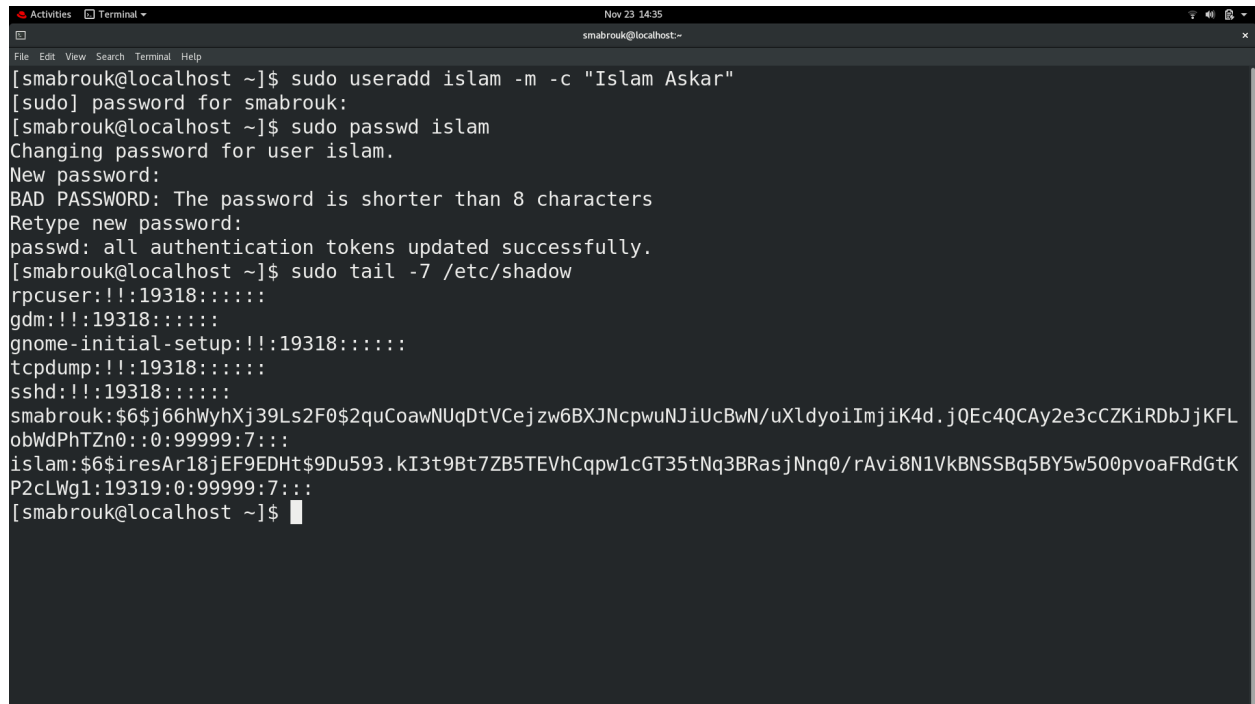


# RHSA1 - Lab 2

1. Create a user account with the following attribute

- username: islam
- Fullname/comment: Islam Askar
- Password: islam



```
Nov 23 14:35
smabrouk@localhost~
File Edit View Search Terminal Help
[smabrouk@localhost ~]$ sudo useradd islam -m -c "Islam Askar"
[sudo] password for smabrouk:
[smabrouk@localhost ~]$ 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.
[smabrouk@localhost ~]$ sudo tail -7 /etc/shadow
rpcuser:!!:19318::::::
gdm:!!:19318::::::
gnome-initial-setup:!!:19318::::::
tcpdump:!!:19318::::::
sshd:!!:19318::::::
smabrouk:$6$j66hWyhXj39Ls2F0$2quCoawNUqDtVcejzw6BXJNcpwuNjiUcBwN/uXldyoiImjiK4d.jQE4QCay2e3cCZKiRdbJjKFL
obWdPhTZn0::0:99999:7:::
islam:$6$iResAr18jEF9EDHt$9Du593.kI3t9Bt7ZB5TEVhCqpw1cGT35tNq3BRasjNnq0/rAvi8N1VkBNSSBq5BY5w500pvoaFRdGtK
P2cLWg1:19319:0:99999:7:::
[smabrouk@localhost ~]$
```

