SFA Homework #7
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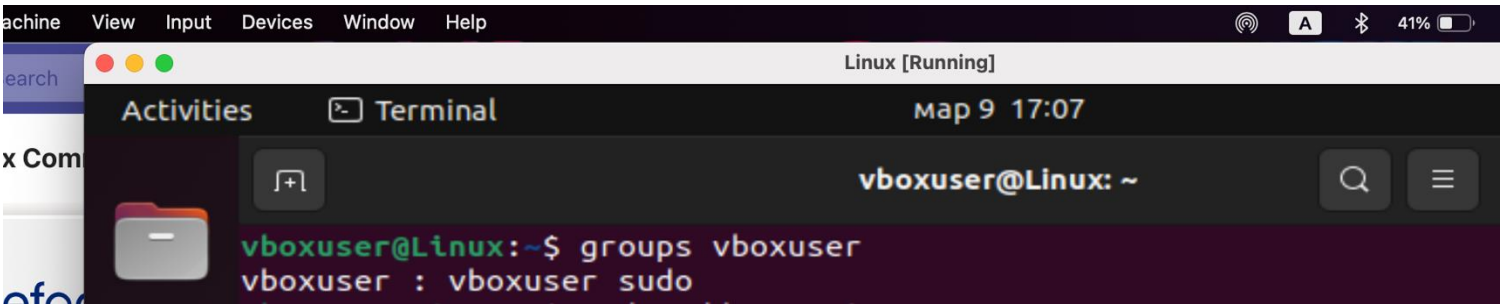
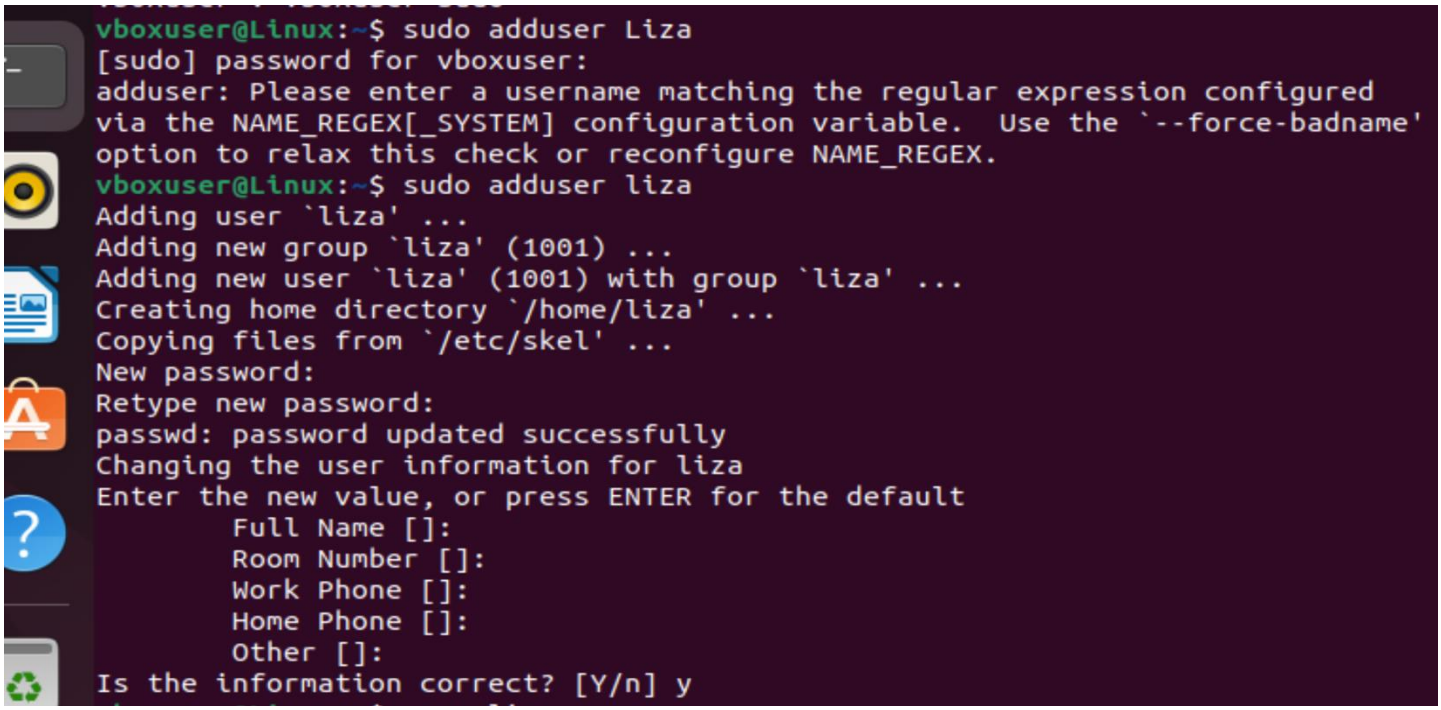
1. Elevate your user access to root.

I used the following command: `sudo usermod -aG sudo vboxuser` to add my account to the sudoers so I can have root priviliges every time I use the sudo command.
Here, I am checking if my account is, indeed, a member of the sudo group.



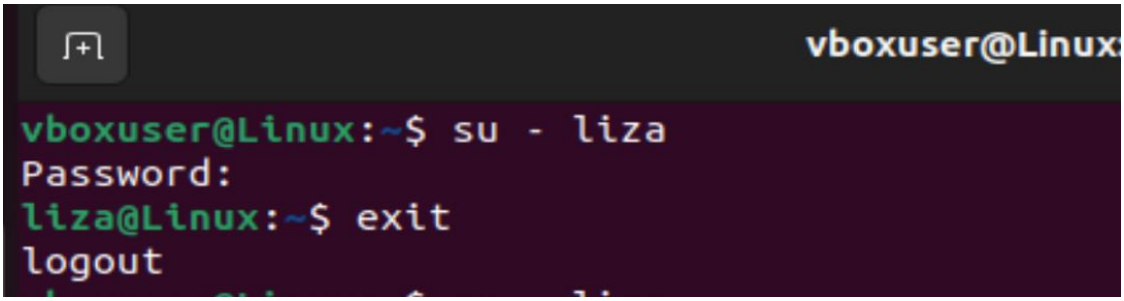
Another way is to just use `sudo su -` and go directly to root. But I decided to stick with the first method.

