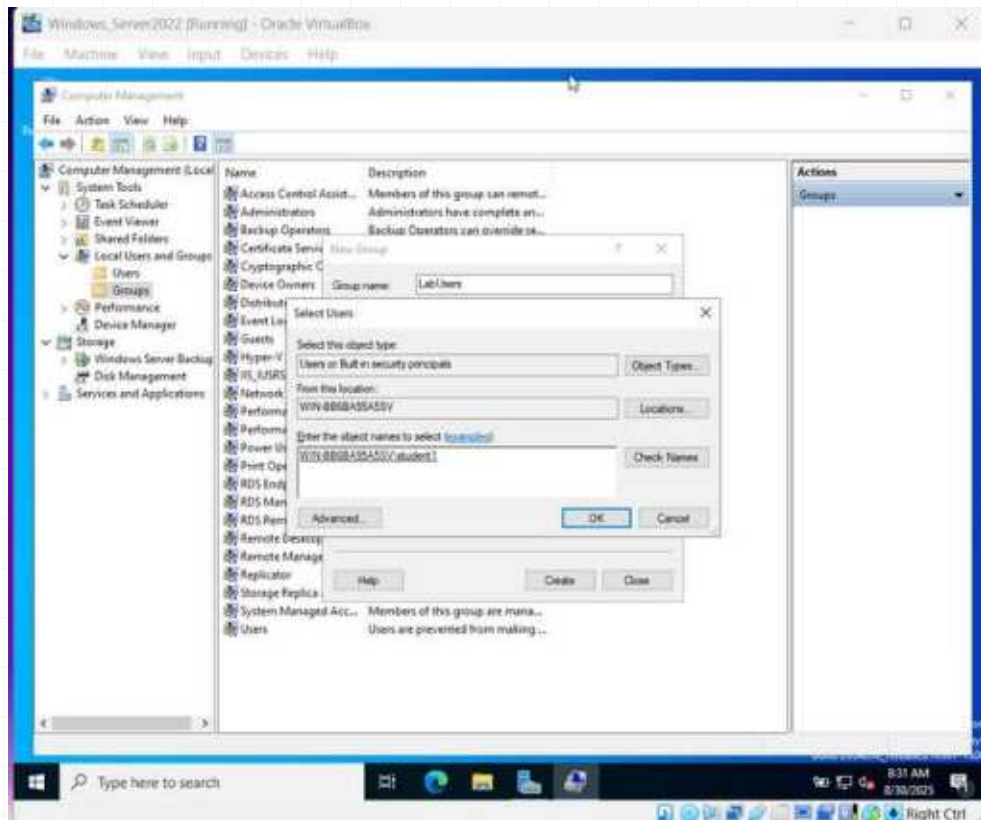
Username: student1, Password: User@123



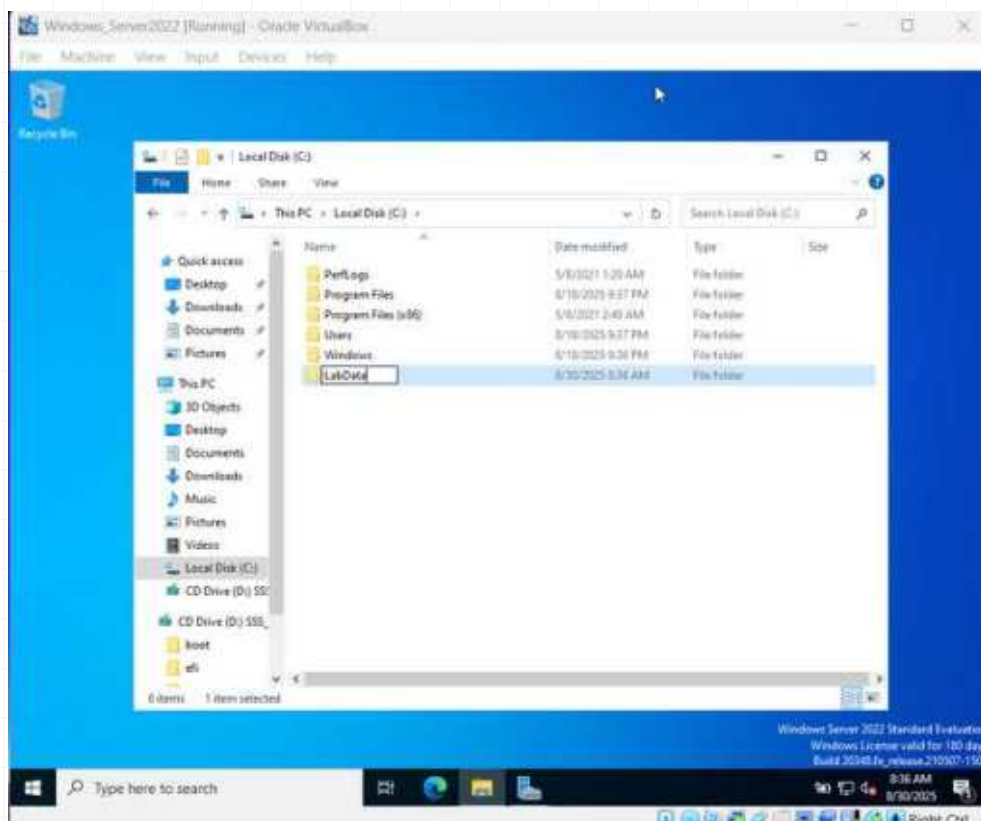
2. Right-click student1 → Properties and add description "Test account for Week 3 Lab". Require password change at next login.



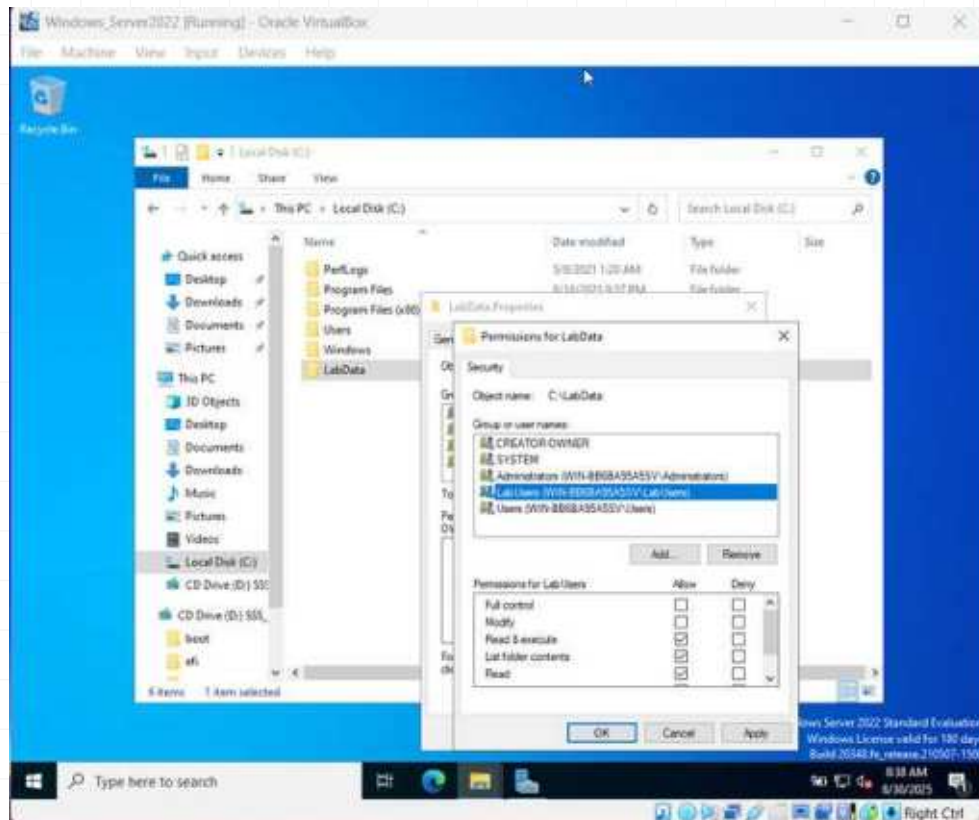
3. Create a group called LabUsers in Windows, go to "Computer Management," then "Local Users and Groups," and click on "Groups." Right-click and select "New Group," name it LabUsers, and click "Create." To add student1, right-click LabUsers, select "Add to Group," type student1, and click "OK."