## 2. Create a user account with the following attribute

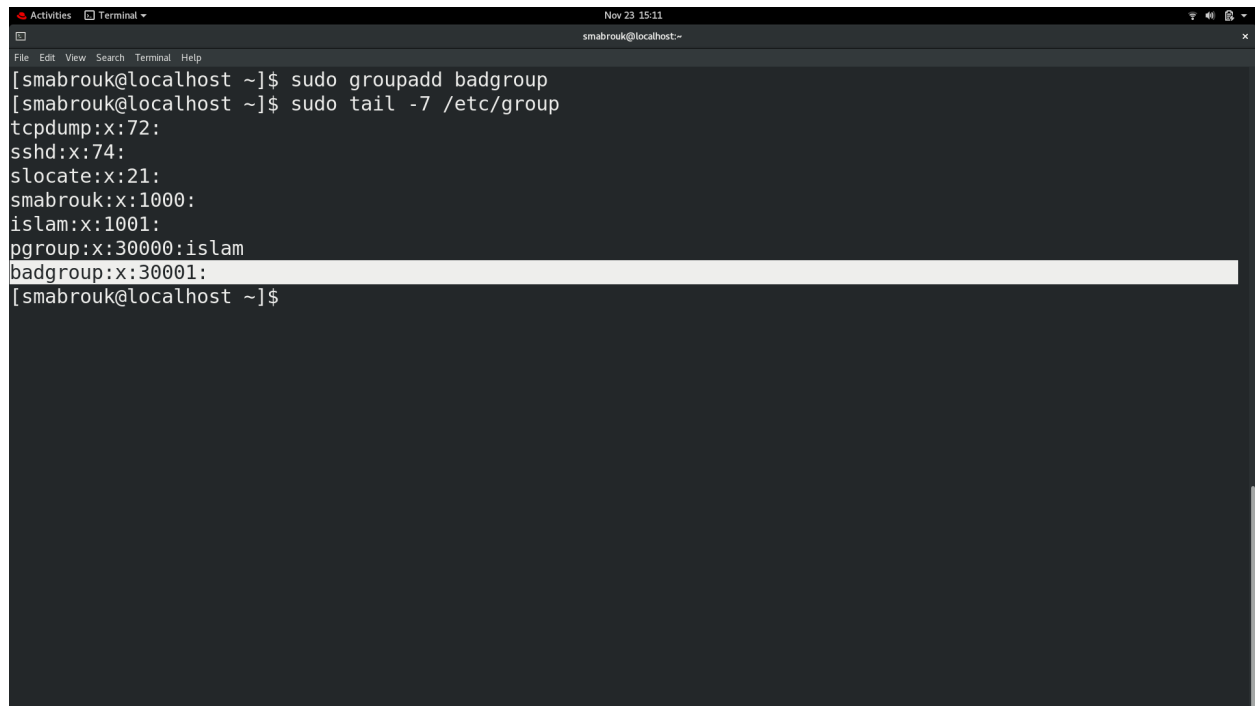
- Username: baduser
- Full name/comment: Bad User
- Password: baduser

```
Nov 23 14:37
smabrouk@localhost:~
[smabrouk@localhost ~]$ sudo useradd baduser -m -c "Bad User"
[smabrouk@localhost ~]$ 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.
[smabrouk@localhost ~]$ sudo tail -7 /etc/shadow
gdm:!!:19318::::::
gnome-initial-setup:!!:19318::::::
tcpdump:!!:19318::::::
sshd:!!:19318::::::
smabrouk:$6$j66hWyhXj39Ls2F0$2quCoawNUqDtVCejzw6BXJNcpwuNjUcBwN/uXldyoiImjiK4d.jQE4QCAy2e3cCZKiRDbJjKFL
obWdPhTZn0:0:99999:7:::
islam:$6$iresAr18jEF9EDHt$9Du593.kI3t9Bt7ZB5TEVhCqpw1cGT35tNq3BRasjNnq0/rAvi8N1VkBNSSBq5BY5w500pvoaFRdGtK
P2cLWg1:19319:0:99999:7:::
baduser:$6$678zlrRtMtUWktyz$CPDhuCGPDN/IkWwRGsYWBRkzY9RTOzDzitn4MVy0vrueLA2s9AEGTsEDlnWoAdAjPSgSiWwL.LuN
qZGHuYTB0:19319:0:99999:7:::
[smabrouk@localhost ~]$
```