2. Add a new user to your Linux OS and set a password for them;



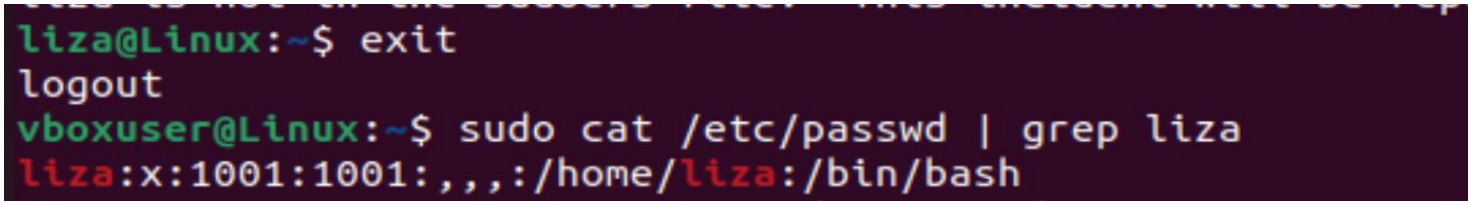
I entered the username with a capital letter by mistake so I got an error. Then I entered it correctly, after which I was prompted to enter a password for the new user and any additional data that is optional to add.

3. Test if you can log in using that user



I logged in successfully and logged out after that.

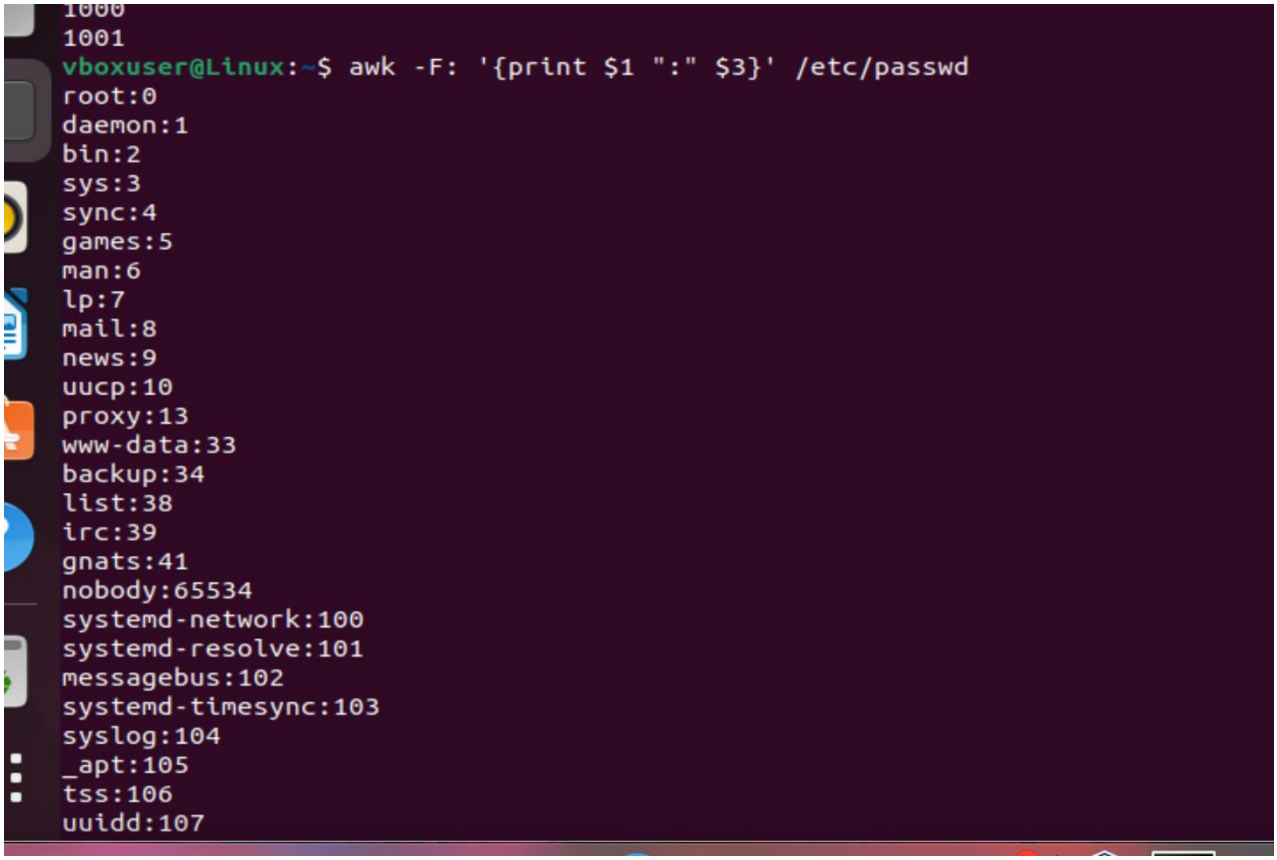
4. Using grep command check if the user is created



There is output, so that means the user exists.