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

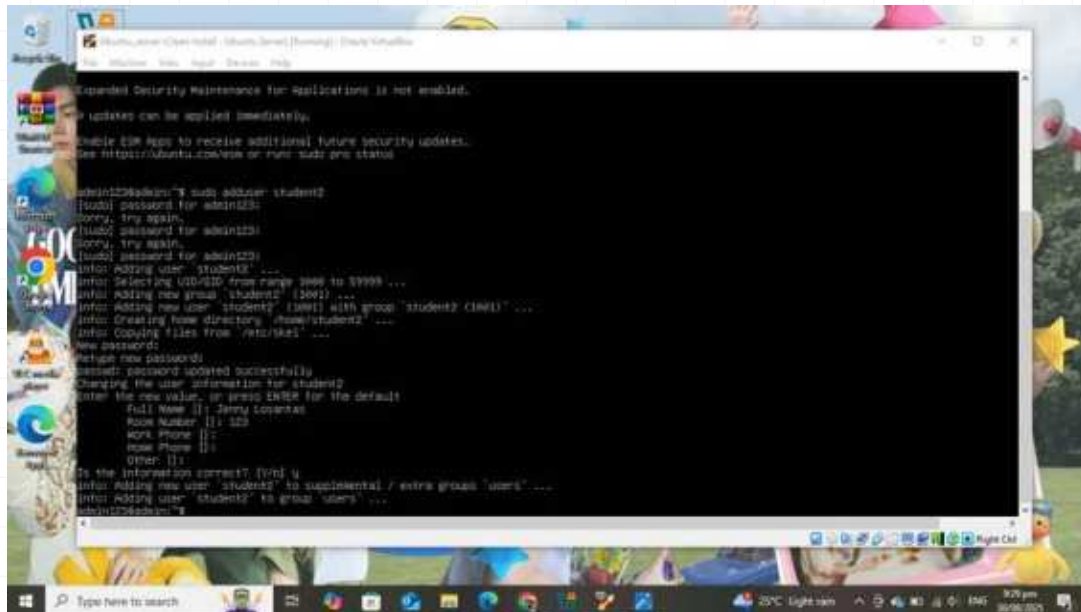


Right-click folder → Properties → Security → Add LabUsers → Grant Read & Execute only.

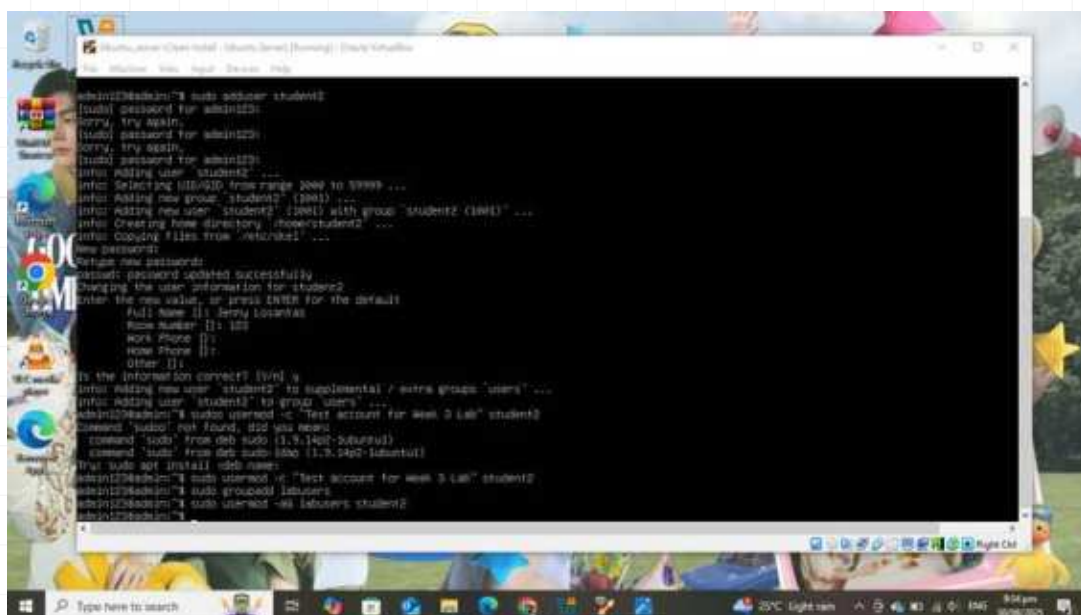


Part 2 – User & Group Management in Ubuntu Server

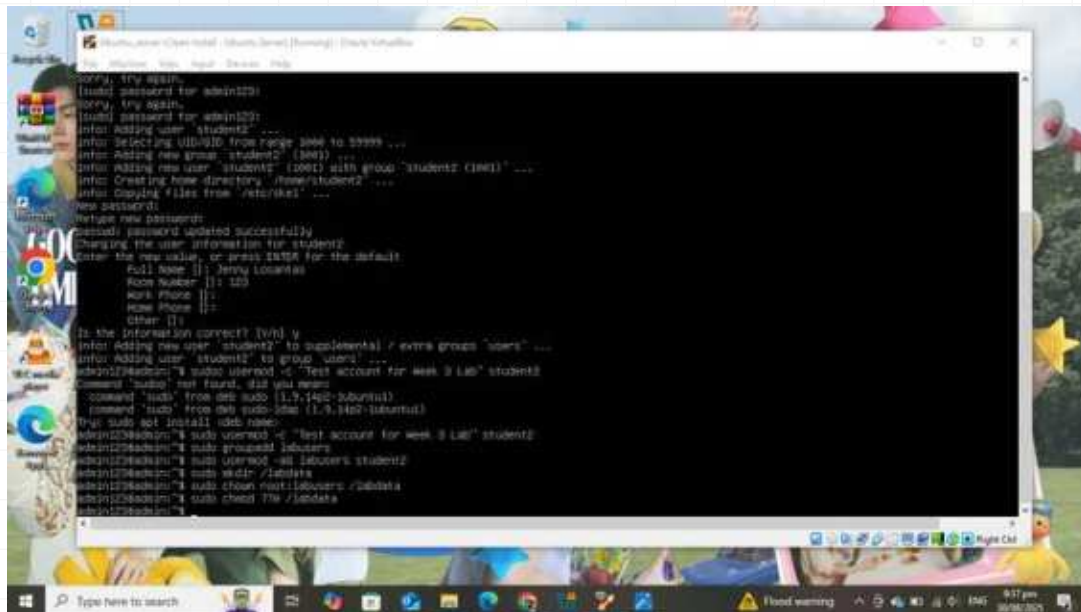
1. Create a new user on the system, enter "sudo adduser student2". This command requires administrative privileges, which is why "sudo" is included. During the process, set a password for the new account, which is User@123. After entering the password, the system will ask for additional details, such 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.



```
admin@kali:~$ sudo groupadd labusers
groupadd: group 'labusers' added successfully
admin@kali:~$ sudo usermod -aG labusers student2
usermod: user 'student2' added to group 'labusers' successfully
admin@kali:~$
```

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.

