

LAB2

1. Create a user account with the following attribute

-username: islam

-Fullname/comment: Islam Askar

-Password: islam

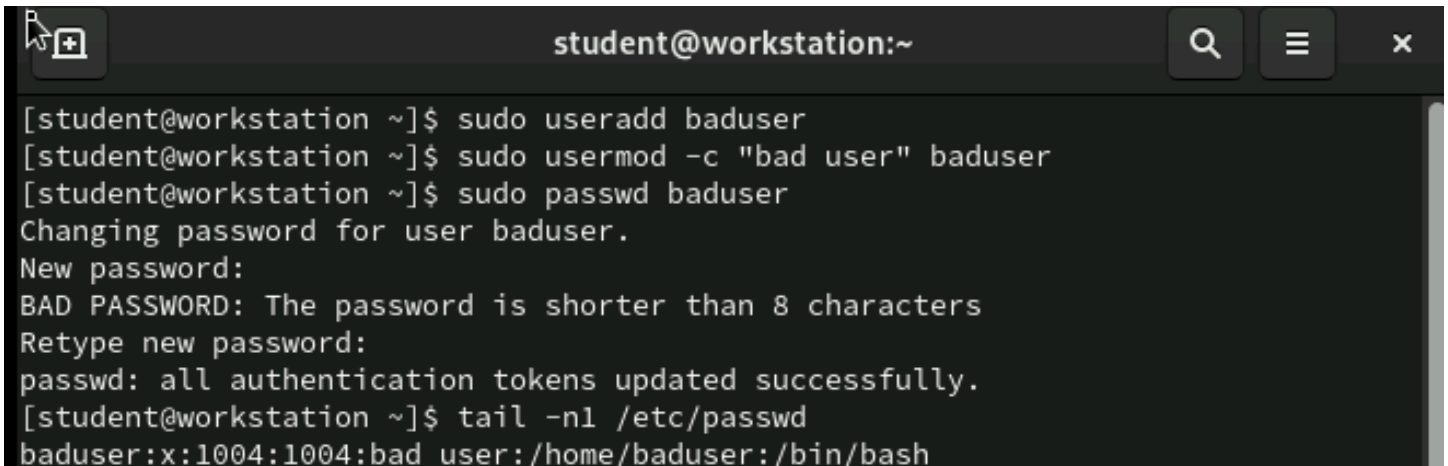
```
[student@workstation ~]$ sudo useradd islam
[sudo] password for student:
[student@workstation ~]$ sudo usermod -c "Islam Askar" islam
[student@workstation ~]$ sudo passwd islam
Changing password for user islam.
New password:
```

2. Create a user account with the following attribute

- Username: baduser

- Full name/comment: Bad User

- Password: baduse



```
student@workstation:~
[student@workstation ~]$ sudo useradd baduser
[student@workstation ~]$ sudo usermod -c "bad user" baduser
[student@workstation ~]$ sudo passwd baduser
Changing password for user baduser.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[student@workstation ~]$ tail -n1 /etc/passwd
baduser:x:1004:1004:bad user:/home/baduser:/bin/bash
```

3. Create a supplementary (Secondary) group called pgroup with group ID of 30000

```
student@workstation:~  
[student@workstation ~]$ sudo groupadd -g 3000 pgroup  
[student@workstation ~]$ tail -n1 /etc/group  
pgroup:x:3000:
```

4. Create a supplementary group called badgroup

```
[student@workstation ~]$ sudo groupadd badgroup  
[student@workstation ~]$ tail -n1/etc/group  
tail: invalid number of lines: '1/etc/group'  
[student@workstation ~]$ tail -n1 /etc/group  
badgroup:x:3001:
```

5. Add islam user to the pgroup group as a supplementary group

```
[student@workstation ~]$ sudo usermod -aG pgroup islam  
[student@workstation ~]$ tail -n5 /etc/passwd  
gnome-initial-setup:x:977:977::/run/gnome-initial-setup:/sbin/nologin  
dnsmasq:x:976:975:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/usr/sbin/nologin  
cloud-user:x:1002:1002:Cloud User:/home/cloud-user:/bin/bash  
islam:x:1003:1003:Islam Askar:/home/islam:/bin/bash  
baduser:x:1004:1004:bad user:/home/baduser:/bin/bash  
[student@workstation ~]$ id islam  
uid=1003(islam) gid=1003(islam) groups=1003(islam),3000(pgroup)
```