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

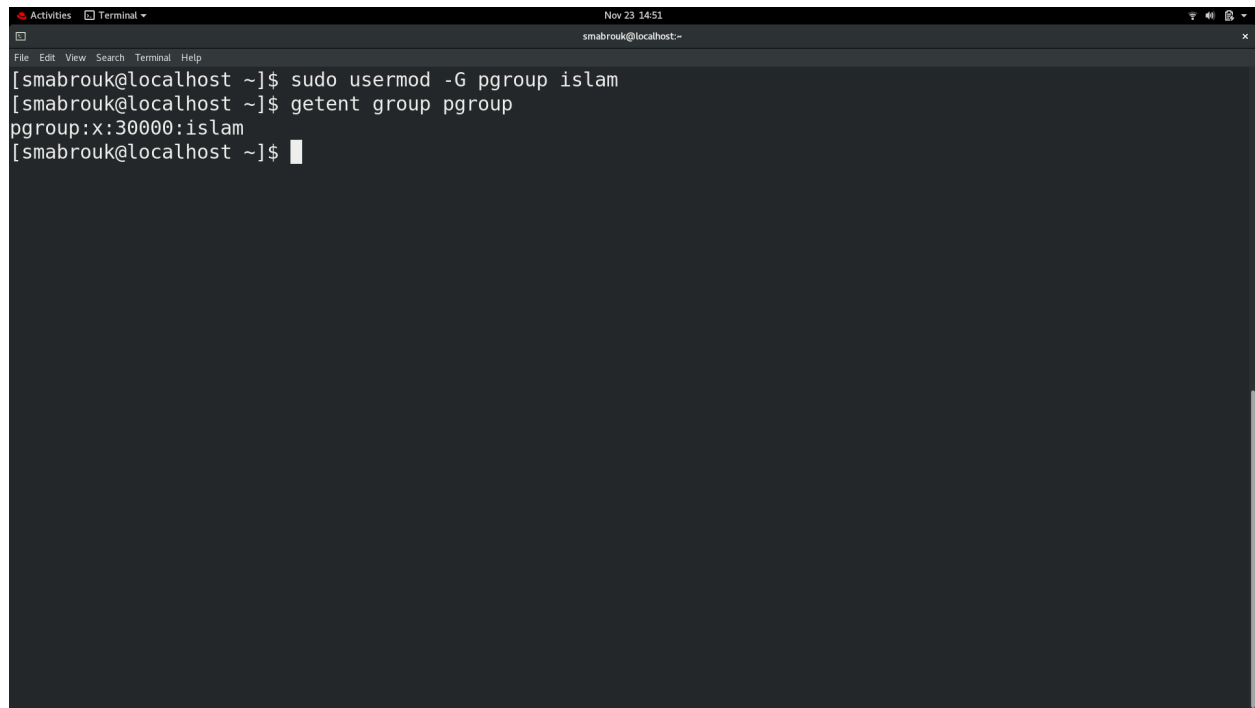
```
Nov 23 14:44
smabrouk@localhost:~
[smabrouk@localhost ~]$ sudo groupadd pgroup -g 30000
[sudo] password for smabrouk:
[smabrouk@localhost ~]$ sudo tail -7 /etc/group
tcpdump:x:72:
sshd:x:74:
slocate:x:21:
smabrouk:x:1000:
islam:x:1001:
baduser:x:1002:
pgroup:x:30000:
[smabrouk@localhost ~]$
```

#### 4. Create a supplementary group called badgroup

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 23 15:11, smabrouk@localhost:~). The terminal shows the following commands and output:

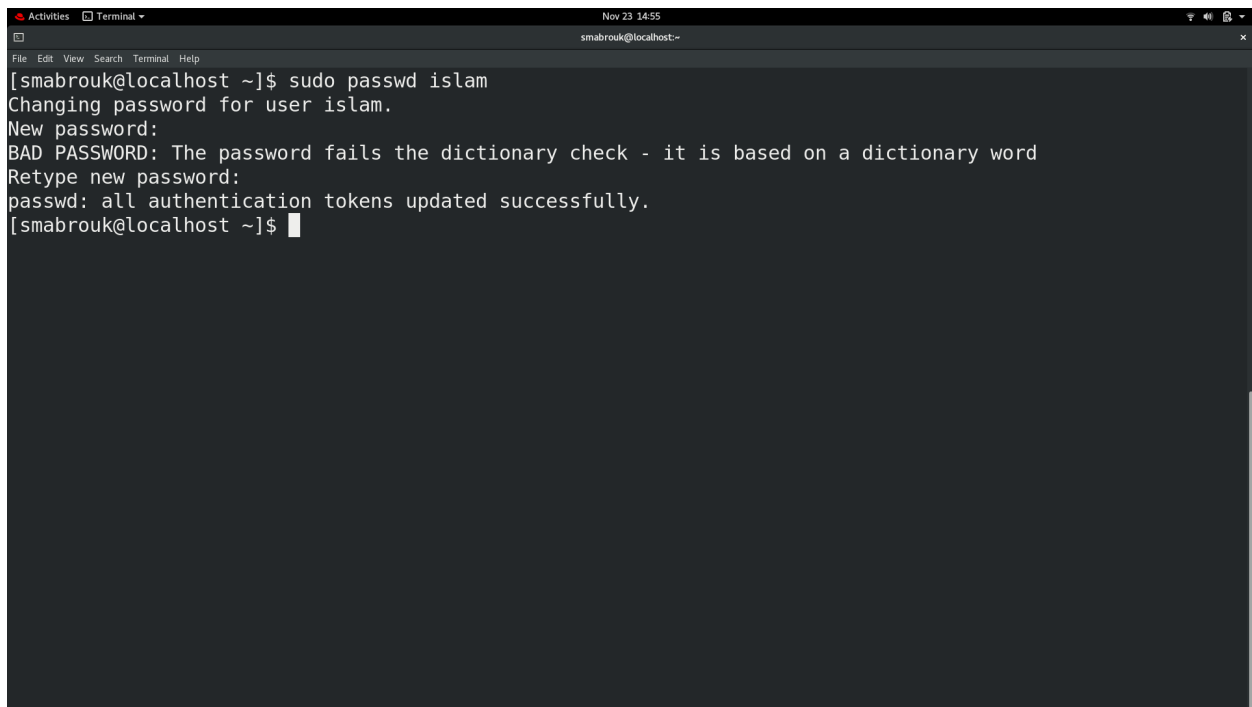
```
[smabrouk@localhost ~]$ sudo groupadd badgroup
[smabrouk@localhost ~]$ sudo tail -7 /etc/group
tcpdump:x:72:
sshd:x:74:
slocate:x:21:
smabrouk:x:1000:
islam:x:1001:
pgroup:x:30000:islam
badgroup:x:30001:
[smabrouk@localhost ~]$
```

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

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 23 14:51, smabrouk@localhost:~). The terminal shows the following commands and output:

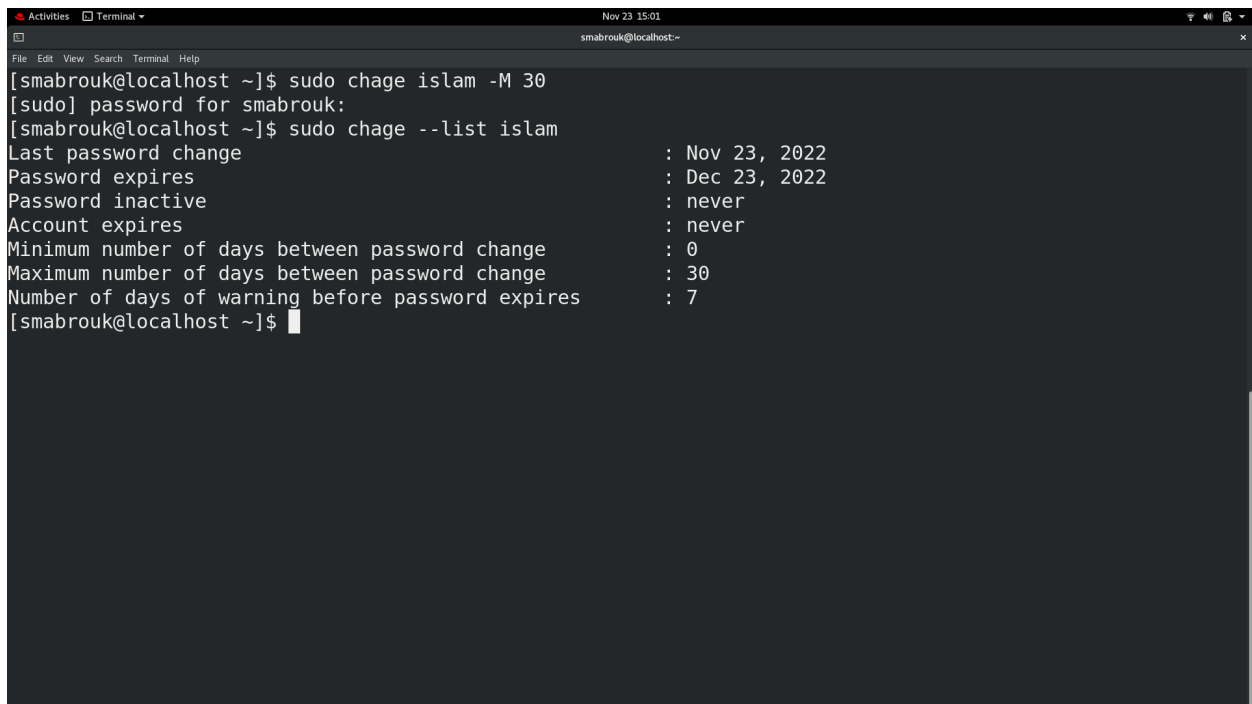
```
[smabrouk@localhost ~]$ sudo usermod -G pgroup islam
[smabrouk@localhost ~]$ getent group pgroup
pgroup:x:30000:islam
[smabrouk@localhost ~]$
```