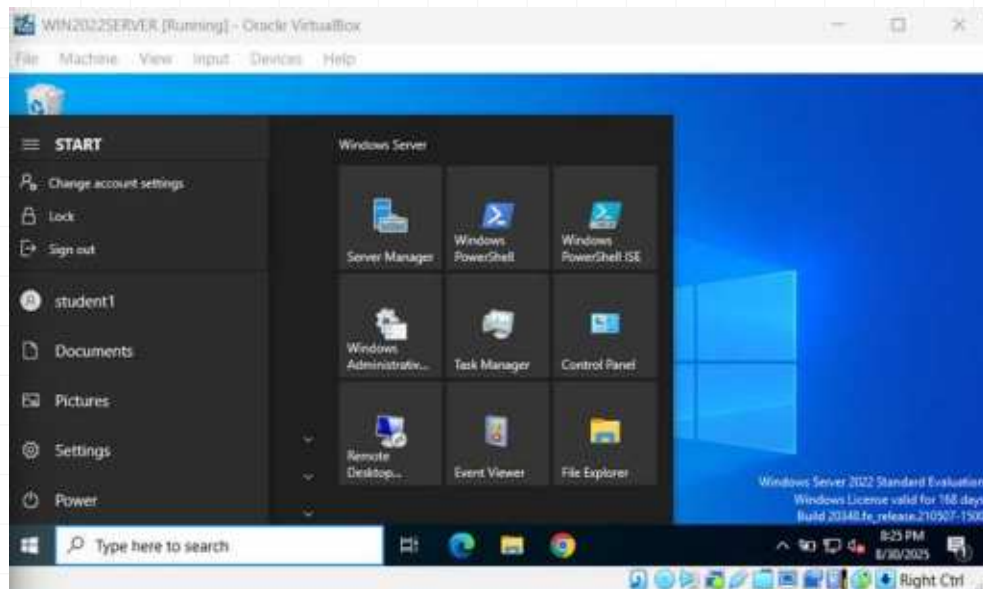


```
admin@kali:~$ sudo mkdir /labdata
mkdir: created directory '/labdata'
admin@kali:~$ sudo chown root:labusers /labdata
chown: changing ownership of '/labdata' to root:labusers
admin@kali:~$ sudo chmod 770 /labdata
chmod: changing permissions of '/labdata' to rwxrwx---
admin@kali:~$
```

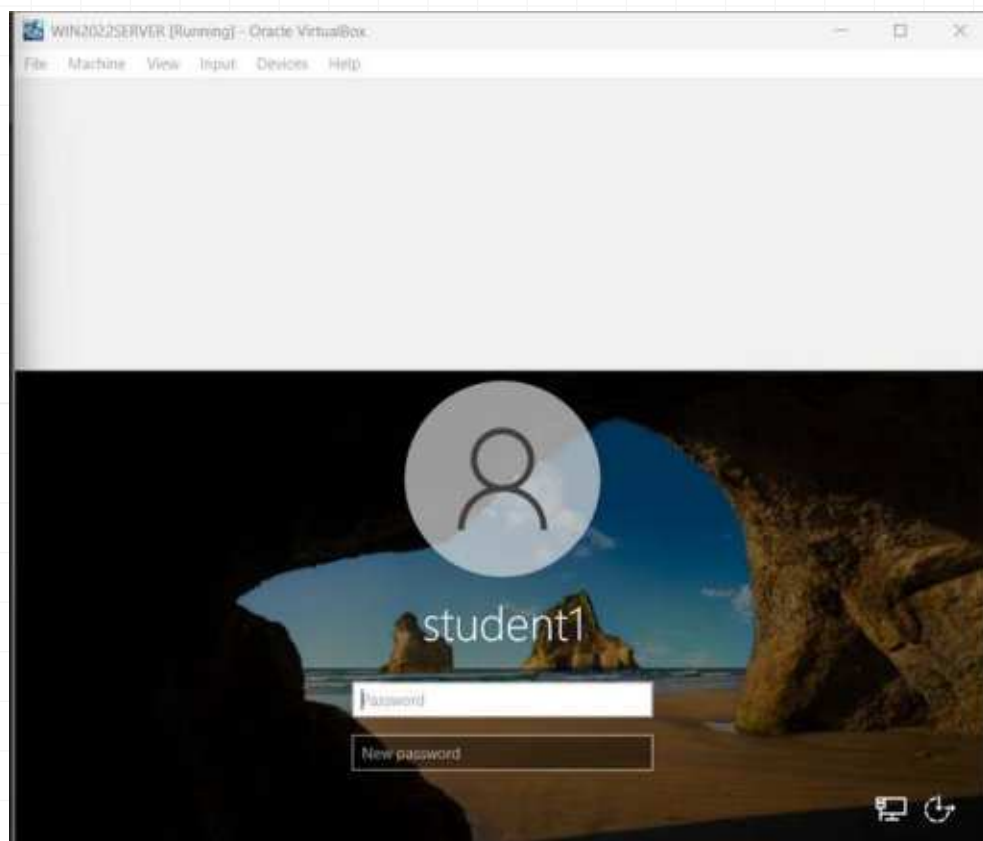
Part 3 – Verification & Troubleshooting

1. Windows

Log out and log in as student1.

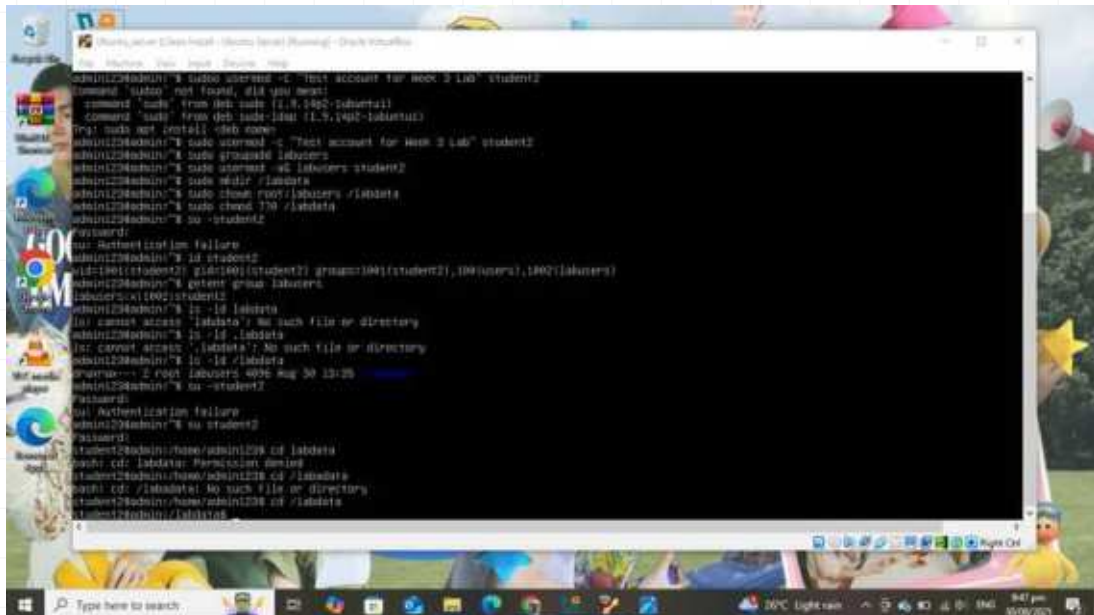


Require password change at next login.

