

Austin Cupp

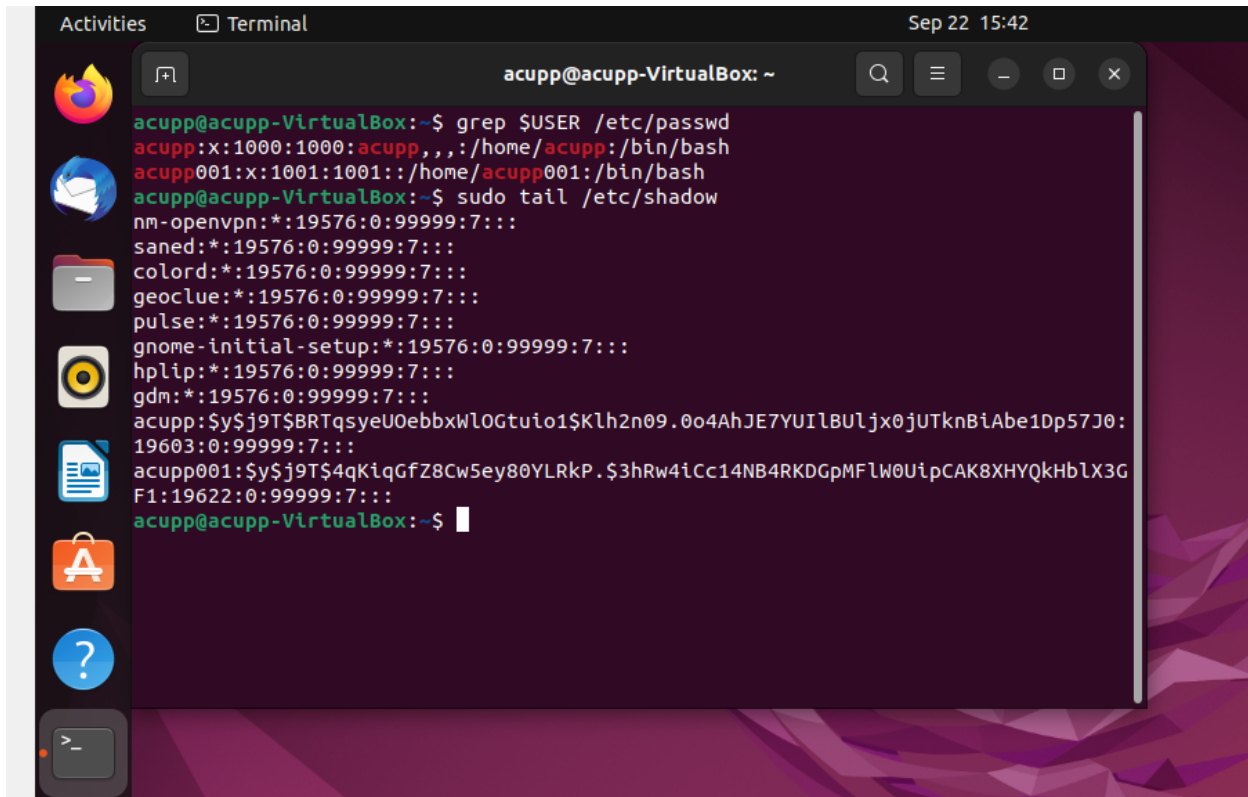
Professor Vatsa

Cyse 270

9/22/2023

## Assignment #4

### TASK A

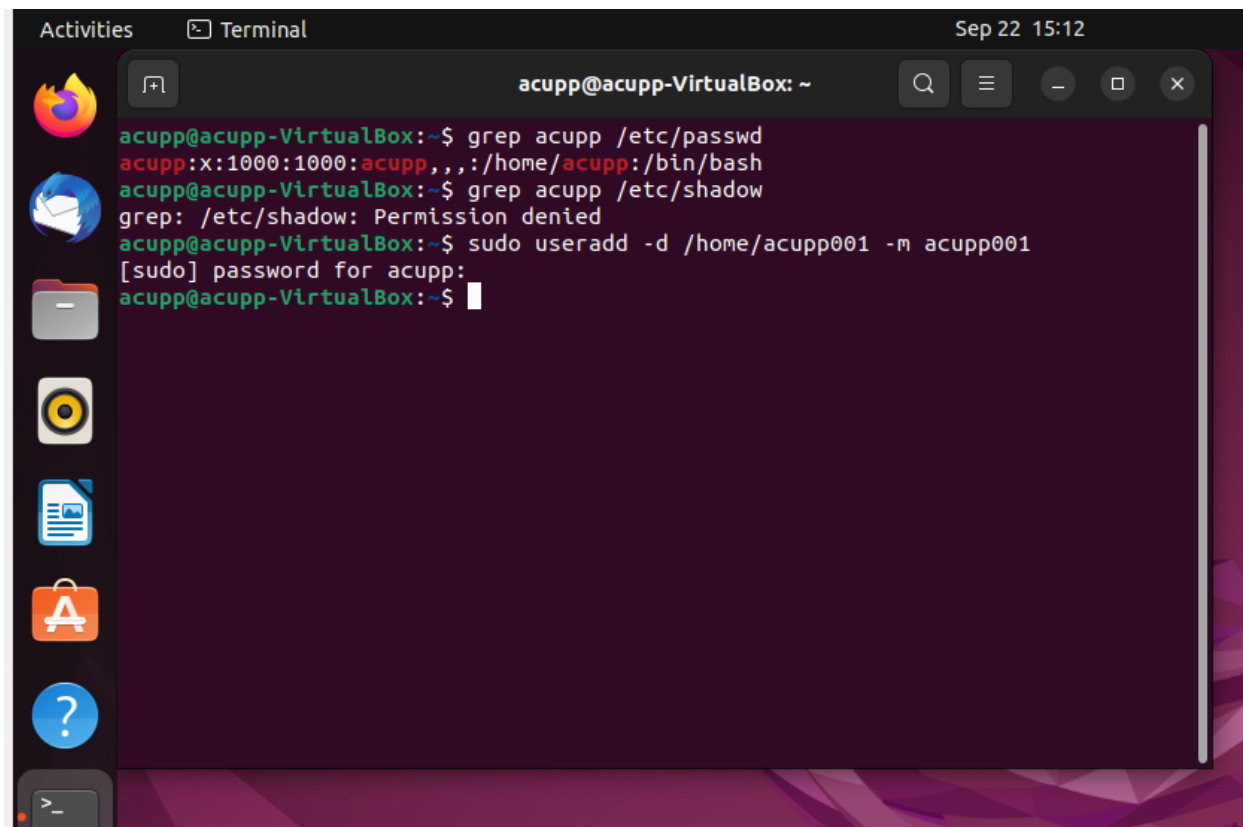


The screenshot shows a terminal window titled "acupp@acupp-VirtualBox: ~" with a search bar and window controls. The terminal output is as follows:

```
acupp@acupp-VirtualBox:~$ grep $USER /etc/passwd
acupp:x:1000:1000:acupp,,,:/home/acupp:/bin/bash
acupp001:x:1001:1001:/:/home/acupp001:/bin/bash
acupp@acupp-VirtualBox:~$ sudo tail /etc/shadow
nm-openvpn*:19576:0:99999:7:::
sane*:19576:0:99999:7:::
colord*:19576:0:99999:7:::
geoclue*:19576:0:99999:7:::
pulse*:19576:0:99999:7:::
gnome-initial-setup*:19576:0:99999:7:::
hplip*:19576:0:99999:7:::
gdm*:19576:0:99999:7:::
acupp:$y$j9T$BRTqsyU0ebbxwL0Gtuio1$Klh2n09.0o4AhJE7YUilBUljx0jUTknBiAbe1Dp57J0:
19603:0:99999:7:::
acupp001:$y$j9T$4qKiqGfZ8Cw5ey80YLRkP.$3hRw4iCc14NB4RKDGpMFLw0UipCAK8XHYQkHb1X3G
F1:19622:0:99999:7:::
acupp@acupp-VirtualBox:~$
```

Step 1: Used `grep $USER /etc/passwd` command to display user account information (including the login shell and home directory)