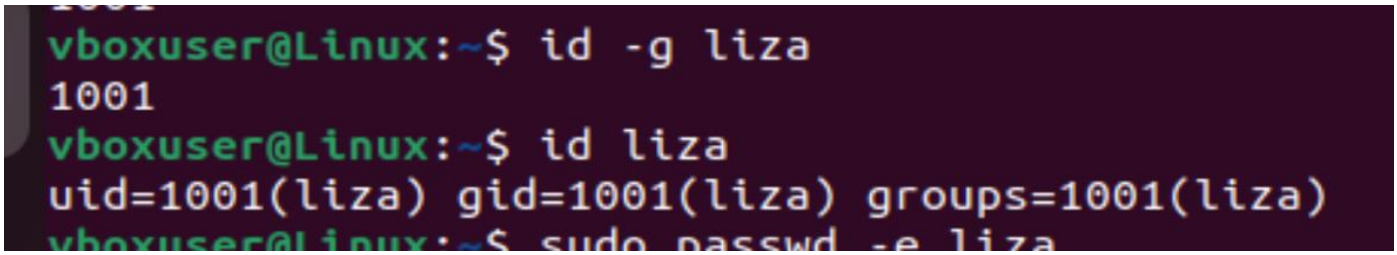
5. Grep the UID of each user

- Printing only the UID



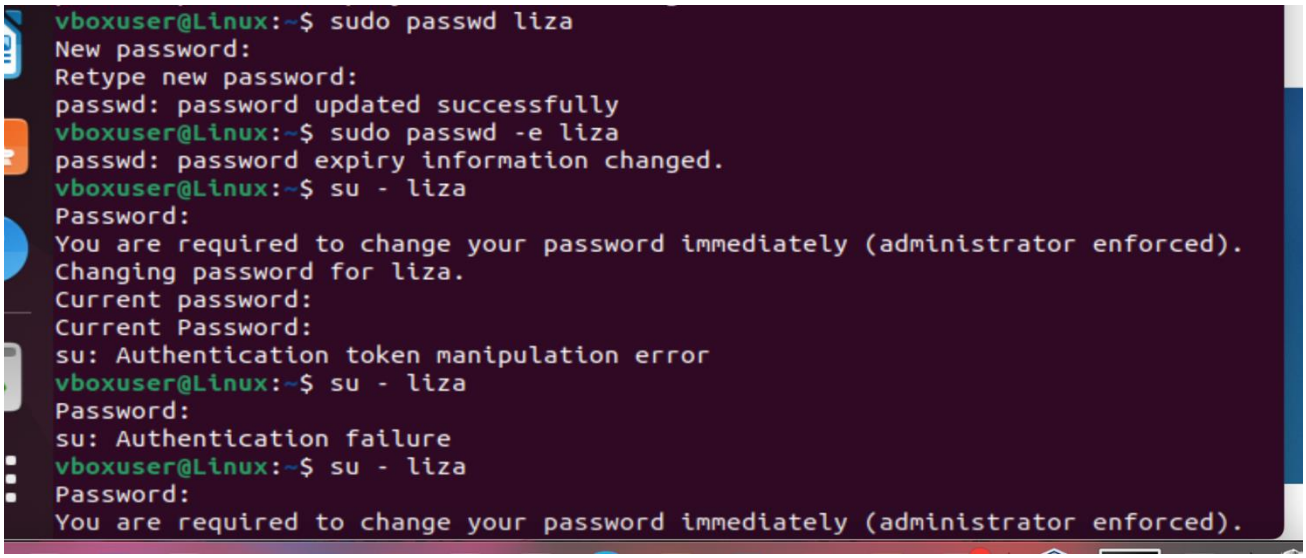
- Printing the users with their corresponding UIDs

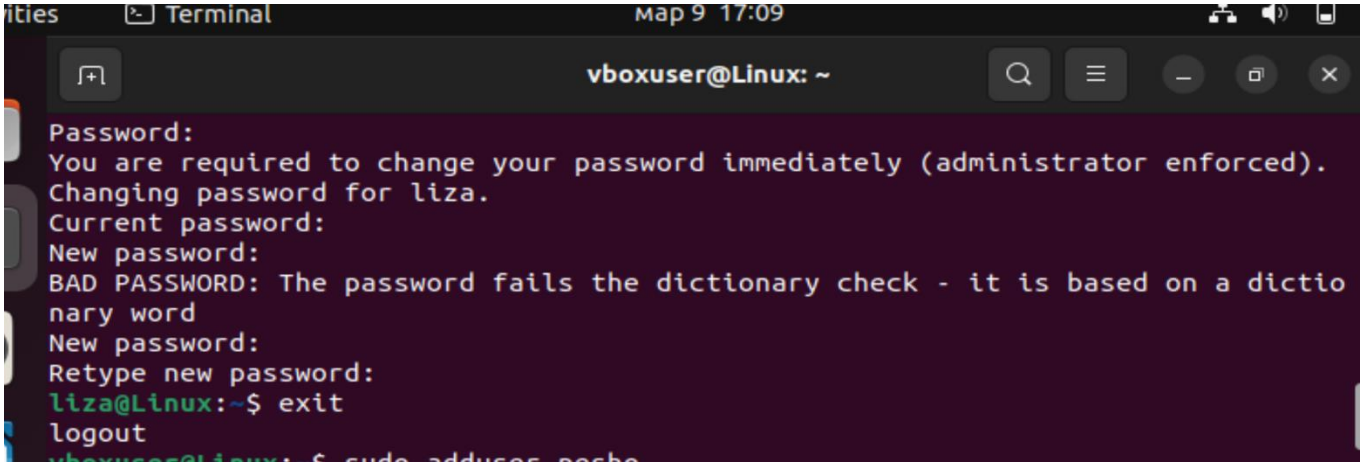
6. Find out the GID of the created user



Can be done both ways.

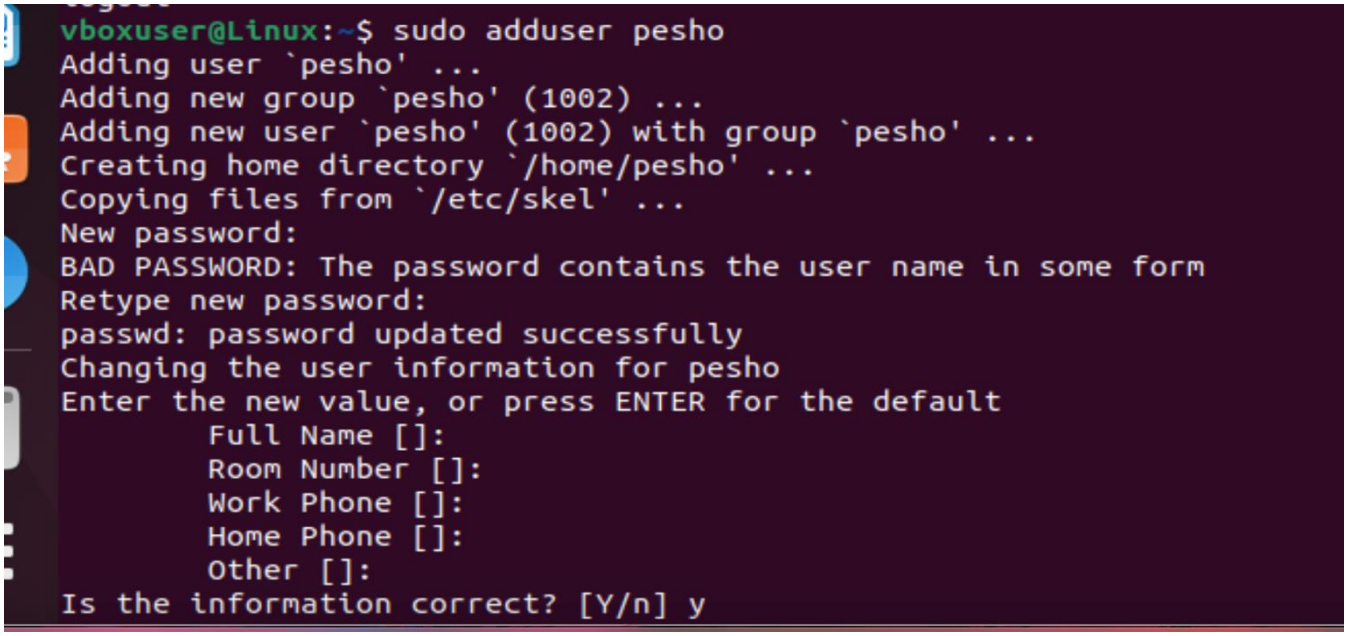
7. Change the password of the user and force it to change the pass on his next login