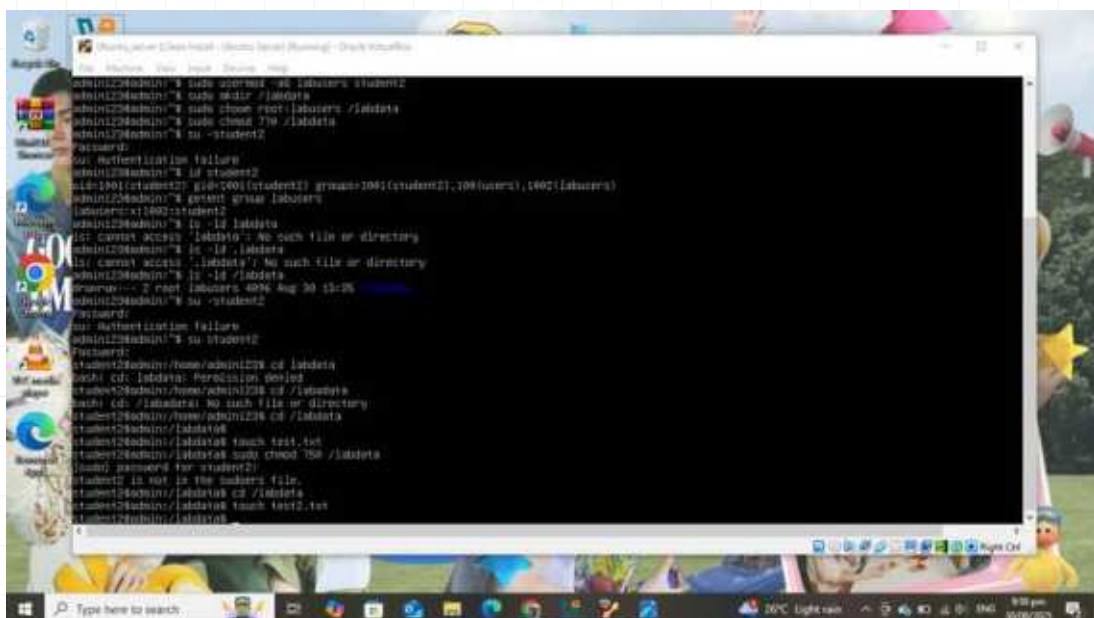


2. Linux

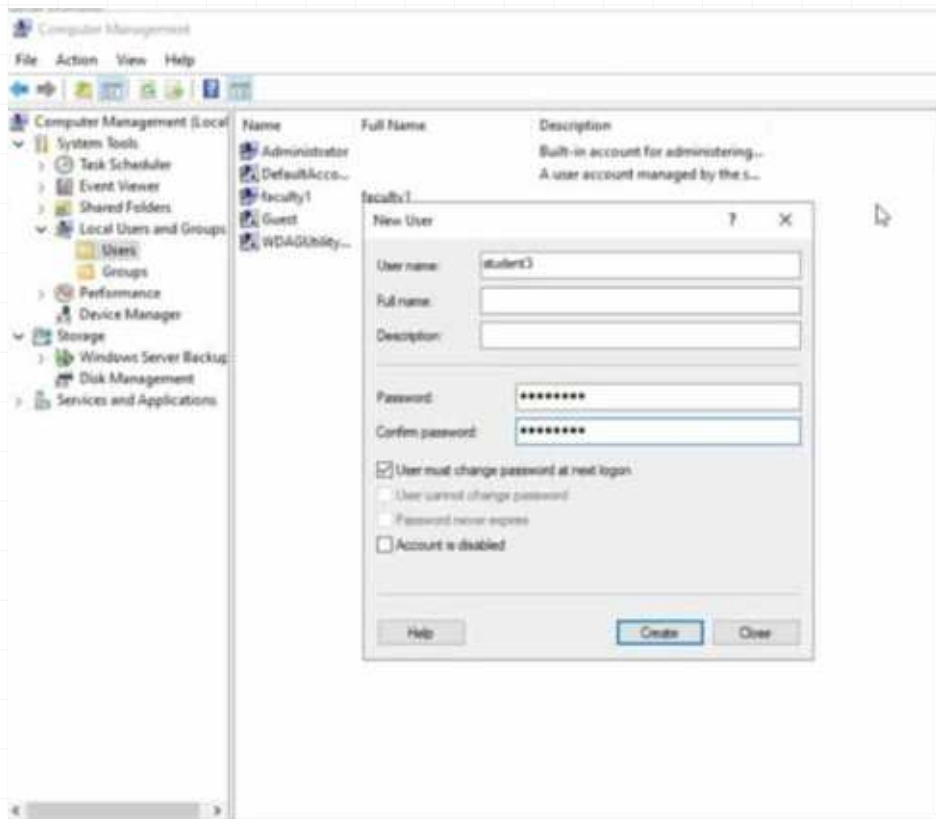
- To switch to the user student2, use the command `su - student2`, which provides access to that user's environment. Once switched, you can access the directory `/labdata` and create a file with `touch testfile.txt`, which should succeed since student2 is part of the labusers group. After that, remove 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.



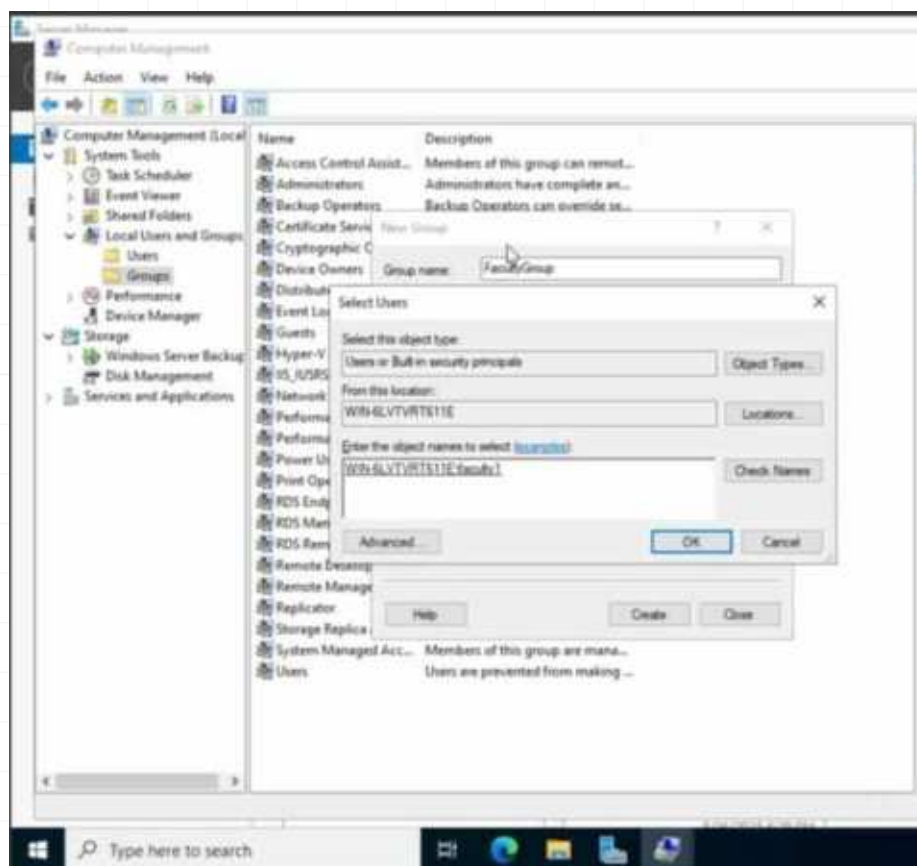
```
admin123@admin1:~$ sudo useradd -c "Test account for week 2 lab" student2
Adding user `student2' with group `labusers'
Adding new group `labusers' (100)
Adding new user `student2' (100) with group `labusers'
admin123@admin1:~$ sudo groupadd labusers
admin123@admin1:~$ sudo useradd -c "Test account for week 2 lab" student2
admin123@admin1:~$ sudo mkdir /labdata
admin123@admin1:~$ sudo chown root:labusers /labdata
admin123@admin1:~$ sudo chmod 750 /labdata
admin123@admin1:~$ su -student2
Password:
su: Authentication failure
admin123@admin1:~$ id student2
uid=100(student2) gid=100(student2) groups=100(student2),100(users),100(labusers)
admin123@admin1:~$ getent group labusers
labusers:x:100:student2
admin123@admin1:~$ ls -ld /labdata
ls: cannot access '/labdata': No such file or directory
admin123@admin1:~$ ls -ld /labdata
ls: cannot access '/labdata': No such file or directory
admin123@admin1:~$ ls -ld /labdata
ls: cannot access '/labdata': No such file or directory
admin123@admin1:~$ su -student2
Password:
su: Authentication failure
admin123@admin1:~$ su student2
Password:
student2@admin1:/home/admin123$ cd /labdata
bash: cd: /labdata: Permission denied
student2@admin1:/home/admin123$ cd /labdata
bash: cd: /labdata: No such file or directory
student2@admin1:/home/admin123$ cd /labdata
student2@admin1:/labdata$
```