Step 2: The `grep` command was giving me a permission denied error, so I had to use `sudo tail /etc/shadow` command to display user password information (including the encrypted password and password aging) for the current user.

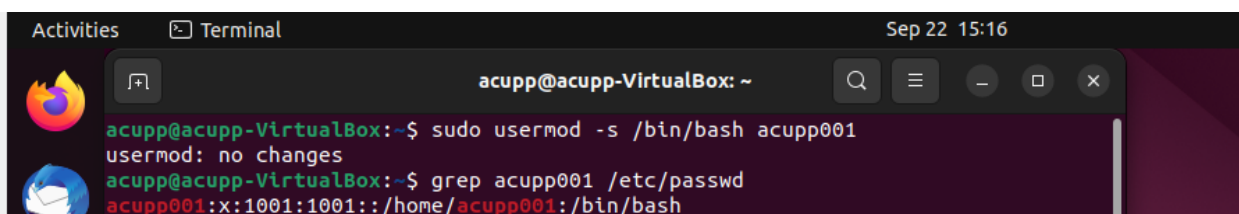


A terminal window titled "acupp@acupp-VirtualBox: ~" with a search bar and window controls. The terminal shows the following commands and output:

```
acupp@acupp-VirtualBox:~$ grep acupp /etc/passwd
acupp:x:1000:1000:acupp,,,:/home/acupp:/bin/bash
acupp@acupp-VirtualBox:~$ grep acupp /etc/shadow
grep: /etc/shadow: Permission denied
acupp@acupp-VirtualBox:~$ sudo useradd -d /home/acupp001 -m acupp001
[sudo] password for acupp:
acupp@acupp-VirtualBox:~$
```

Step 3: used `sudo useradd -d /home/acupp001 -m acupp001` command to create a new user named `acupp001` and explicitly use options to create the home directory.

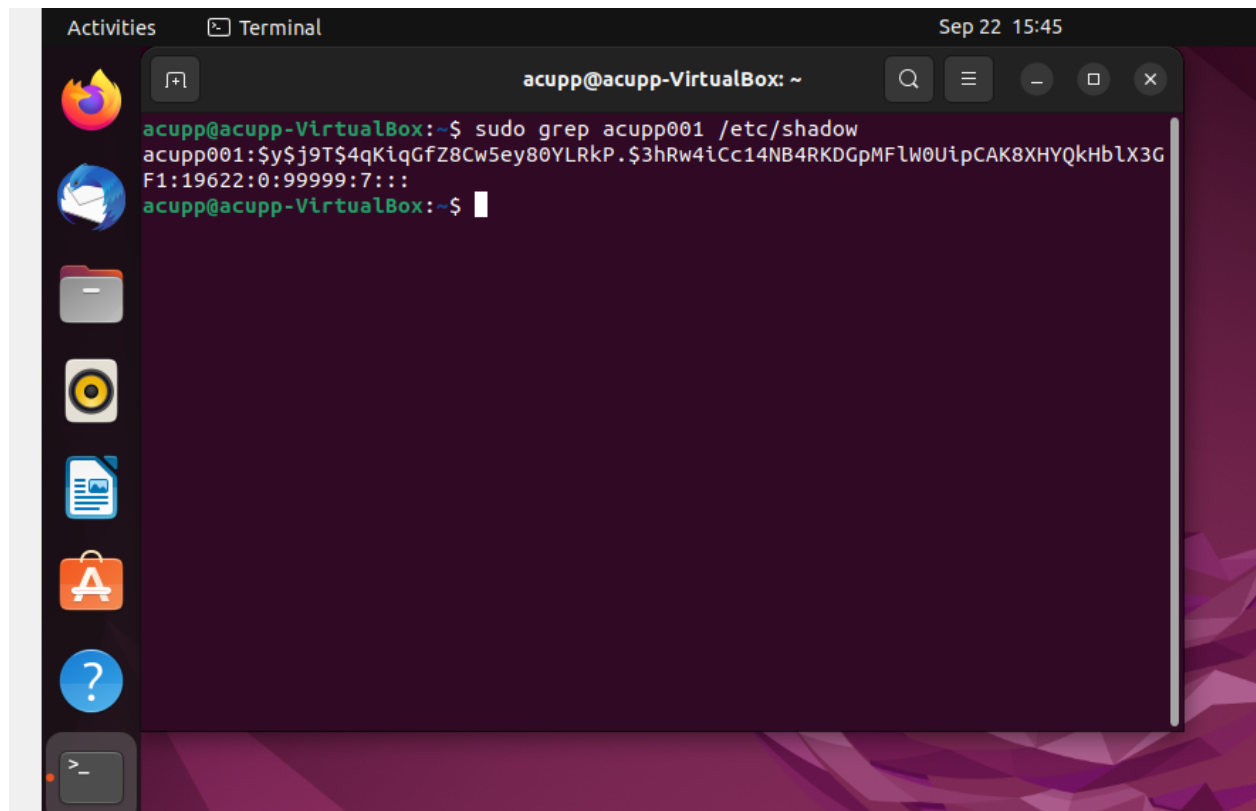
Step 4: password set as `lovelov3`



A terminal window titled "acupp@acupp-VirtualBox: ~" with a search bar and window controls. The terminal shows the following commands and output:

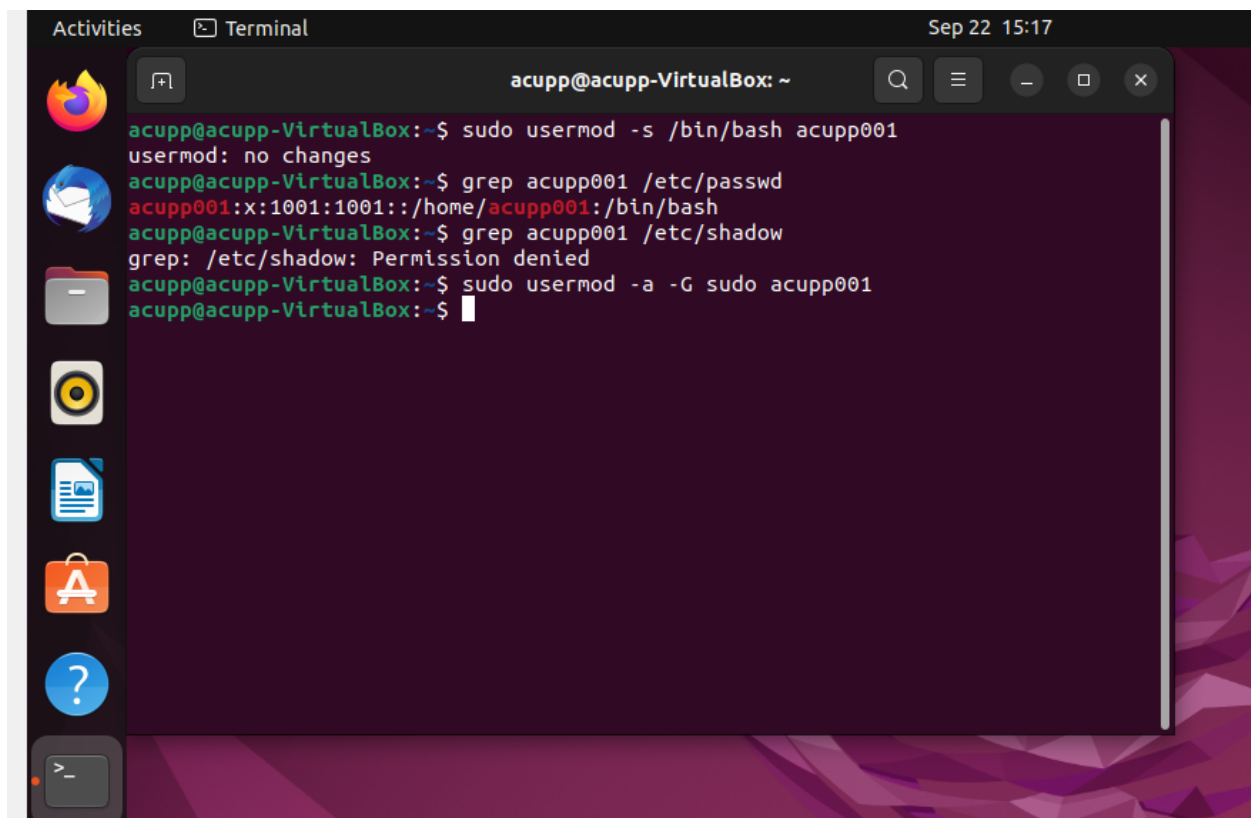
```
acupp@acupp-VirtualBox:~$ sudo usermod -s /bin/bash acupp001
usermod: no changes
acupp@acupp-VirtualBox:~$ grep acupp001 /etc/passwd
acupp001:x:1001:1001::/home/acupp001:/bin/bash
```

Step 5: used `sudo usermod -s /bin/bash acupp001` command to set `bash` shell as the default login shell for the new user `acupp001`, then verified the change by using `grep`.

A terminal window titled 'acupp@acupp-VirtualBox: ~' with a search bar and window controls. The terminal shows the command 'sudo grep acupp001 /etc/shadow' being executed. The output is 'acupp001:\$y\$j9T\$4qKiQfZ8Cw5ey80YLRkP.\$3hRw4iCc14NB4RKDGpMFLW0UipCAK8XHYQkHb1X3GF1:19622:0:99999:7:::'. The prompt returns to 'acupp@acupp-VirtualBox:~\$'.

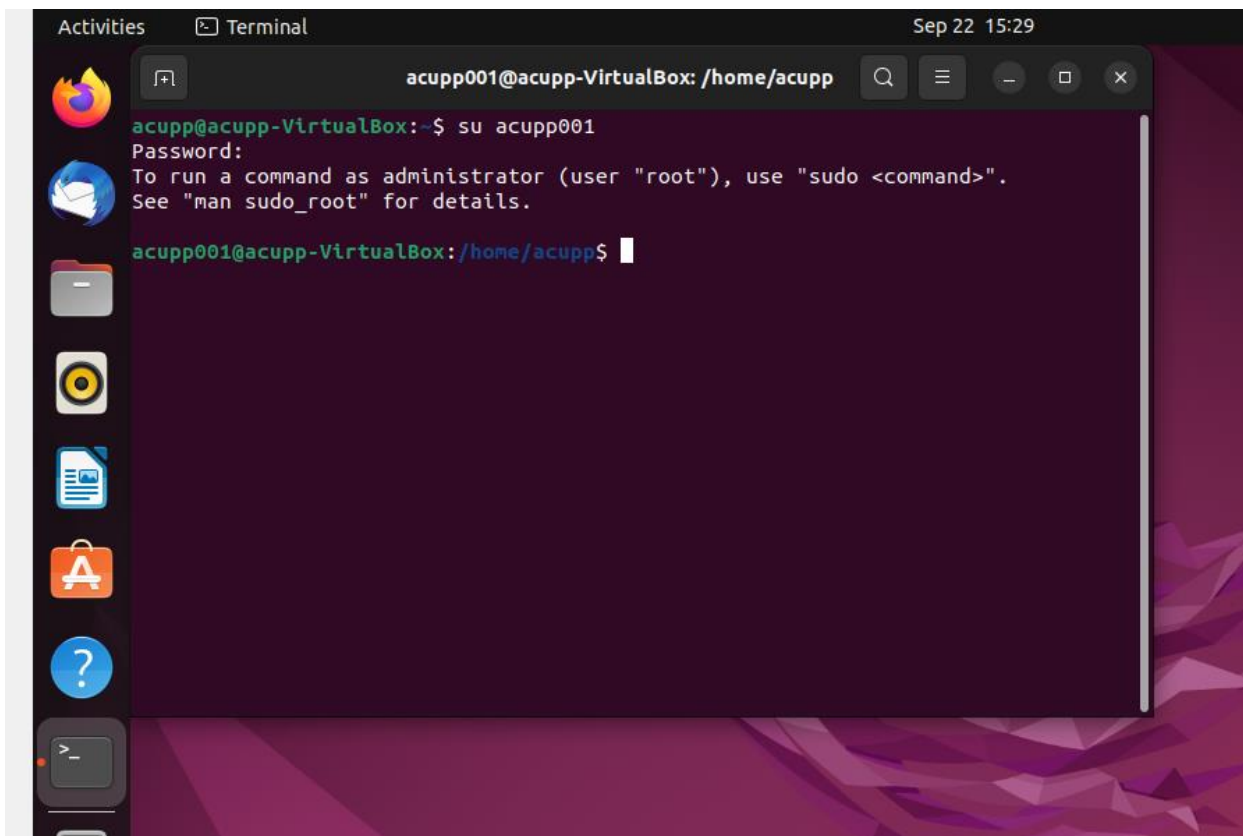
```
acupp@acupp-VirtualBox:~$ sudo grep acupp001 /etc/shadow
acupp001:$y$j9T$4qKiQfZ8Cw5ey80YLRkP.$3hRw4iCc14NB4RKDGpMFLW0UipCAK8XHYQkHb1X3GF1:19622:0:99999:7:::
acupp@acupp-VirtualBox:~$
```