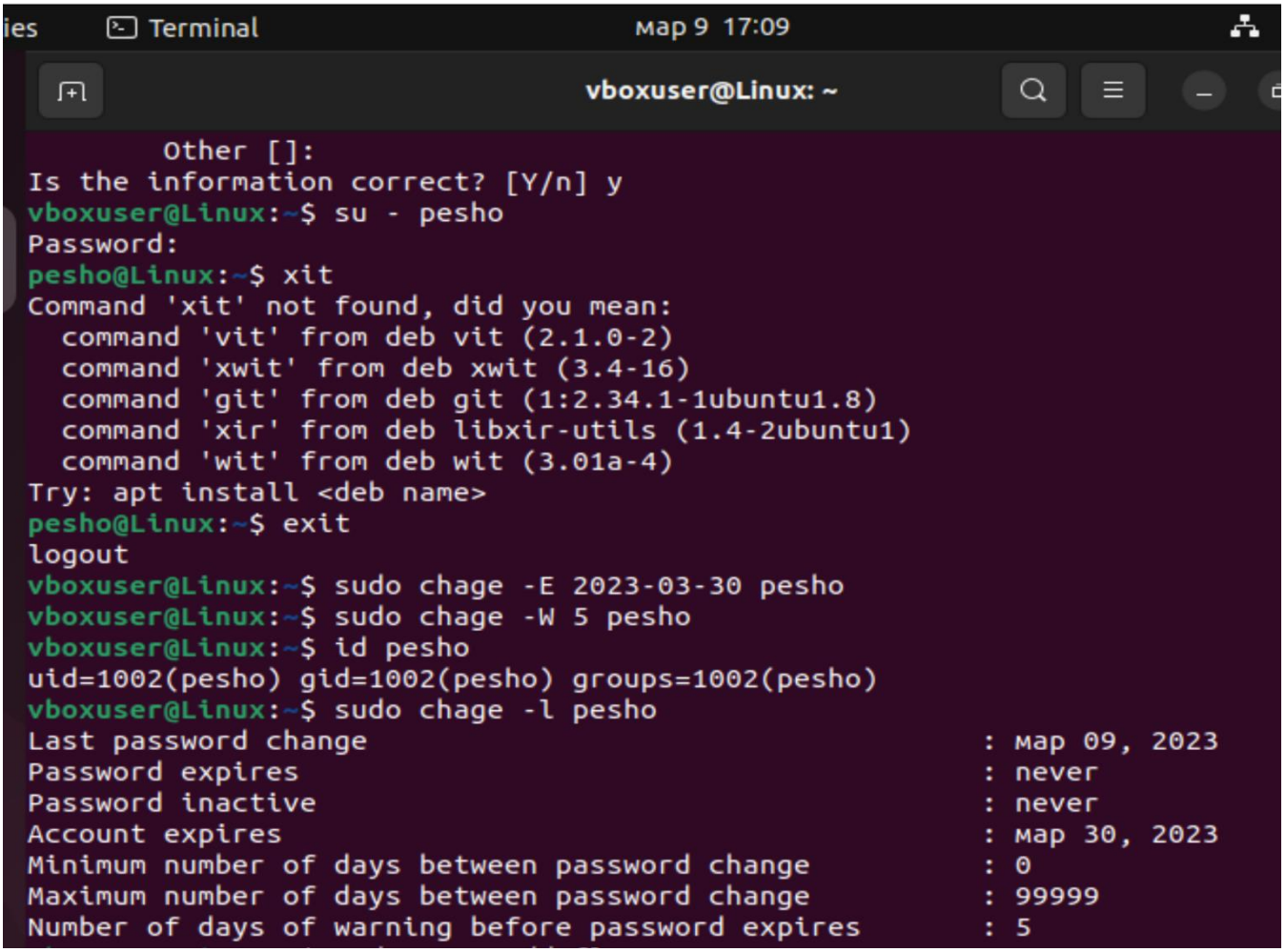




I changed the password for the user liza. Then I forced the user to change the password upon next login. First, I couldn't remember the password I had set, which is why the authentication failed. Then I remembered the right one and I managed to change it. Then I logged out.

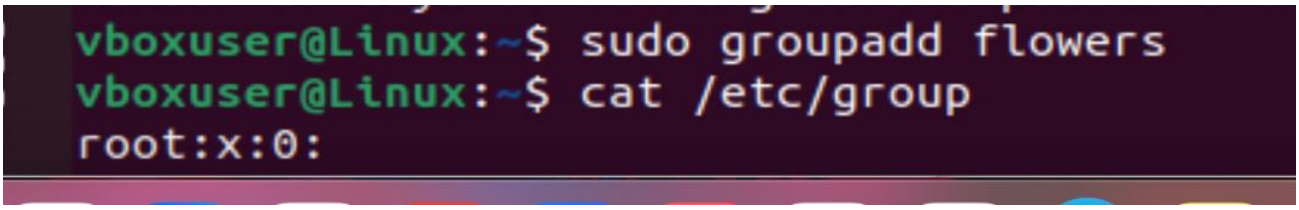
8. Add a new user and set an expiration date for it, with a five-day warning period