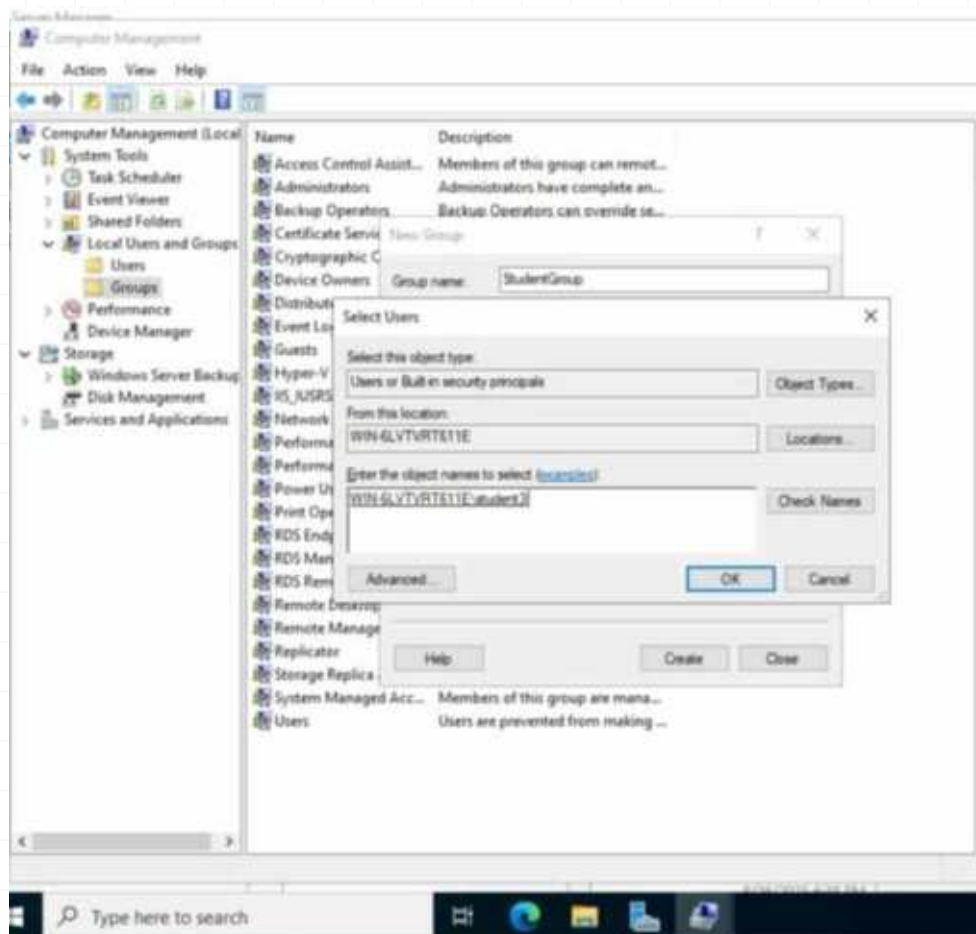


```
admin123@admin1:~$ sudo useradd -c "Test account for week 2 lab" student2
Adding user `student2' with group `labusers'
Adding new group `labusers' (100)
Adding new user `student2' (100) with group `labusers'
admin123@admin1:~$ sudo groupadd labusers
admin123@admin1:~$ sudo useradd -c "Test account for week 2 lab" student2
admin123@admin1:~$ sudo mkdir /labdata
admin123@admin1:~$ sudo chown root:labusers /labdata
admin123@admin1:~$ sudo chmod 750 /labdata
admin123@admin1:~$ su -student2
Password:
su: Authentication failure
admin123@admin1:~$ su student2
Password:
student2@admin1:/home/admin123$ cd /labdata
bash: cd: /labdata: Permission denied
student2@admin1:/home/admin123$ cd /labdata
bash: cd: /labdata: No such file or directory
student2@admin1:/home/admin123$ cd /labdata
student2@admin1:/labdata$ touch test.txt
student2@admin1:/labdata$ sudo chmod 750 /labdata
student2@admin1:/labdata$
```

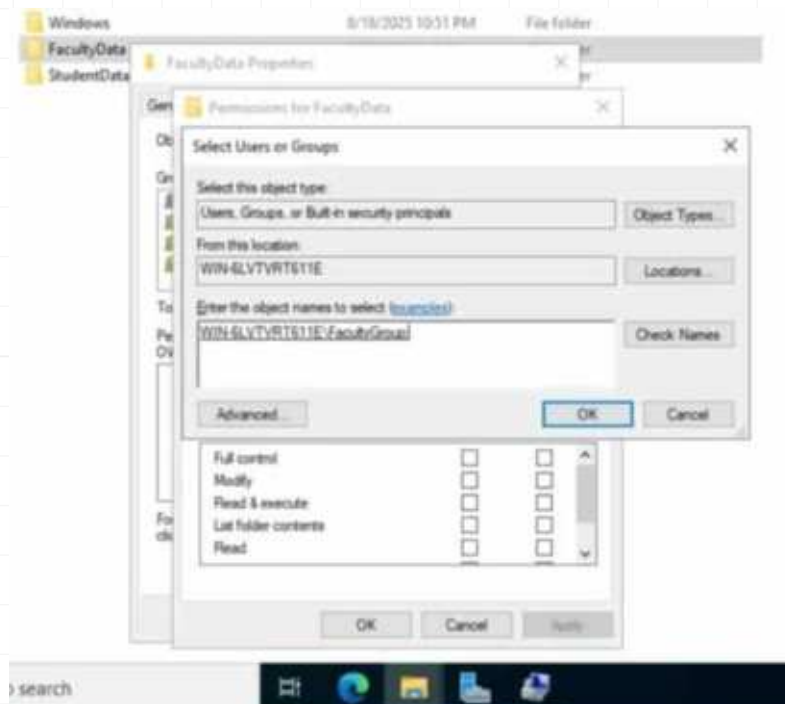



Create two groups: FacultyGroup, StudentGroup and assign each user to their respective group.