Step 6: Used `sudo grep acupp001 /etc/shadow` command to display user password information (including the encrypted password and password aging) for the new user `acupp001` using `grep`.

A terminal window titled 'acupp@acupp-VirtualBox: ~' with a search bar and window controls. The terminal shows a sequence of commands: 'sudo usermod -s /bin/bash acupp001' (output: 'usermod: no changes'), 'grep acupp001 /etc/passwd' (output: 'acupp001:x:1001:1001::/home/acupp001:/bin/bash'), 'grep acupp001 /etc/shadow' (output: 'grep: /etc/shadow: Permission denied'), and 'sudo usermod -a -G sudo acupp001'. The prompt returns to 'acupp@acupp-VirtualBox:~\$' after the last command.

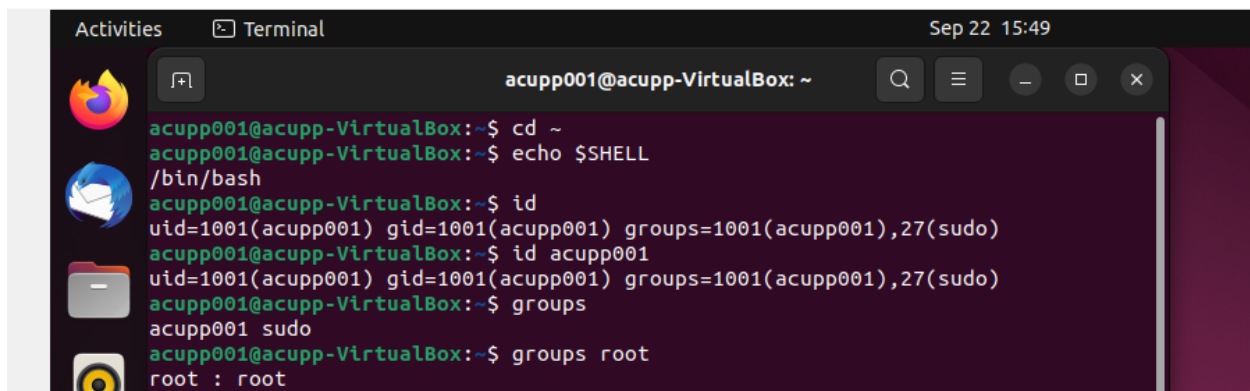
```
acupp@acupp-VirtualBox:~$ sudo usermod -s /bin/bash acupp001
usermod: no changes
acupp@acupp-VirtualBox:~$ grep acupp001 /etc/passwd
acupp001:x:1001:1001::/home/acupp001:/bin/bash
acupp@acupp-VirtualBox:~$ grep acupp001 /etc/shadow
grep: /etc/shadow: Permission denied
acupp@acupp-VirtualBox:~$ sudo usermod -a -G sudo acupp001
acupp@acupp-VirtualBox:~$
```

Step 7: used `sudo usermod -a -G sudo acupp001` command to add the new user `acupp001` to `sudo` group without overriding the existing group membership.



Step 8: Used the su acupp001 command to switch to the new users account, password is lovelov3.

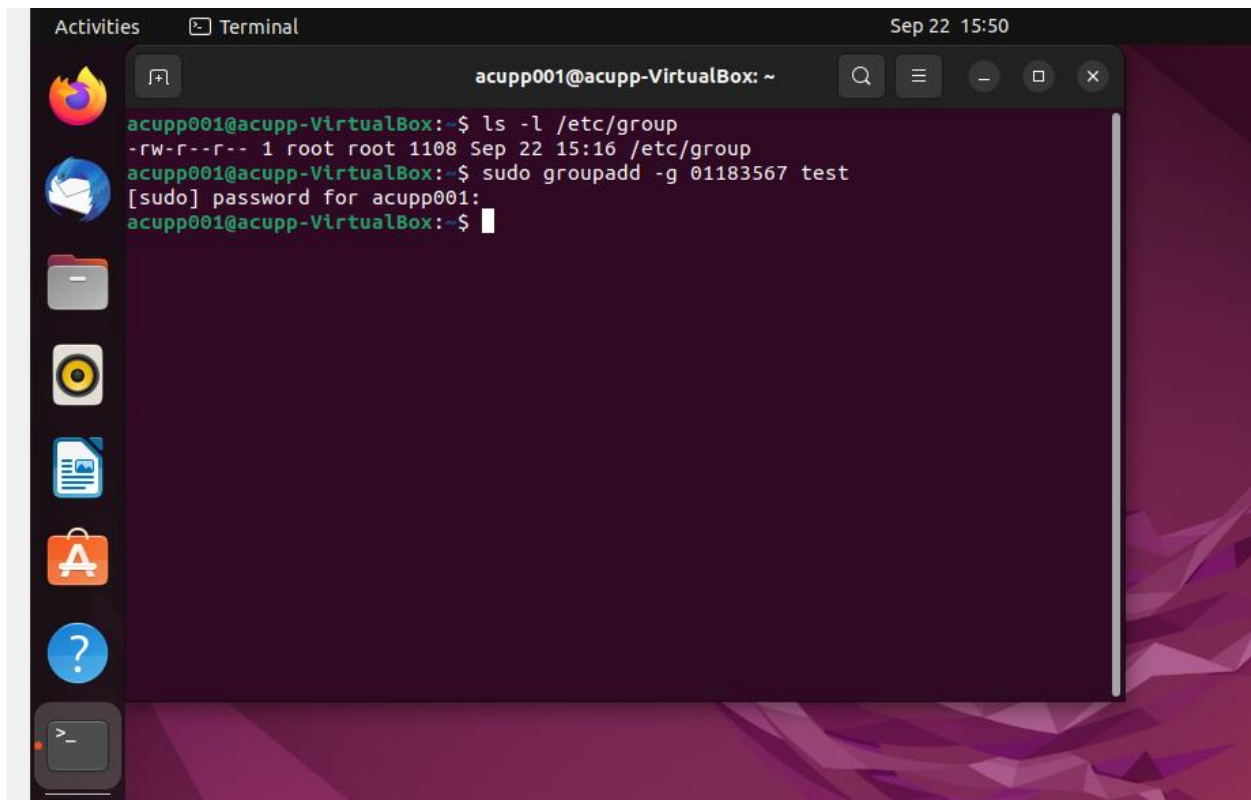
## TASK B



Step 1: Changed back into the home directory and used echo \$SHELL to determine shell I'm using.

