Exercises about users and groups management

NOTE 1: We have to start a root session to do the exercises
NOTE 2: Take into account that user and group names are CASE SENSITIVE

1. Add two new groups named “daw” and “crey”

```
palo@palo-VirtualBox:~$ sudo su
[sudo] password for palo:
root@palo-VirtualBox:/home/palo# groupadd daw; groupadd crey
root@palo-VirtualBox:/home/palo# tail -2 /etc/group
daw:x:2002:
crey:x:2003:
root@palo-VirtualBox:/home/palo#
```

2. Change “daw” and “crey” GIDS to 2001 and 2002, respectively.

```
root@palo-VirtualBox:/home/palo# groupmod -g 2001 daw; groupmo
d -g 2002 crey
root@palo-VirtualBox:/home/palo# tail -2 /etc/group
daw:x:2001:
crey:x:2002:
root@palo-VirtualBox:/home/palo#
```

3. Create a new group called “profesores” with GID of 2000. Then, modify the group name to teachers

```
root@palo-VirtualBox:/home/palo# groupadd -g 2000 profesores
root@palo-VirtualBox:/home/palo# tail -3 /etc/group
daw:x:2001:
crey:x:2002:
profesores:x:2000:
root@palo-VirtualBox:/home/palo# groupmod -n teachers profesor
es
root@palo-VirtualBox:/home/palo# tail -3 /etc/group
daw:x:2001:
crey:x:2002:
teachers:x:2000:
root@palo-VirtualBox:/home/palo#
```

4. Verify that you have correctly created the groups named “daw”, “crey” and “teachers”

```
root@palo-VirtualBox:/home/palo# tail -3 /etc/group
daw:x:2001:
crey:x:2002:
teachers:x:2000:
root@palo-VirtualBox:/home/palo#
```

We can also do this with the command “grep” followed by the key word we want to find and then the directory it is in, so in this case: grep daw /etc/group or grep crey /etc/group

5. Add a new user named “john” whose primary group is “crey”. Has the home directory been created with the default command?

```
root@palo-VirtualBox:/home/palo# useradd -g crey john
root@palo-VirtualBox:/home/palo# grep john /etc/passwd
john:x:2002:2002::/home/john:/bin/sh
root@palo-VirtualBox:/home/palo# ls /home
palo        testuser1  testuser4  testuser6
testgroup3  testuser2  testuser5
root@palo-VirtualBox:/home/palo#
```

No, in order for the home directory to be created we need to add -m to the command; useradd **-m** -g crey john

6. Add a new user named “mary”, whose primary group is “daw” and the home directory /home/mary

```
root@palo-VirtualBox:/home/palo# useradd -d /home/mary -m -g
daw mary
root@palo-VirtualBox:/home/palo# grep mary /etc/passwd
mary:x:2003:2001::/home/mary:/bin/sh
root@palo-VirtualBox:/home/palo# ls /home
mary  testgroup3  testuser2  testuser5
palo  testuser1   testuser4  testuser6
root@palo-VirtualBox:/home/palo#
```

In this case we would only need to use -m but since the exercise wanted us to specify the directory I used -d.

7. Add a new user named “martha”, whose primary group is “teachers”, the home directory /home/martha and belonging to the secondary group “crey”

```
root@palo-VirtualBox:/home/palo# useradd -g teachers -G crey
-m martha
root@palo-VirtualBox:/home/palo# grep martha /etc/passwd
martha:x:2004:2000::/home/martha:/bin/sh
root@palo-VirtualBox:/home/palo# ls /home
martha  palo        testuser1  testuser4  testuser6
mary    testgroup3  testuser2  testuser5
```

8. Add the following names to the users that you have just created:

a. John= “John Doe”

b. Mary = “Mary Williams”

c. Martha = “Martha Jones”

```
root@palo-VirtualBox:/home/palo# usermod -c "John Doe" john;
usermod -c "Mary Williams" mary; usermod -c "Martha Jones" ma
rtha
root@palo-VirtualBox:/home/palo# tail -4 /etc/passwd
testuser6:x:2000:2003:Test user 6 for class:/home/testuser6:/
bin/sh
john:x:2002:2002:John Doe:/home/john:/bin/sh
mary:x:2003:2001:Mary Williams:/home/mary:/bin/sh
martha:x:2004:2000:Martha Jones:/home/martha:/bin/sh
root@palo-VirtualBox:/home/palo#
```