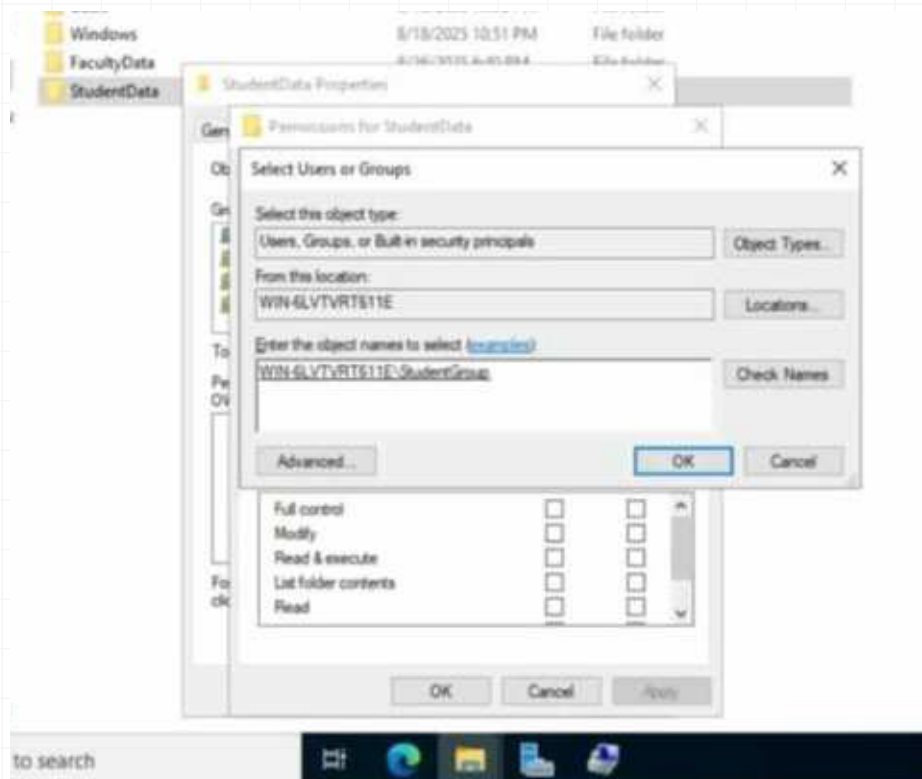




C:\FacultyData → Only FacultyGroup has Modify rights.

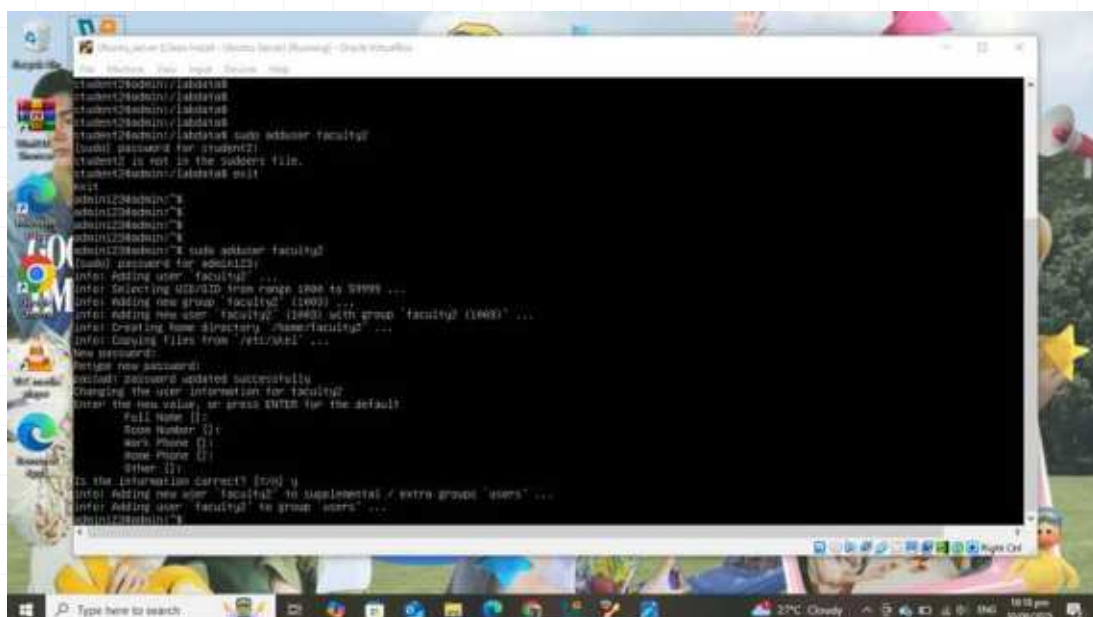


C:\StudentData → Only StudentGroup has Read rights.



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.

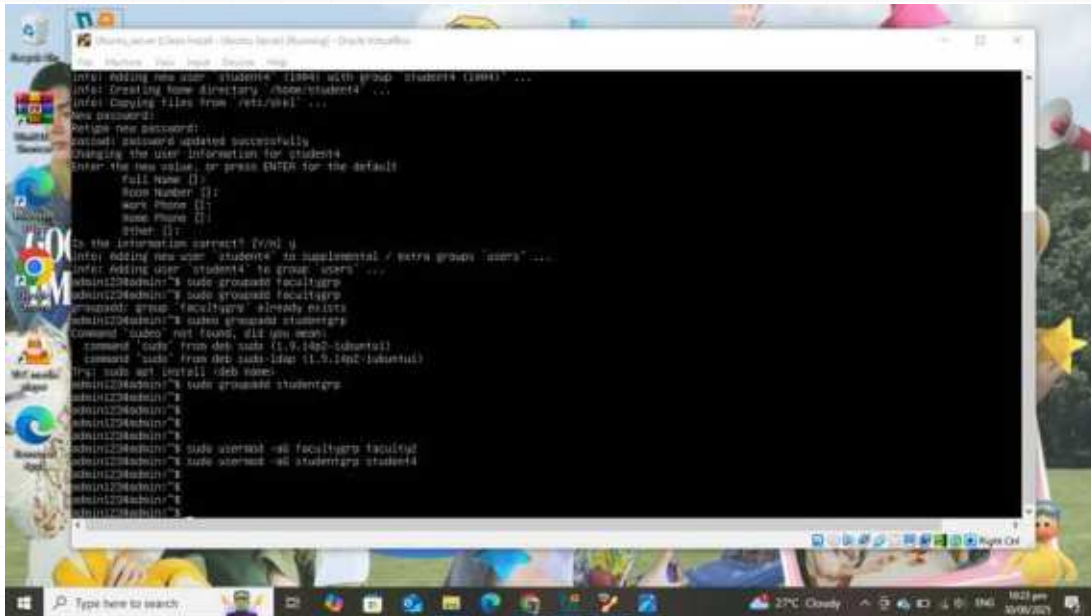



```
Info: Copying files from /etc/skel ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for faculty2
Enter the new value, or press ENTER for the default:
  Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [y/n] y
Info: Adding new user 'faculty2' to supplemental / extra groups 'users' ...
admin123@ubuntu:~$ sudo adduser student4
Info: Adding user 'student4' ...
Info: Selecting UID/GID from range 1000 to 50000 ...
Info: Adding new group 'student4' (1004) ...
Info: Adding new user 'student4' (1004) with group 'student4' (1004) ...
Info: Creating home directory: /home/student4 ...
Info: Copying files from /etc/skel ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for student4
Enter the new value, or press ENTER for the default:
  Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [y/n] y
Info: Adding new user 'student4' to supplemental / extra groups 'users' ...
Info: Adding user 'student4' to group 'users' ...
admin123@ubuntu:~$
```

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.