Step 2: Used id to display the current user's ID and group membership.

Step 3: Used groups command to display the group membership of the root account.



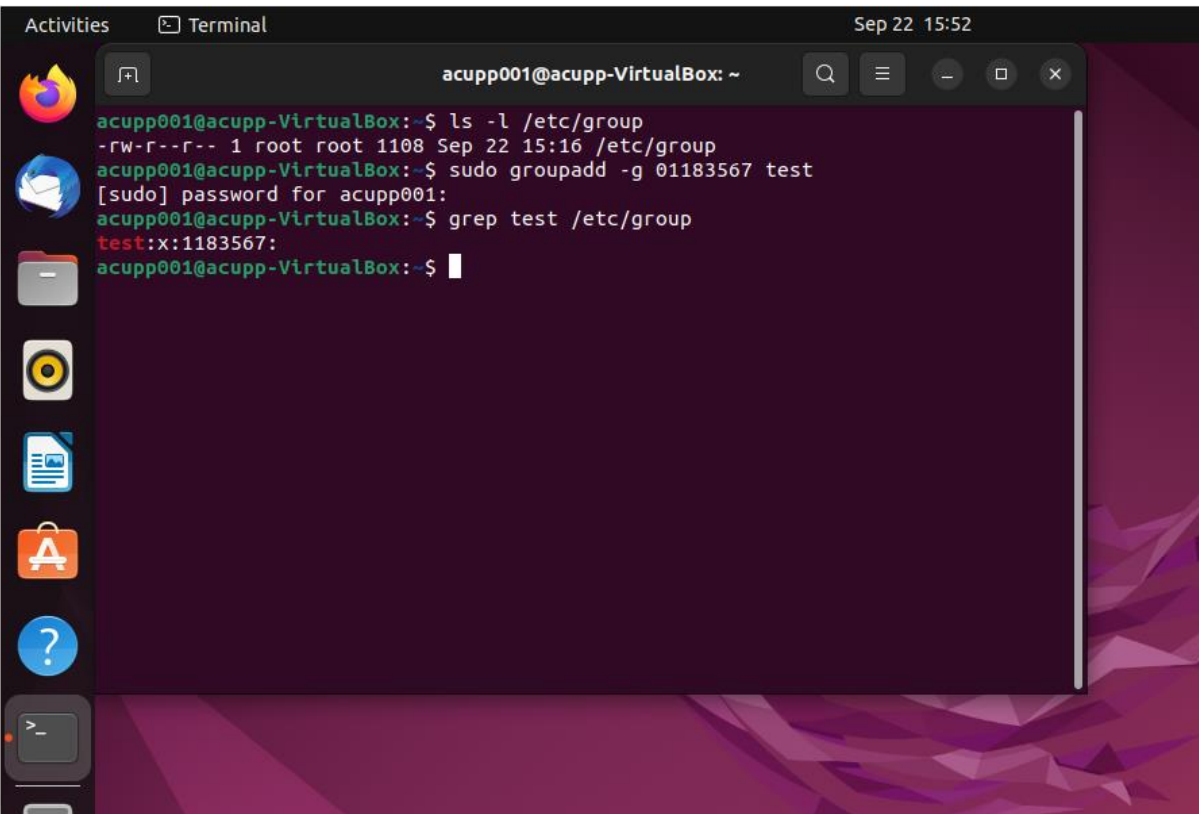
The screenshot shows a terminal window titled "acupp001@acupp-VirtualBox: ~" with a search icon, a menu icon, and window control buttons. The terminal output is as follows:

```
acupp001@acupp-VirtualBox:~$ ls -l /etc/group
-rw-r--r-- 1 root root 1108 Sep 22 15:16 /etc/group
acupp001@acupp-VirtualBox:~$ sudo groupadd -g 01183567 test
[sudo] password for acupp001:
acupp001@acupp-VirtualBox:~$
```

The left sidebar of the desktop environment contains icons for Firefox, a mail client, a file manager, a media player, a document viewer, a shopping bag, a help icon, and a terminal icon.

Step 4: Used `ls -l /etc/group` command to determine the user owner and group owner of the `/etc/group` file.

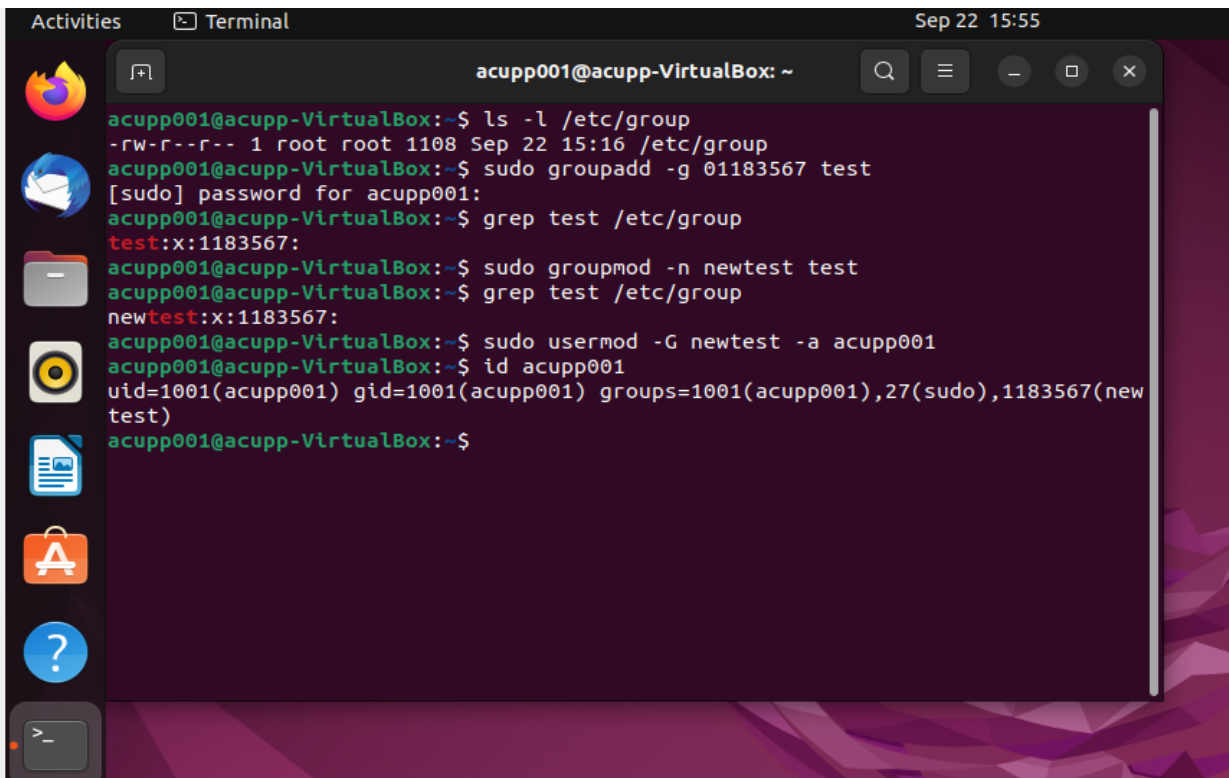
Step 5: used `sudo groupadd -g 01183567 test` command to create a new group named `test` and use your UIN as the GID. Password `lovelov3`