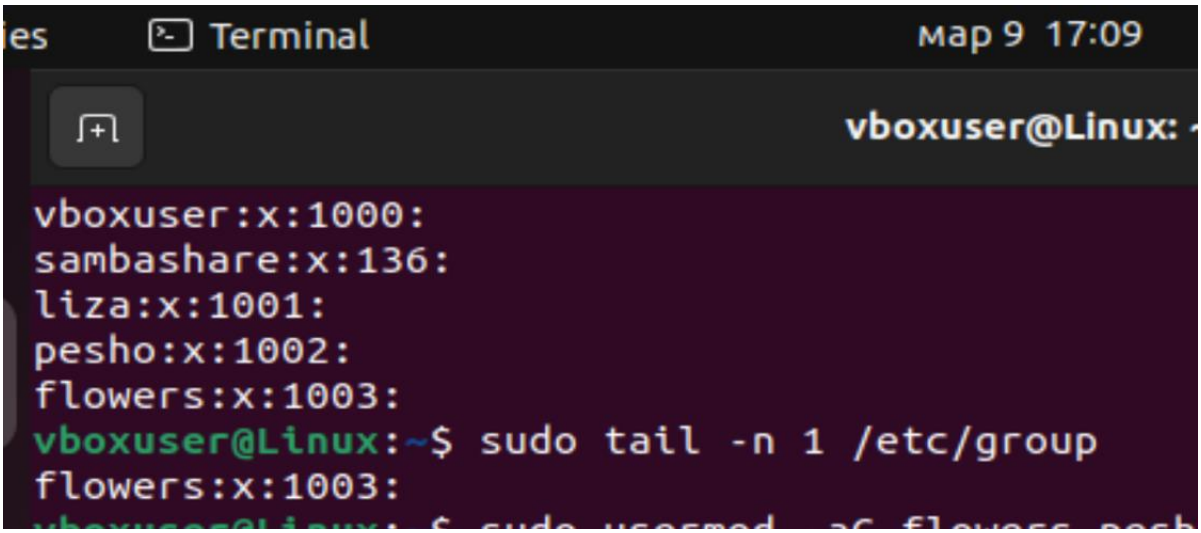




Here, I created a new user called pesho. Then I logged in to test if the user has been created. I then set the expiration date for pesho's account to be March 30th with the `chage` command. Then, I set the five-day warning period with -W. I check again for the user's existence just in case. And then I check if the expiration date and warning period have been set correctly.

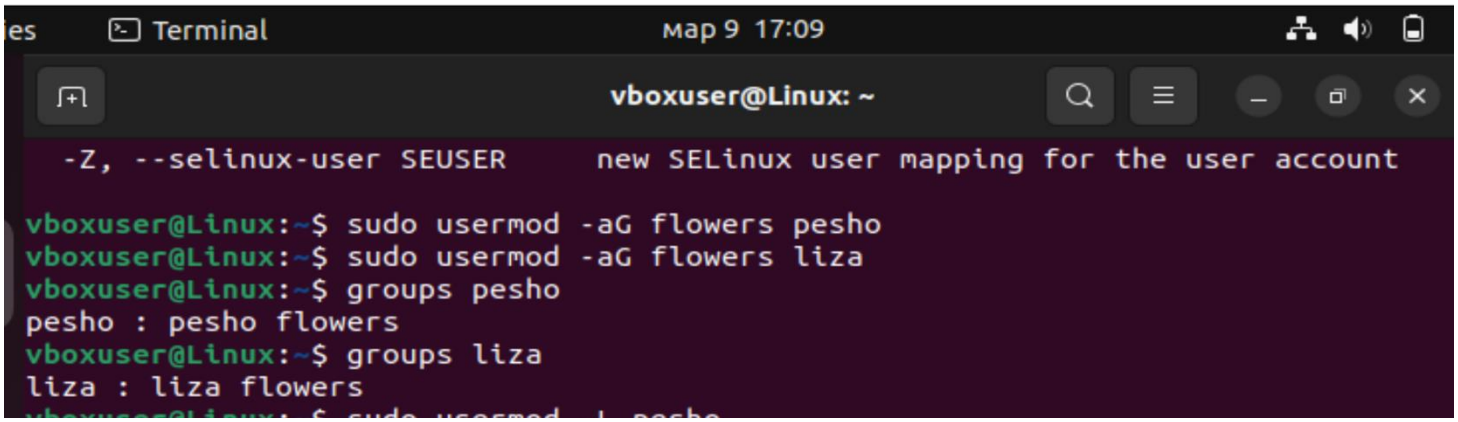
9. Create new group





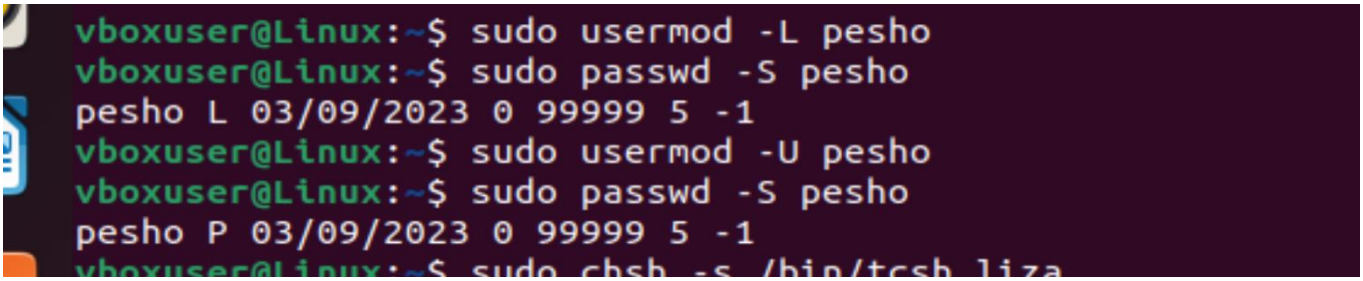
I created a group called flowers and then I checked if it was successfully created in two different ways – one using `cat`, and another using `tail` to show only the last line of the group file.

10. Assign the two new users to that group



I assigned the users pesho and liza to group flowers. And then I checked if the operation was successful by displaying the groups of which pesho / liza is a member.