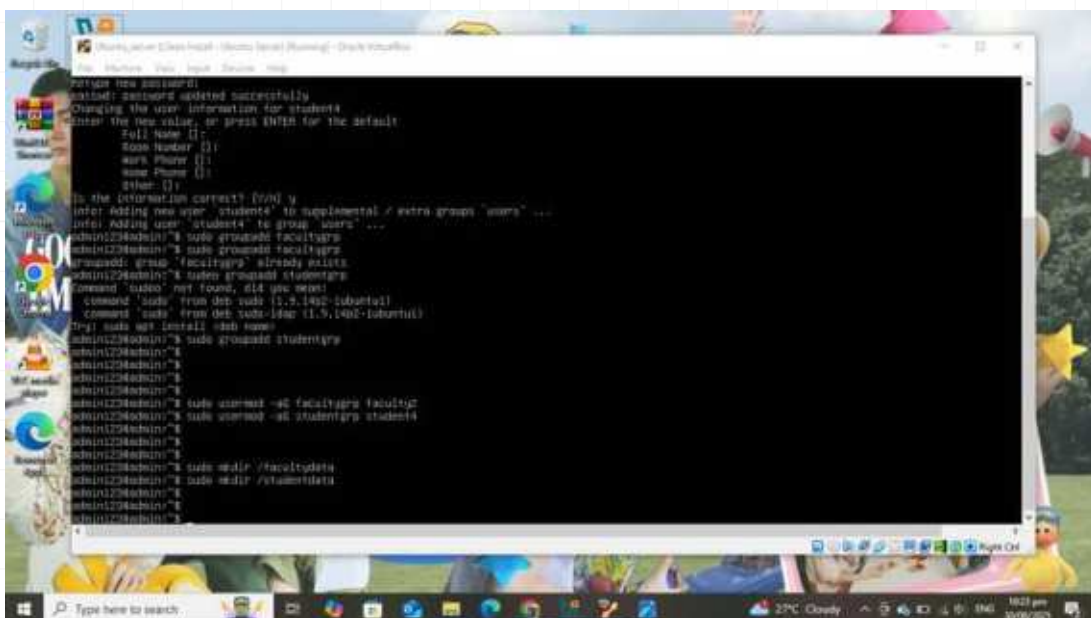
```
admin123@ubuntu:~$ sudo groupadd student4
Info: Adding user 'student4' to group 'users' ...
admin123@ubuntu:~$ sudo adduser student4
Info: Adding user 'student4' ...
Info: Selecting UID/GID from range 1000 to 50000 ...
Info: Adding new group 'student4' (1004) ...
Info: Adding new user 'student4' (1004) with group 'student4' (1004) ...
Info: Creating home directory: /home/student4 ...
Info: Copying files from /etc/skel ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for student4
Enter the new value, or press ENTER for the default:
  Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [y/n] y
Info: Adding new user 'student4' to supplemental / extra groups 'users' ...
admin123@ubuntu:~$ sudo groupadd facultygrp
admin123@ubuntu:~$ sudo groupadd studentgrp
groupadd: group 'facultygrp' already exists
groupadd: group 'studentgrp' already exists
command 'sudo' from deb sudo (1.9.14-2ubuntu1)
command 'sudo' from deb sudo (1.9.14-2ubuntu1)
Try: sudo apt install sudo
admin123@ubuntu:~$ sudo groupadd studentgrp
admin123@ubuntu:~$
admin123@ubuntu:~$
admin123@ubuntu:~$
```

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`.



```
info: adding new user 'student4' (1000) with group 'students' (1000) ...
info: Creating home directory: /home/student4 ...
info: Copying files from /etc/skel ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for student4
Enter the new value, or press ENTER for the default
Full Name []:
Room Number []:
Work Phone []:
Home Phone []:
Other []:
Is the information correct? [Y/n] y
info: adding new user 'student4' to supplemental / extra groups 'users' ...
info: Adding user 'student4' to group 'users' ...
admin@kali:~$ sudo groupadd facultygrp
admin@kali:~$ sudo groupadd facultygrp
groupadd: group 'facultygrp' already exists
admin@kali:~$ sudo groupadd studentgrp
Command 'sudo' not found, did you mean:
Command 'sudo' from deb sudo (1.9.14-0ubuntu1)
Command 'sudo' from deb sudo (1.9.14-0ubuntu1)
Try: sudo apt install deb name
admin@kali:~$ sudo groupadd studentgrp
admin@kali:~$ sudo usermod -aG facultygrp faculty2
admin@kali:~$ sudo usermod -aG studentgrp student4
admin@kali:~$
```

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.



```
passwd: password updated successfully
Changing the user information for student4
Enter the new value, or press ENTER for the default
Full Name []:
Room Number []:
Work Phone []:
Home Phone []:
Other []:
Is the information correct? [Y/n] y
info: adding new user 'student4' to supplemental / extra groups 'users' ...
info: Adding user 'student4' to group 'users' ...
admin@kali:~$ sudo groupadd facultygrp
admin@kali:~$ sudo groupadd facultygrp
groupadd: group 'facultygrp' already exists
admin@kali:~$ sudo groupadd studentgrp
Command 'sudo' not found, did you mean:
Command 'sudo' from deb sudo (1.9.14-0ubuntu1)
Command 'sudo' from deb sudo (1.9.14-0ubuntu1)
Try: sudo apt install deb name
admin@kali:~$ sudo groupadd studentgrp
admin@kali:~$ sudo usermod -aG facultygrp faculty2
admin@kali:~$ sudo usermod -aG studentgrp student4
admin@kali:~$ sudo mkdir /facultydata
admin@kali:~$ sudo mkdir /studentdata
admin@kali:~$
```

The screenshot shows a Windows 10 desktop environment. In the foreground, a Kali Linux virtual machine window is open, displaying a terminal session. The terminal output shows the following commands and their results:

```

Changing the user information for student4
Enter the new value, or press ENTER for the default
Full Name []:
Given Name []:
Work Phone []:
Home Phone []:
Other []:

Is the information correct? [y/n]
Info: Adding new user 'student4' to supplemental / extra groups 'users' ....
Info: Adding user 'student4' to group 'users' ....
admin123@admin1:~$ sudo groupadd facultygr
admin123@admin1:~$ sudo groupadd studentgr
groupadd: group 'facultygr' already exists
admin123@admin1:~$ sudo groupadd studentgr
Command 'sudo' not found, did you mean:
Command 'sudo' from deb sudo (1.9.14b-1ubuntu1)
Command 'sude' from deb sudo (1.9.14b-1ubuntu1)
Info: sudo not installed. Visit https://www.winehq.org
admin123@admin1:~$ sudo groupadd studentgr
admin123@admin1:~$
admin123@admin1:~$
admin123@admin1:~$
admin123@admin1:~$ sudo useradd -s /bin/bash facultygr
admin123@admin1:~$ sudo useradd -s /bin/bash student4
admin123@admin1:~$
admin123@admin1:~$ sudo mkdir /facultydata
admin123@admin1:~$ sudo mkdir /studentdata
admin123@admin1:~$
admin123@admin1:~$
admin123@admin1:~$ sudo chown root:facultygr /facultydata
admin123@admin1:~$ sudo chown root:studentgr /studentdata
admin123@admin1:~$

```

The desktop background is a colorful cartoon illustration of a girl and a boy. The taskbar at the bottom shows various application icons, including the Start button, search bar, and several open applications. The system clock in the bottom right corner shows the date as 10/26/2021 and the time as 10:26 pm.