A terminal window titled 'acupp001@acupp-VirtualBox: ~' with a search bar and window controls. The terminal shows the following commands and output:

```
acupp001@acupp-VirtualBox:~$ ls -l /etc/group
-rw-r--r-- 1 root root 1108 Sep 22 15:16 /etc/group
acupp001@acupp-VirtualBox:~$ sudo groupadd -g 01183567 test
[sudo] password for acupp001:
acupp001@acupp-VirtualBox:~$ grep test /etc/group
test:x:1183567:
acupp001@acupp-VirtualBox:~$
```

The background of the terminal window shows a desktop environment with various application icons on the left and a purple geometric pattern on the right.

Step 6: used `grep test /etc/group` command to display the group account information for the test group.

A terminal window titled 'acupp001@acupp-VirtualBox: ~' with a search bar and window controls. The terminal shows the following commands and output:

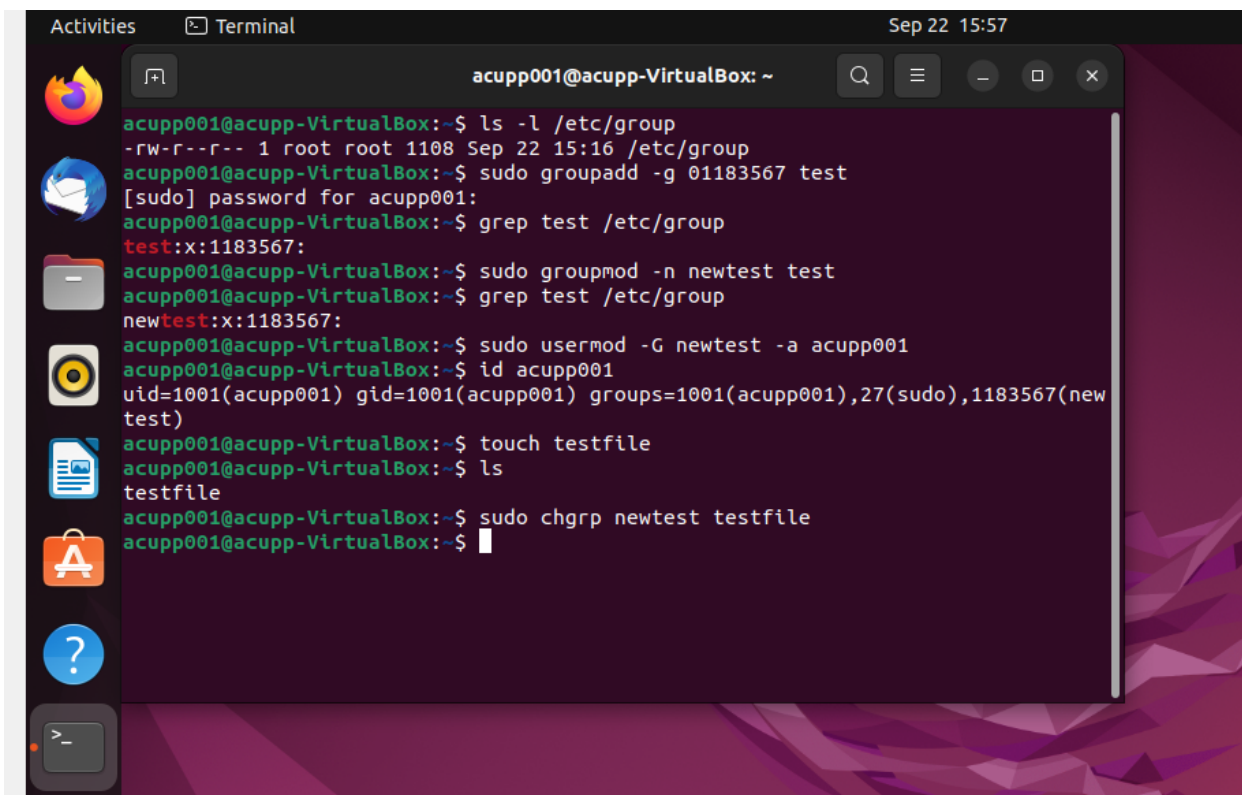
```
acupp001@acupp-VirtualBox:~$ ls -l /etc/group
-rw-r--r-- 1 root root 1108 Sep 22 15:16 /etc/group
acupp001@acupp-VirtualBox:~$ sudo groupadd -g 01183567 test
[sudo] password for acupp001:
acupp001@acupp-VirtualBox:~$ grep test /etc/group
test:x:1183567:
acupp001@acupp-VirtualBox:~$ sudo groupmod -n newtest test
acupp001@acupp-VirtualBox:~$ grep test /etc/group
newtest:x:1183567:
acupp001@acupp-VirtualBox:~$ sudo usermod -G newtest -a acupp001
acupp001@acupp-VirtualBox:~$ id acupp001
uid=1001(acupp001) gid=1001(acupp001) groups=1001(acupp001),27(sudo),1183567(newtest)
acupp001@acupp-VirtualBox:~$
```

The background of the terminal window shows a desktop environment with various application icons on the left and a purple geometric pattern on the right.

Step 7: used `sudo groupmod -n newtest test` command to Change the group name of the test group to newtest.