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

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 23 14:55, smabrouk@localhost:~). The terminal shows the command 'sudo passwd islam' being executed. The output indicates the password for user 'islam' is being changed. A new password is entered, but it fails the dictionary check. A second password is entered, and the change is successful. The terminal prompt returns to the user.

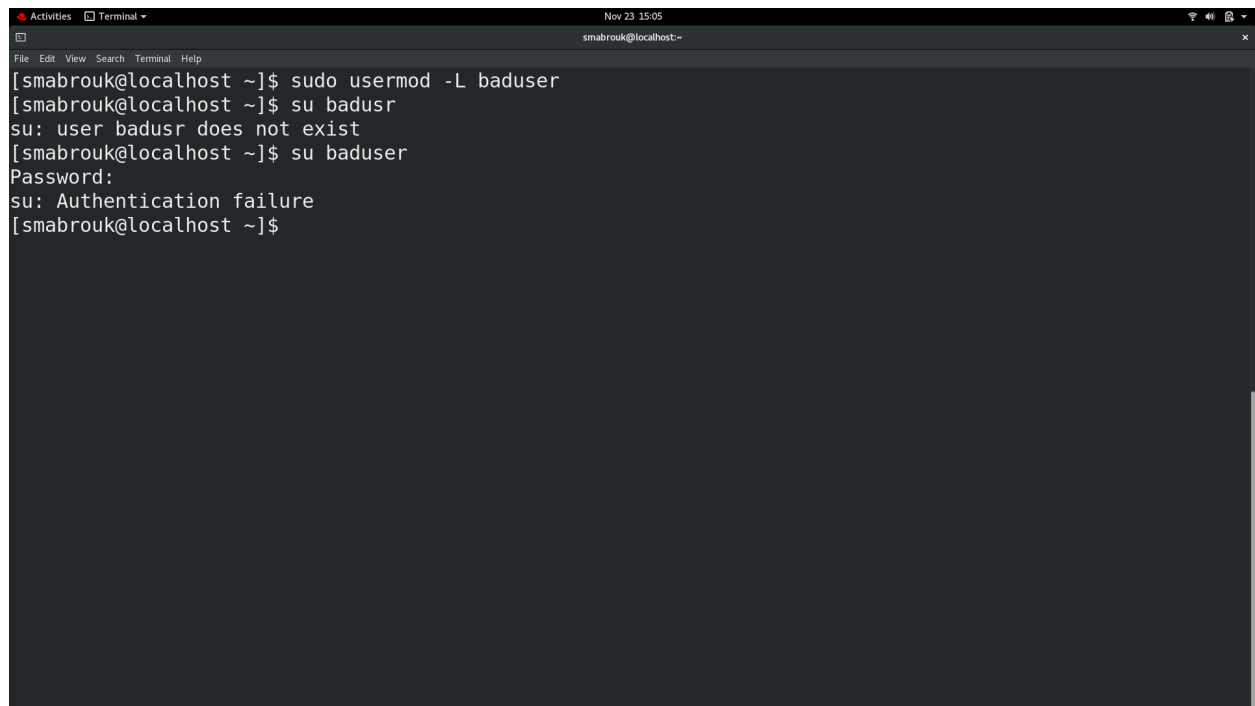
```
[smabrouk@localhost ~]$ sudo passwd islam
Changing password for user islam.
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
[smabrouk@localhost ~]$
```