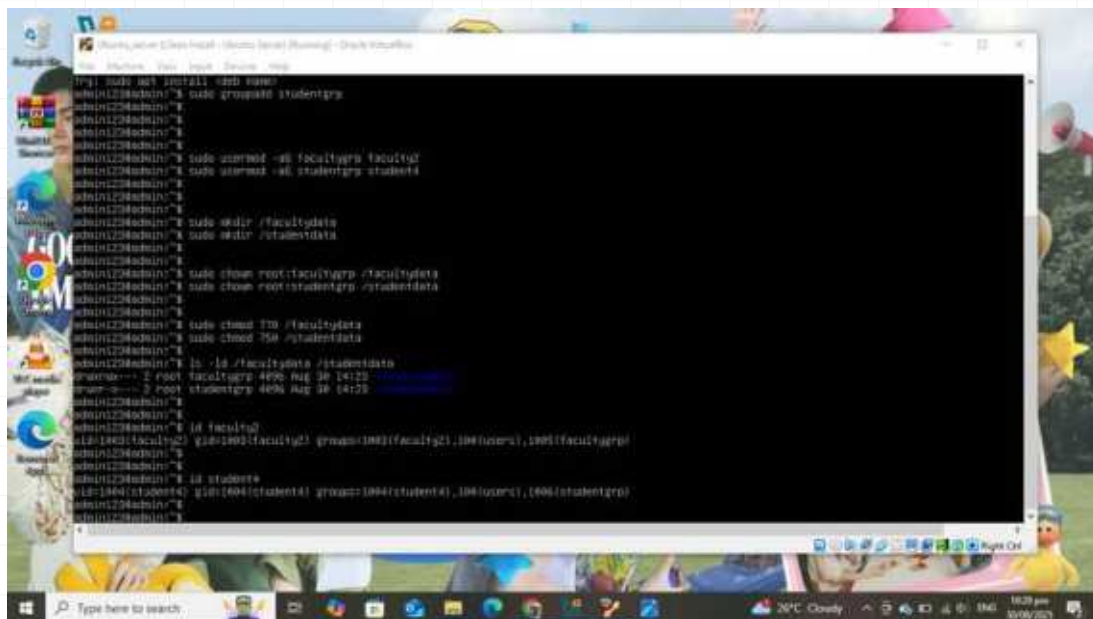
The screenshot shows a Kali Linux desktop environment. A terminal window is open, displaying the following commands and output:

```

Command 'sudo' not found, did you mean:
Command 'sudo' from deb sudo (1.9.14df-1ubuntu1)
Command 'sudo' from deb sudo (1.9.14df-1ubuntu1)
[ry] sudo apt install -y nmap
admin@kali:~$ sudo groupadd studentgrp
admin@kali:~$ sudo id studentgrp
uid=1000(studentgrp)
gid=1000(studentgrp)
groups=1000(studentgrp),1000(studentgrp)
admin@kali:~$ sudo mkdir /facultydata
admin@kali:~$ sudo mkdir /studentdata
admin@kali:~$ sudo chown root:facultygrp /facultydata
admin@kali:~$ sudo chown root:studentgrp /studentdata
admin@kali:~$ sudo chmod 770 /facultydata
admin@kali:~$ sudo chmod 750 /studentdata
admin@kali:~$ ls -ls /facultydata /studentdata
ls: cannot access /studentdata: No such file or directory
admin@kali:~$

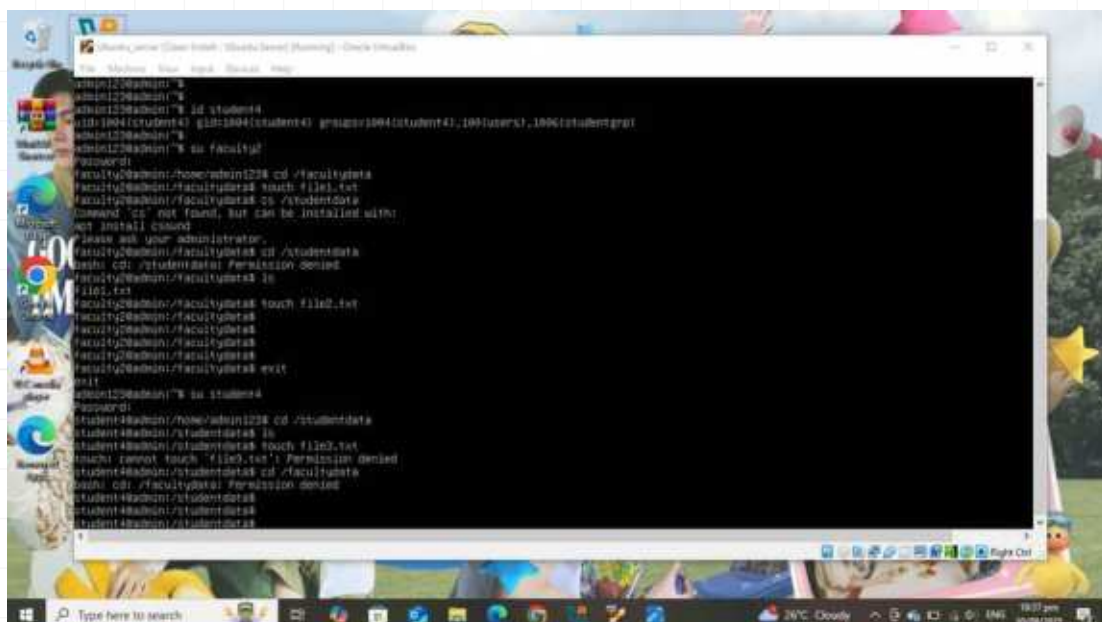
```

The desktop background is a cartoon image of a girl with pigtails. The taskbar at the bottom shows various application icons and the system clock.

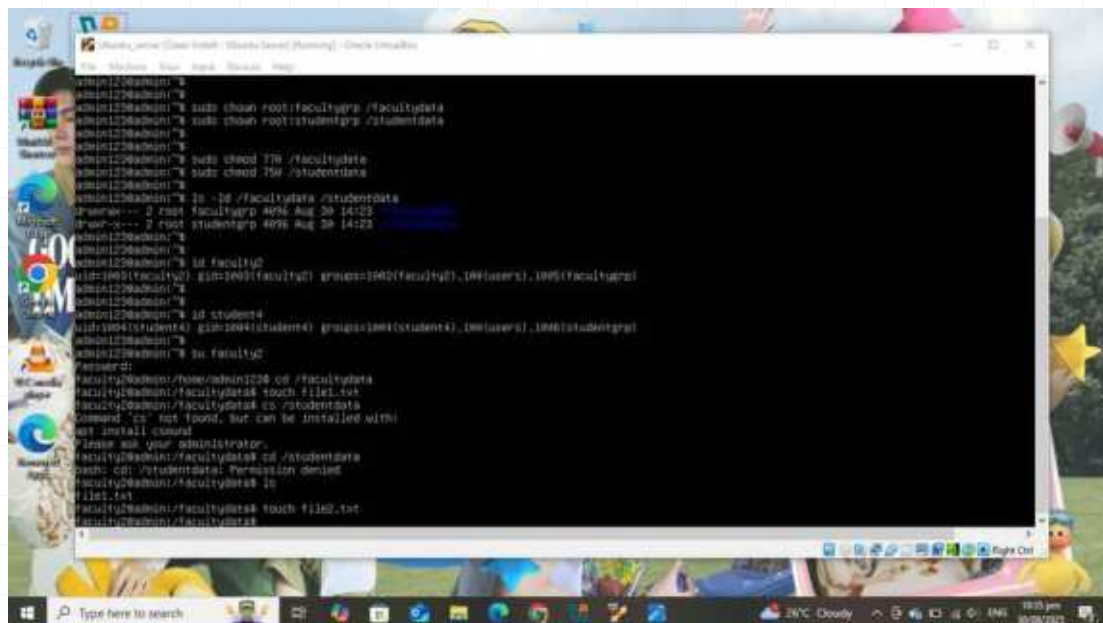


To test the setup, log in as faculty2 and student4 to verify their access permissions.

- 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.



```
chuan@kali:~/Desktop$ sudo su
root@kali:~# cd /
root@kali:/# ls -ld /facultydata /studentdata
lrwxrwxrwx 1 root root 4096 Aug 20 14:23 /facultydata
lrwxrwxrwx 1 root root 4096 Aug 20 14:23 /studentdata
root@kali:/# id faculty0
uid=1000(faculty0) gid=1000(faculty0) groups=1000(faculty0),1000(users),1000(faculty0)
root@kali:/# id student4
uid=1004(student4) gid=1004(student4) groups=1004(student4),1000(users),1000(student4)
root@kali:/# su faculty0
faculty0@kali:~/workspace$ cd /facultydata
faculty0@kali/facultydata$ touch file1.txt
faculty0@kali/facultydata$ cd /studentdata
Command 'cd' not found, but can be installed with:
sudo apt install command
Please see your administrator.
faculty0@kali/facultydata$ cd /studentdata
cd: /studentdata: Permission denied
faculty0@kali/facultydata$ id
uid=1000(faculty0) gid=1000(faculty0) groups=1000(faculty0),1000(users),1000(faculty0)
faculty0@kali/facultydata$ touch file2.txt
```