11. Lock one of the user accounts

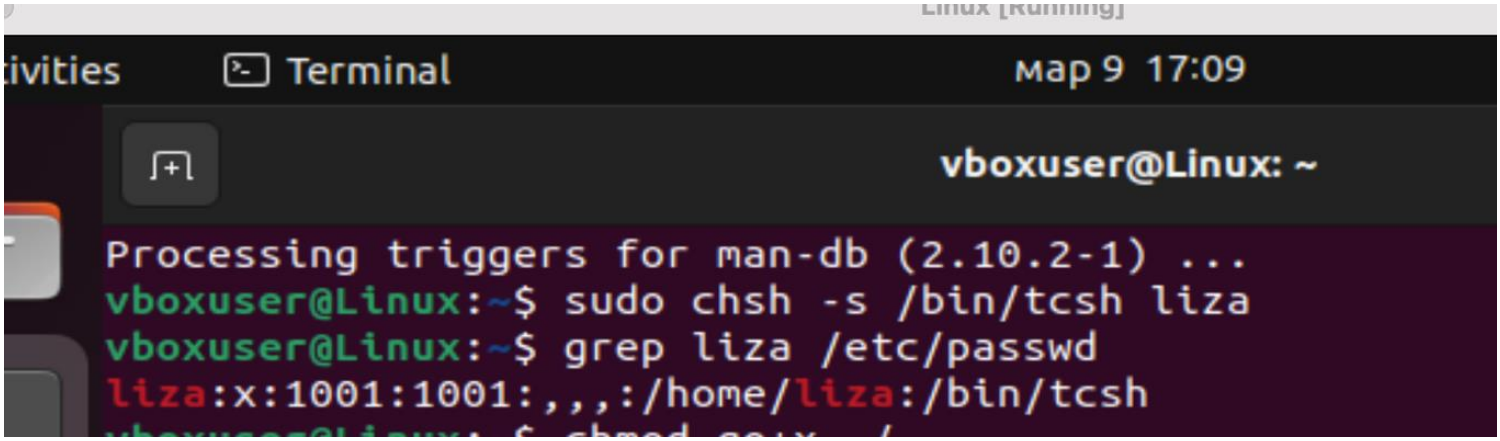


I locked pesho. Then I checked the status of pesho's password – it printed out "L", which means locked. Then, I unlocked pesho and checked again. Now the command displayed "P" which means I managed to unlock the user.

12. Change the shell of one user to tcsh

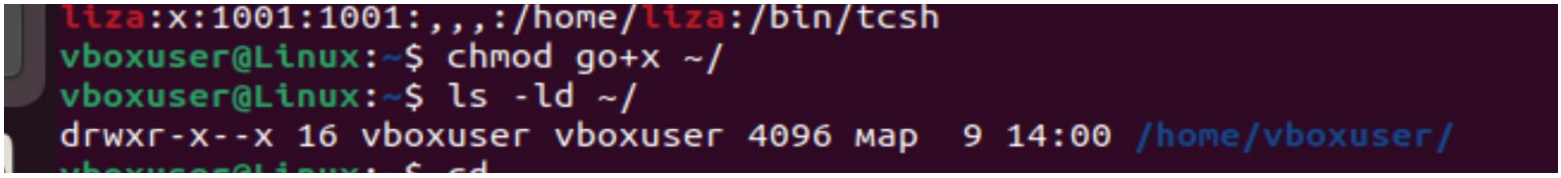
```
pesho P 03/09/2023 0 99999 5 -1
vboxuser@Linux:~$ sudo chsh -s /bin/tcsh liza
chsh: Warning: /bin/tcsh does not exist
vboxuser@Linux:~$ which tcsh
vboxuser@Linux:~$ sudo apt-get install tcsh
Четене на списъците с пакети... Готово
Изграждане на дървото със зависимости... Готово
Четене на информацията за състоянието... Готово
Следните НОВИ пакети ще бъдат инсталирани:
  tcsh
0 актуализирани, 1 нови инсталирани, 0 за премахване и 68 без промяна.
Необходимо е да се изтеглят 422 kB архиви.
След тази операция ще бъде използвано 1351 kB допълнително дисково пространство
.
Изт:1 http://us.archive.ubuntu.com/ubuntu jammy/universe amd64 tcsh amd64 6.21.
00-1.1 [422 kB]
```

I tried changing the shell for liza but it turned out that it does not exist. So I checked if tcsh is installed – and no, it was not. That is why I installed in and was able to user if afterwards.



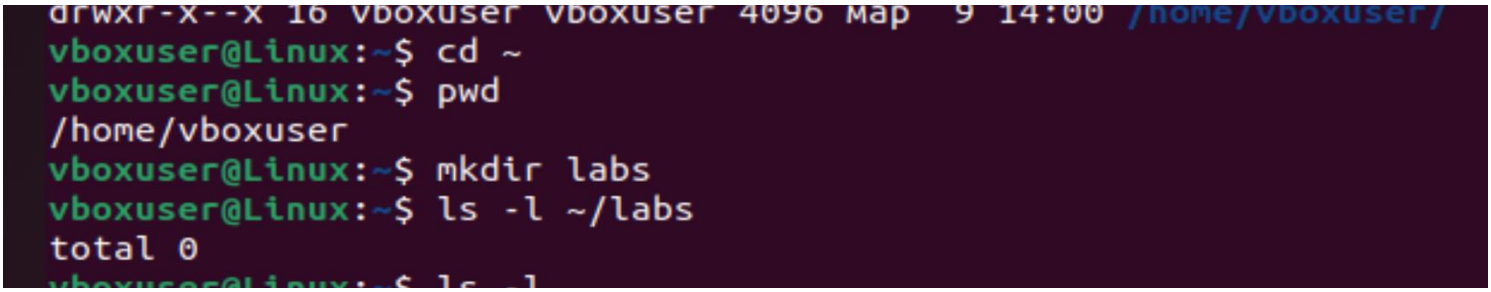
I changed the shell, after which I ran `grep` to check is liza's shell is, indeed, tcsh now.

13. Make sure your home directory has “execute” access enabled for group and other.



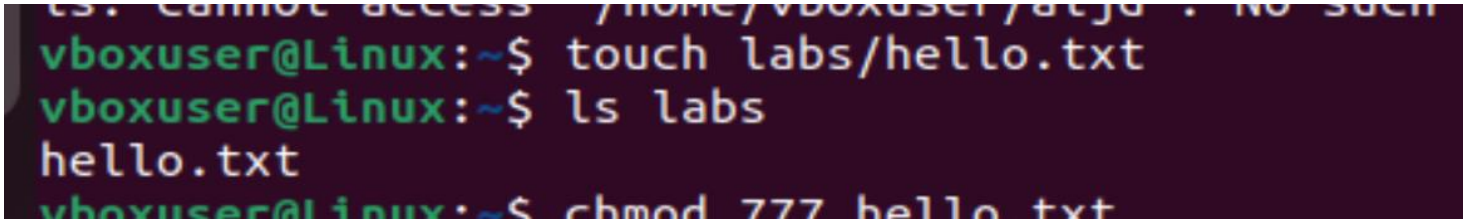
I added execute permission to the g (group) and o (other). Then I checked if the change has taken effect.