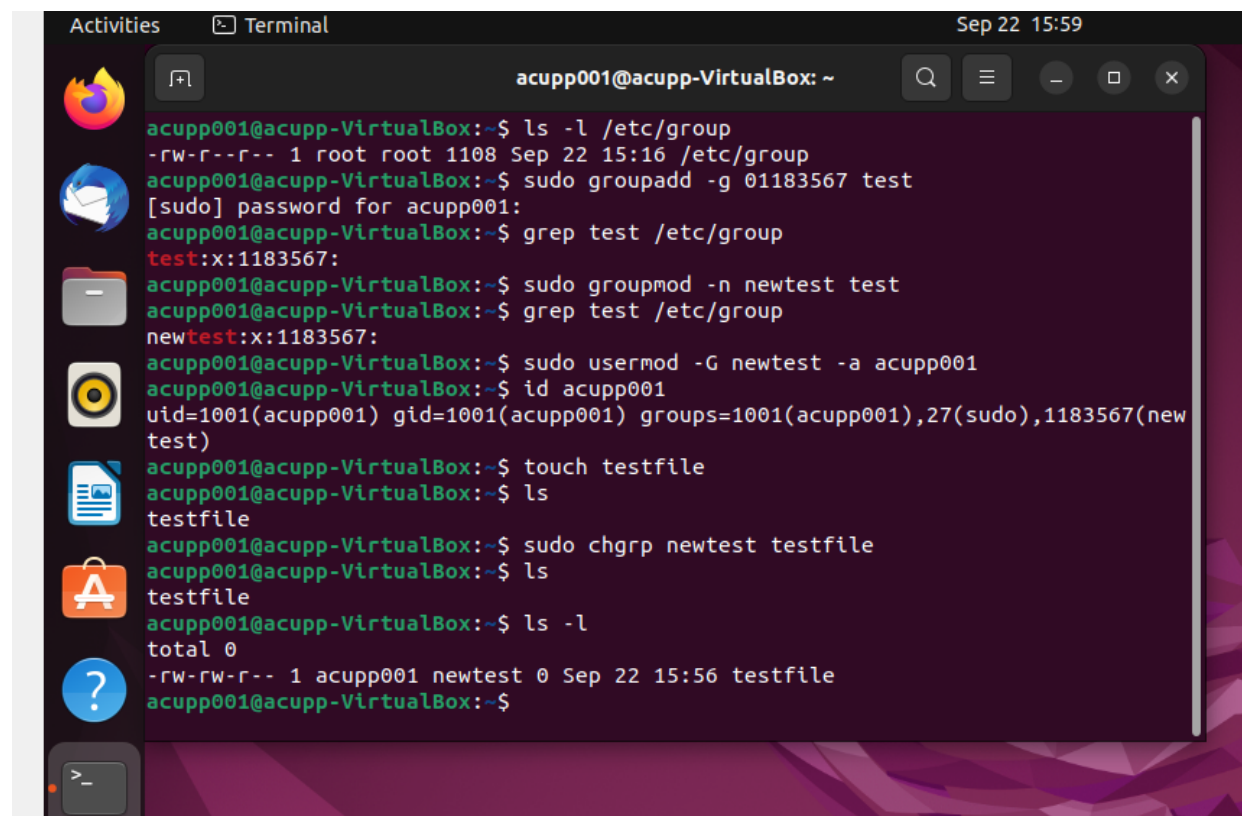
Step 8: used `sudo usermod -G newtest -a acupp001` command to add the acupp001 as a secondary member of the newtest group without overriding this user's current group membership.





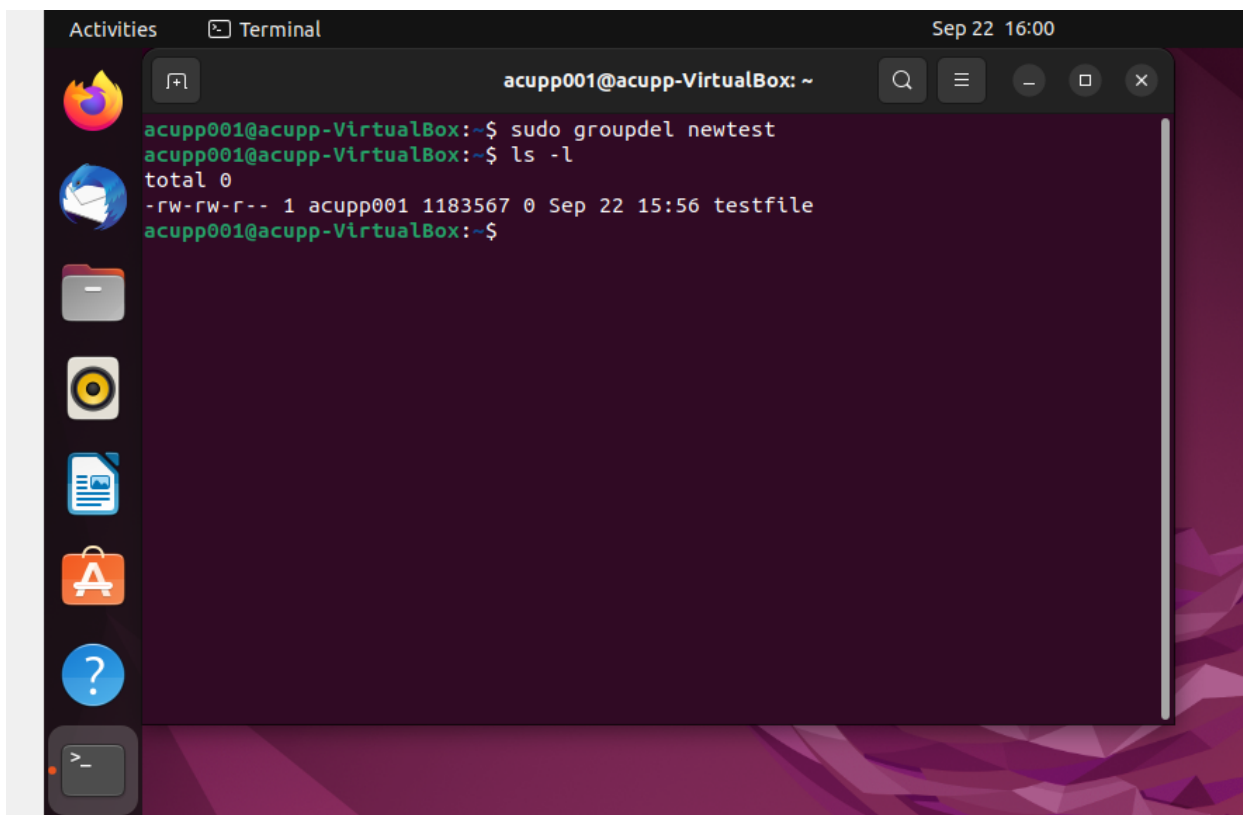
```
acupp001@acupp-VirtualBox: ~  
acupp001@acupp-VirtualBox:~$ ls -l /etc/group  
-rw-r--r-- 1 root root 1108 Sep 22 15:16 /etc/group  
acupp001@acupp-VirtualBox:~$ sudo groupadd -g 01183567 test  
[sudo] password for acupp001:  
acupp001@acupp-VirtualBox:~$ grep test /etc/group  
test:x:1183567:  
acupp001@acupp-VirtualBox:~$ sudo groupmod -n newtest test  
acupp001@acupp-VirtualBox:~$ grep test /etc/group  
newtest:x:1183567:  
acupp001@acupp-VirtualBox:~$ sudo usermod -G newtest -a acupp001  
acupp001@acupp-VirtualBox:~$ id acupp001  
uid=1001(acupp001) gid=1001(acupp001) groups=1001(acupp001),27(sudo),1183567(new  
test)  
acupp001@acupp-VirtualBox:~$ touch testfile  
acupp001@acupp-VirtualBox:~$ ls  
testfile  
acupp001@acupp-VirtualBox:~$ sudo chgrp newtest testfile  
acupp001@acupp-VirtualBox:~$
```