6. Modify the password of islam's account to password

```
student@workstation:~  
[student@workstation ~]$ sudo passwd islam  
Changing password for user islam.  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: all authentication tokens updated successfully.
```

7. Modify islam's account so the password expires after 30 days

```
[student@workstation ~]$ sudo chage -M 30 islam  
[student@workstation ~]$ sudo chage -l islam  
Last password change : Nov 02, 2025  
Password expires : Dec 02, 2025  
Password inactive : never  
Account expires : never  
Minimum number of days between password change : 0  
Maximum number of days between password change : 30  
Number of days of warning before password expires : 7
```

8. Lock bad user account so he can't log in

```
[student@workstation ~]$ sudo usermod -L baduser  
[student@workstation ~]$
```

9. Delete bad user account

```
[student@workstation ~]$ sudo userdel -r baduser  
[student@workstation ~]$
```

10. Delete the supplementary group called badgroup.

```
student@workstation:~  
[student@workstation ~]$ sudo groupdel badgroup  
[student@workstation ~]$
```

10. Create a folder called myteam in your home directory and change its permissions to read only for the owner.

```
[student@workstation home]$ ls -l  
total 4  
drwx-----. 4 baduser baduser 93 Nov 2 18:57 baduser  
drwx-----. 5 cloud-user cloud-user 105 Apr 17 2024 cloud-user  
drwx-----. 6 devops devops 118 Mar 7 2024 devops  
drwx-----. 4 islam islam 93 Nov 2 13:15 islam  
drwx-----. 4 marwan marwan 93 Nov 2 18:03 marwan  
dr----- 2 root root 6 Nov 3 11:18 myteam  
drwx----- 25 student student 4096 Aug 13 2024 student
```

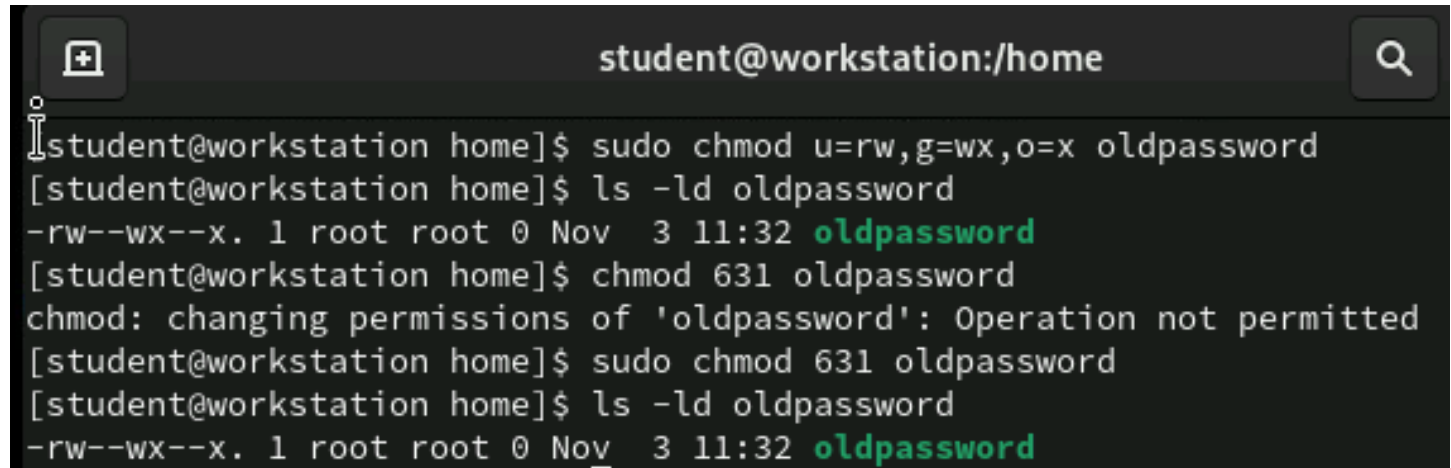
11. Log out and log in by another user

```
student@workstation:/home  
[student@workstation home]$ su - ahmed  
Password:  
Last login: Mon Nov 3 11:26:09 UTC 2025 on pts/0  
[ahmed@workstation ~]$ exit  
logout  
[student@workstation home]$
```

12. Try to access (by cd command) the folder (myteam)

```
[student@workstation home]$ sudo chmod 777 myteam
[student@workstation home]$ cd myteam
[student@workstation myteam]$
```

13-Change the permissions of oldpasswd file to give owner read and write permissions and for group write and execute and execute only for the others (using chmod in 2 different ways)