14. Change to your home directory, and create a directory called labs



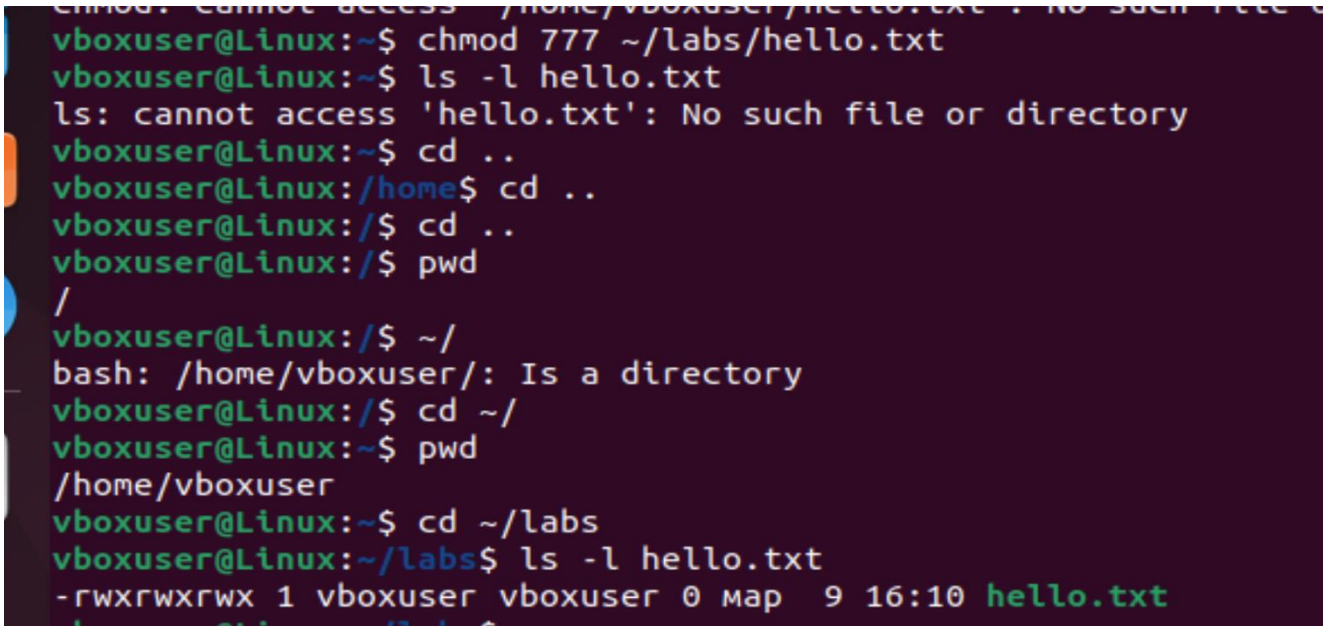
Changing and checking my directory, and then creating labs. Checking if labs exists by listing. Total 0 means that the directory is empty but the directory itself is there and existing.

15. Create an empty file in labs directory



Created an empty file called hello.txt and then checked if it exists by listing the contents of the labs directory.

16. Change permissions of file to rwx-rwx-rwx

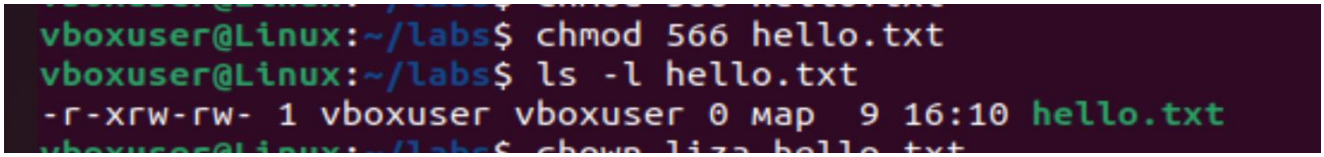


777 means highest permission which is why I used it to finish this task. I got a little confused with the directories but eventually I managed to list the hello.txt file from within the labs directory. The file shows that permissions are on the highest level for all.

17. List the file. What color is the file?

The file was listed in the previous question. The color of the file is green.

18. Change the permissions back to rx-rw-rw

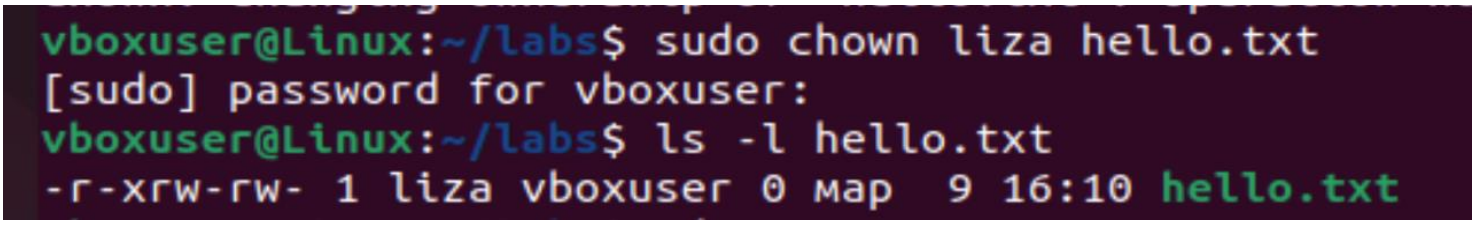


Changed permissions for hello.txt with `chmod` 566.

19. Change the permissions back to rx-rw-rw

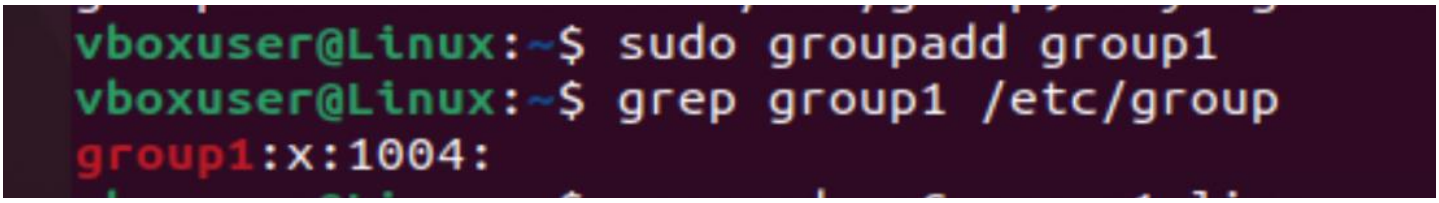
As can be seen from the previous screenshot, the listing command already shows the owner of the file – vboxuser.