Step 9: used touch testfile command to create a new file testfile in the account's home directory, then used sudo chgrp newtest testfile command to change the group owner to newtest.



```
acupp001@acupp-VirtualBox: ~  
acupp001@acupp-VirtualBox:~$ ls -l /etc/group  
-rw-r--r-- 1 root root 1108 Sep 22 15:16 /etc/group  
acupp001@acupp-VirtualBox:~$ sudo groupadd -g 01183567 test  
[sudo] password for acupp001:  
acupp001@acupp-VirtualBox:~$ grep test /etc/group  
test:x:1183567:  
acupp001@acupp-VirtualBox:~$ sudo groupmod -n newtest test  
acupp001@acupp-VirtualBox:~$ grep test /etc/group  
newtest:x:1183567:  
acupp001@acupp-VirtualBox:~$ sudo usermod -G newtest -a acupp001  
acupp001@acupp-VirtualBox:~$ id acupp001  
uid=1001(acupp001) gid=1001(acupp001) groups=1001(acupp001),27(sudo),1183567(new  
test)  
acupp001@acupp-VirtualBox:~$ touch testfile  
acupp001@acupp-VirtualBox:~$ ls  
testfile  
acupp001@acupp-VirtualBox:~$ sudo chgrp newtest testfile  
acupp001@acupp-VirtualBox:~$ ls  
testfile  
acupp001@acupp-VirtualBox:~$ ls -l  
total 0  
-rw-rw-r-- 1 acupp001 newtest 0 Sep 22 15:56 testfile  
acupp001@acupp-VirtualBox:~$
```

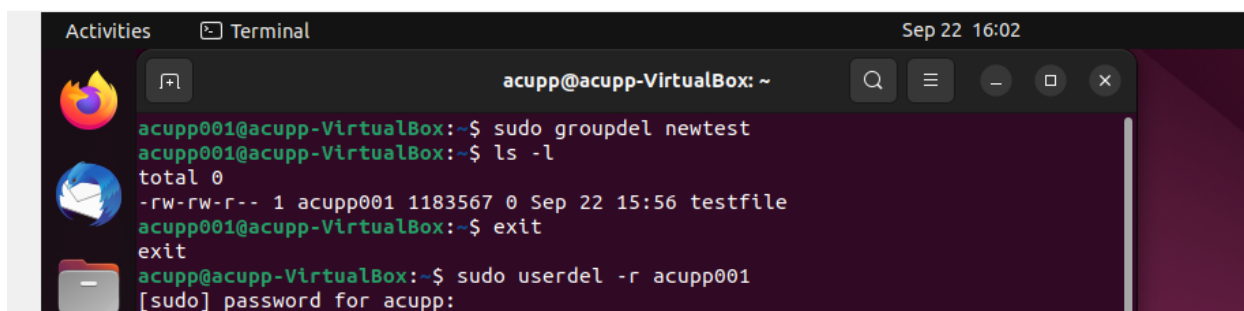
Step 10: used ls -l command to display the user owner and group owner information of the file testfile.

A terminal window titled 'acupp001@acupp-VirtualBox: ~' with a search bar and window controls. The terminal shows the following commands and output:

```
acupp001@acupp-VirtualBox:~$ sudo groupdel newtest
acupp001@acupp-VirtualBox:~$ ls -l
total 0
-rw-rw-r-- 1 acupp001 1183567 0 Sep 22 15:56 testfile
acupp001@acupp-VirtualBox:~$
```

The left sidebar shows application icons for Firefox, Mail, Files, Music, Documents, and the Dash icon.

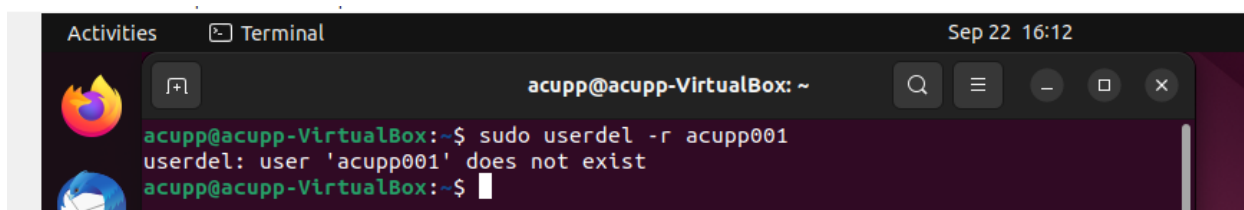
Step 11: Used sudo groupdel newtest command to delete the newtest group and used ls -l to repeat the previous step. I found that that that name “newtest” is no longer showing up as the group owner, but the GID for newtest which is my UIN 01183567 still is showing up.

A terminal window titled 'acupp@acupp-VirtualBox: ~' with a search bar and window controls. The terminal shows the following commands and output:

```
acupp001@acupp-VirtualBox:~$ sudo groupdel newtest
acupp001@acupp-VirtualBox:~$ ls -l
total 0
-rw-rw-r-- 1 acupp001 1183567 0 Sep 22 15:56 testfile
acupp001@acupp-VirtualBox:~$ exit
exit
acupp@acupp-VirtualBox:~$ sudo userdel -r acupp001
[sudo] password for acupp:
```

The left sidebar shows application icons for Firefox, Mail, Files, and the Dash icon.

Step 12 part 1: Used the exit command to exit acupp001, then used sudo userdel -r acupp001 to delete acupp001 and the home directory. I then entered in my password.

A terminal window titled 'acupp@acupp-VirtualBox: ~' with a search bar and window controls. The terminal shows the following commands and output:

```
acupp@acupp-VirtualBox:~$ sudo userdel -r acupp001
userdel: user 'acupp001' does not exist
acupp@acupp-VirtualBox:~$
```

The left sidebar shows application icons for Firefox and Mail.

Step 12 part 2: Attempting to use the command again reveals that the user does not exist and has been deleted.