8. How could you check that you have created all the users with the right primary groups? We need to check that the second number that appears on the user description matches the id of the group we assigned it to. For example, martha i assigned to the group teachers and teachers id is 2000 so the second number should be 2000.

```
root@palo-VirtualBox:/home/palo# grep martha /etc/passwd
martha:x:2004:2000:Martha Jones:/home/martha:/bin/sh
root@palo-VirtualBox:/home/palo# grep teachers /etc/group
teachers:x:2000:testuser5
root@palo-VirtualBox:/home/palo#
```

10. Verify if crey and daw groups have martha as a member

```
root@palo-VirtualBox:/home/palo# grep crey /etc/group
crey:x:2002:testuser5,martha
root@palo-VirtualBox:/home/palo# grep daw /etc/group
daw:x:2001:testuser4
root@palo-VirtualBox:/home/palo#
```

Only crey has martha as part of the group.

11. Can you log in with any of the users you have created?

No because i haven't assigned passwords to any of them.

12. Set the password “martha22” for the user “martha”

```
root@palo-VirtualBox:/home/palo# passwd martha
New password:
Retype new password:
passwd: password updated successfully
root@palo-VirtualBox:/home/palo#
```

13. Display on the shell prompt the groups to which Martha belongs

```
root@palo-VirtualBox:/home/palo# grep martha /etc/passwd; gre
p /etc/group
martha:x:2004:2000:Martha Jones:/home/martha:/bin/sh
```

14. Create a directory named “teachers” in “/home”. Then, assign the directory “/home/teachers” to the user martha (you can do all the steps typing just one command).

```
root@palo-VirtualBox:/home/palo# usermod -d /home/teachers -m ma
rtha
root@palo-VirtualBox:/home/palo# ls -l /home
total 36
drwxr-xr-x  2 mary       daw       4096 nov 11 17:31 mary
drwxr-xr-x 19 palo       palo      4096 nov 17 17:24 palo
drwxr-xr-x  2 martha     teachers  4096 nov 11 17:33 teachers
```


15. Now, log in as user “martha”. Run the command “cd $SHOME” and check that the home directory is
“/home/teachers”

```
root@palo-VirtualBox:/home/palo# login martha
Password:
```

```
$ $HOME
-sh: 1: /home/teachers: Permission denied
$
```

16. Go back to the root shell
We do this using the **exit** command.
17. Change the shell of the user named “john” to “sh”

```
root@palo-VirtualBox:/home/palo# usermod -s /bin/sh john
```

18. Add the user “martha” to the secondary group “daw” without removing the already assigned
secondary groups.

```
root@palo-VirtualBox:/home/palo# usermod -G daw -a martha
root@palo-VirtualBox:/home/palo# groups martha
martha : teachers daw crey
root@palo-VirtualBox:/home/palo#
```

19. Run a command to print the following information for each user

User Primary group Secondary groups
john crey
mary daw
martha teachers crey, daw

```
root@palo-VirtualBox:/home/palo# groups john
john : crey
root@palo-VirtualBox:/home/palo# groups mary
mary : daw
root@palo-VirtualBox:/home/palo# groups martha
martha : teachers daw crey
root@palo-VirtualBox:/home/palo#
```

20. Delete all the groups you have created. Could you delete them? Why?

```
root@palo-VirtualBox:/home/palo# groupdel crey
groupdel: cannot remove the primary group of user 'john'
root@palo-VirtualBox:/home/palo# groupdel daw
groupdel: cannot remove the primary group of user 'mary'
root@palo-VirtualBox:/home/palo# groupdel teachers
groupdel: cannot remove the primary group of user 'martha'
root@palo-VirtualBox:/home/palo#
```

No because they are all the primary group of a user, so we would need to assign these usera to other groups or to delete the users.

21. Delete all the users you have created, including the files and directories inside the home.

```
root@palo-VirtualBox:/home/palo# userdel -r john
userdel: john mail spool (/var/mail/john) not found
userdel: john home directory (/home/john) not found
root@palo-VirtualBox:/home/palo# userdel -r mary
userdel: mary mail spool (/var/mail/mary) not found
root@palo-VirtualBox:/home/palo# userdel -r martha
userdel: martha mail spool (/var/mail/martha) not found
```

22. Try again to delete the groups

```
root@palo-VirtualBox:/home/palo# groupdel crey
root@palo-VirtualBox:/home/palo# groupdel daw
root@palo-VirtualBox:/home/palo# groupdel teachers
```

There are no longer any problems and the groups have been deleted.