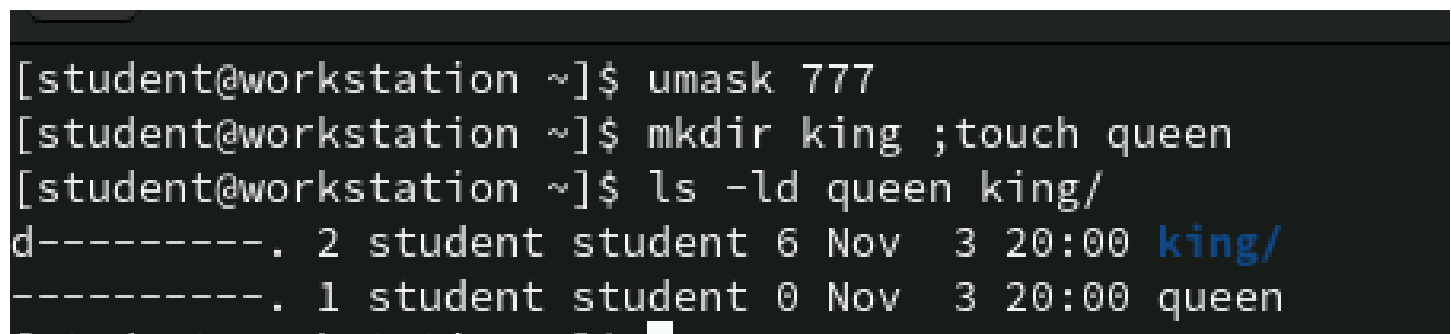
```
student@workstation:/home
[student@workstation home]$ sudo chmod u=rw,g=wx,o=x oldpassword
[student@workstation home]$ ls -ld oldpassword
-rw--wx--x. 1 root root 0 Nov  3 11:32 oldpassword
[student@workstation home]$ chmod 631 oldpassword
chmod: changing permissions of 'oldpassword': Operation not permitted
[student@workstation home]$ sudo chmod 631 oldpassword
[student@workstation home]$ ls -ld oldpassword
-rw--wx--x. 1 root root 0 Nov  3 11:32 oldpassword
```

14.What is the maximum permission a file can have, by default when it is just created? And what is that for directory.

file=rw-rw-rw-

folder=rwxrwxrwx

15.Change your default permissions to be no permission to everyone then create a directory and a file to verify.



```
[student@workstation ~]$ umask 777
[student@workstation ~]$ mkdir king ;touch queen
[student@workstation ~]$ ls -ld queen king/
d------. 2 student student 6 Nov  3 20:00 king/
------. 1 student student 0 Nov  3 20:00 queen
```

17.What are the minimum permission needed for:

-Copy a directory:

-Source directory: need **read (r)** and **execute (x)**

-Target parent directory: need **write (w)** and **execute (x)**

-Copy a file:

-Source file: need **read (r)**

-Target parent directory: need **write (w)** and **execute (x)**

-delete a file:

-need **write(w)** and **excite(x)**

-Change to a directory :

-Need **execute (x)** permission

-List a directory content:

-Need **read (r)** permission

-View a file content:

-Need **read (r)** permission

-Modify a file content :

-Need **write (w)** permission

18-Create a file with permission 444. Try to edit in it and to remove it? Note what happened

-Permission 444 → read-only file.

-You can't edit or write, but you can delete if the directory allows it

```

[student@workstation ~]$ touch maro
[student@workstation ~]$ chmod 444 maro
[student@workstation ~]$ ls -ld maro
-r--r--r--. 1 student student 0 Nov  3 12:14 maro
[student@workstation ~]$ echo "Hello word" >> maro
bash: maro: Permission denied
[student@workstation ~]$ rm maro
rm: remove write-protected regular empty file 'maro'?
[student@workstation ~]$ ls
Desktop    Downloads  Pictures   Templates  ahmed  mahmoud
Documents  Music      Public     Videos    fawzy  maro
[student@workstation ~]$ rm maro
rm: remove write-protected regular empty file 'maro'? yes
[student@workstation ~]$ ls
Desktop    Downloads  Pictures   Templates  ahmed  mahmoud
Documents  Music      Public     Videos    fawzy
[student@workstation ~]$

```

19.What is the difference between the “x” permission for a file and for a directory?

- For a file, the x (execute) permission allows the file to be run as a program or script
- For a directory, the x (execute) permission allows the user to enter the directory (cd) and access its contents.