20. Change the user ownership of the file to another user

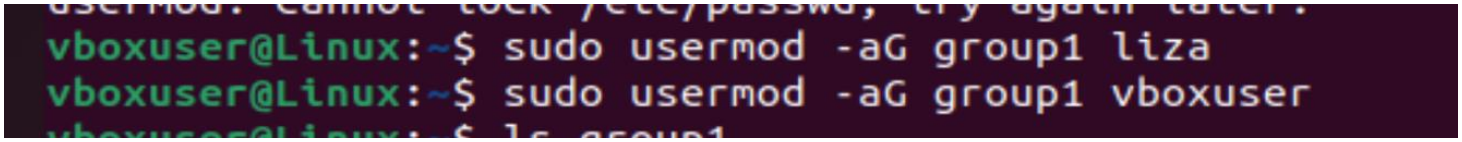


To change the ownership to another user, I was asked for my password since this is a sudo action. Then, I listed the file again – and as can be observed, the owner has changed to liza.

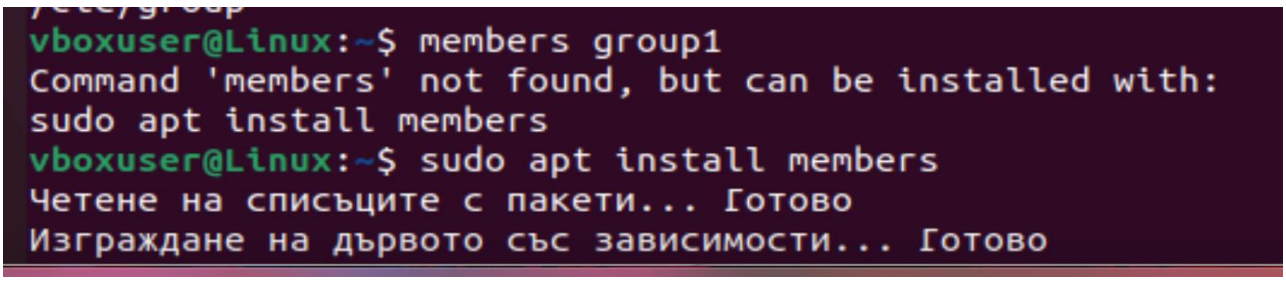
21. Create a group called group1 and assign two users to the group



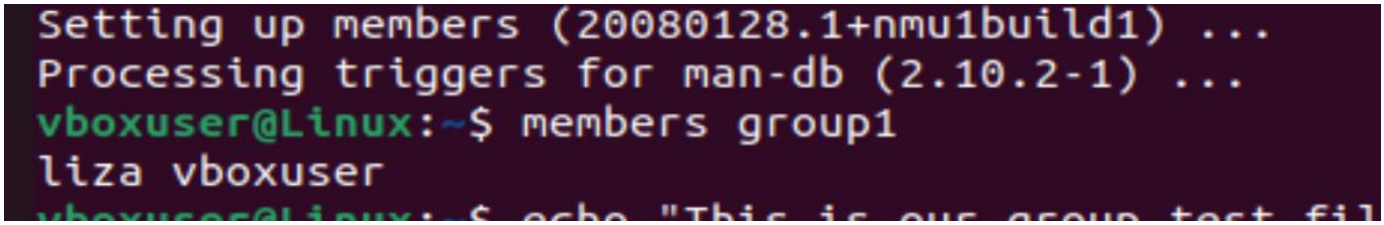
I went back to my home directory and then I added group1 – and checked if it exists.



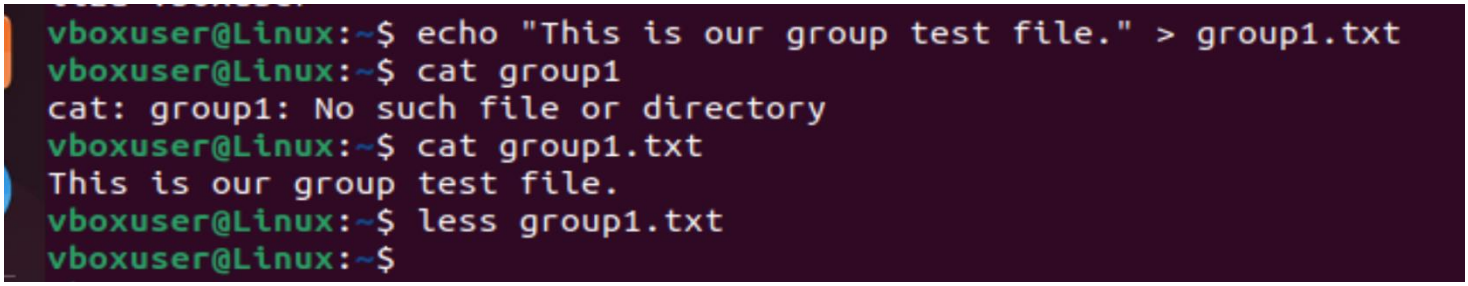
Then I assigned the two users to that group.



I tried checking if I had correctly assigned the two users to the group with the `members` command only to find out I do not have it. So, I installed it, and afterwards it worked:



22. Create a file called group1.txt and redirect below input into the file: “This is our group test file”.



I echoed the text into a newly created file called group1.txt. And I displayed it with `cat` (forgot the extension first time). I also tried viewing the file with `less`.

23. Change the group of the file to one of your users

```
vboxuser@Linux:~$ sudo chgrp pesho group1.txt
vboxuser@Linux:~$ ls -l group1.txt
-rw-rw-r-- 1 vboxuser pesho 29 мар  9 16:50 group1.txt
```

I changed the group of the file to the user pesho and showed the change by listing the txt file.

24. Give members of the group group1 read/write access to this file?

```
vboxuser@Linux:~$ chmod g+rw group1.txt
vboxuser@Linux:~$ ls -l group1.txt
-rw-rw-r-- 1 vboxuser pesho 29 мар  9 16:50 group1.txt
vboxuser@Linux:~$
```

Using `chmod`.