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

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 23 15:01, smabrouk@localhost:~). The terminal shows the command 'sudo chage islam -M 30' being executed. The output shows the current account settings for user 'islam', including the last password change date, password expiration date, password inactivity period, account expiration, and the minimum, maximum, and warning periods for password changes.

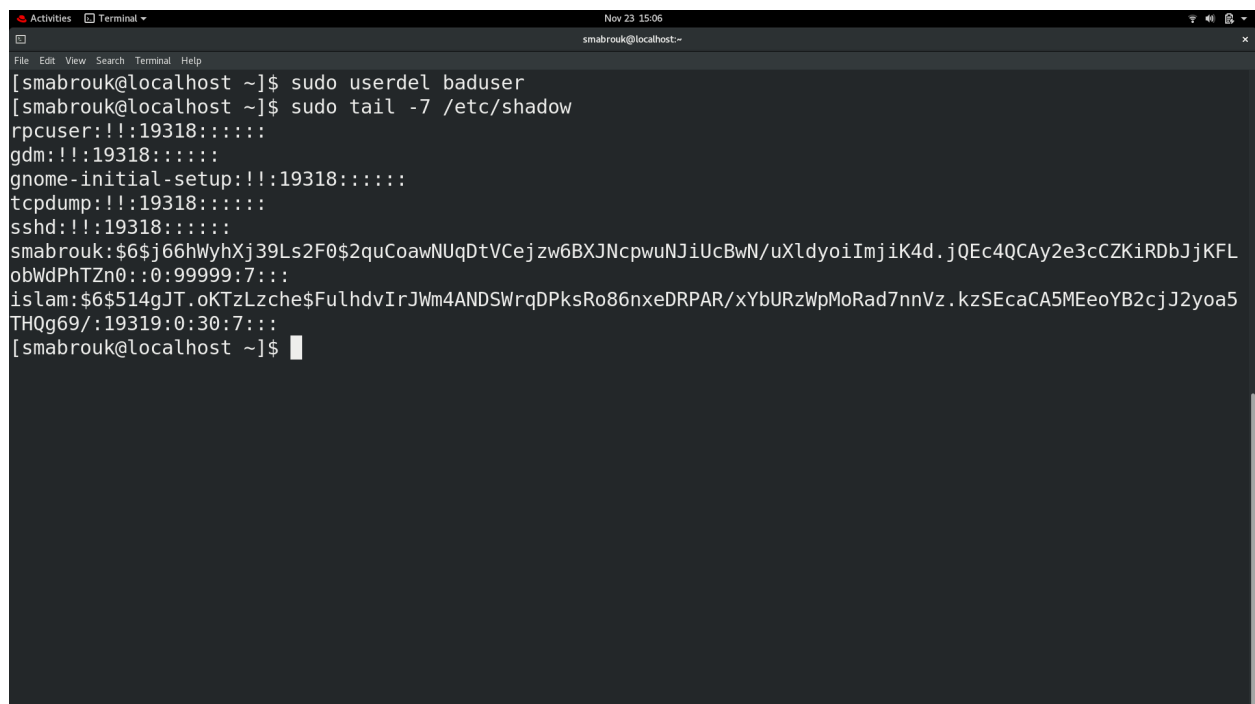
```
[smabrouk@localhost ~]$ sudo chage islam -M 30
[sudo] password for smabrouk:
[smabrouk@localhost ~]$ sudo chage --list islam
Last password change                : Nov 23, 2022
Password expires                     : Dec 23, 2022
Password inactive                    : never
Account expires                     : 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
[smabrouk@localhost ~]$
```

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

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 23 15:05, smabrouk@localhost). The terminal shows the following commands and output:

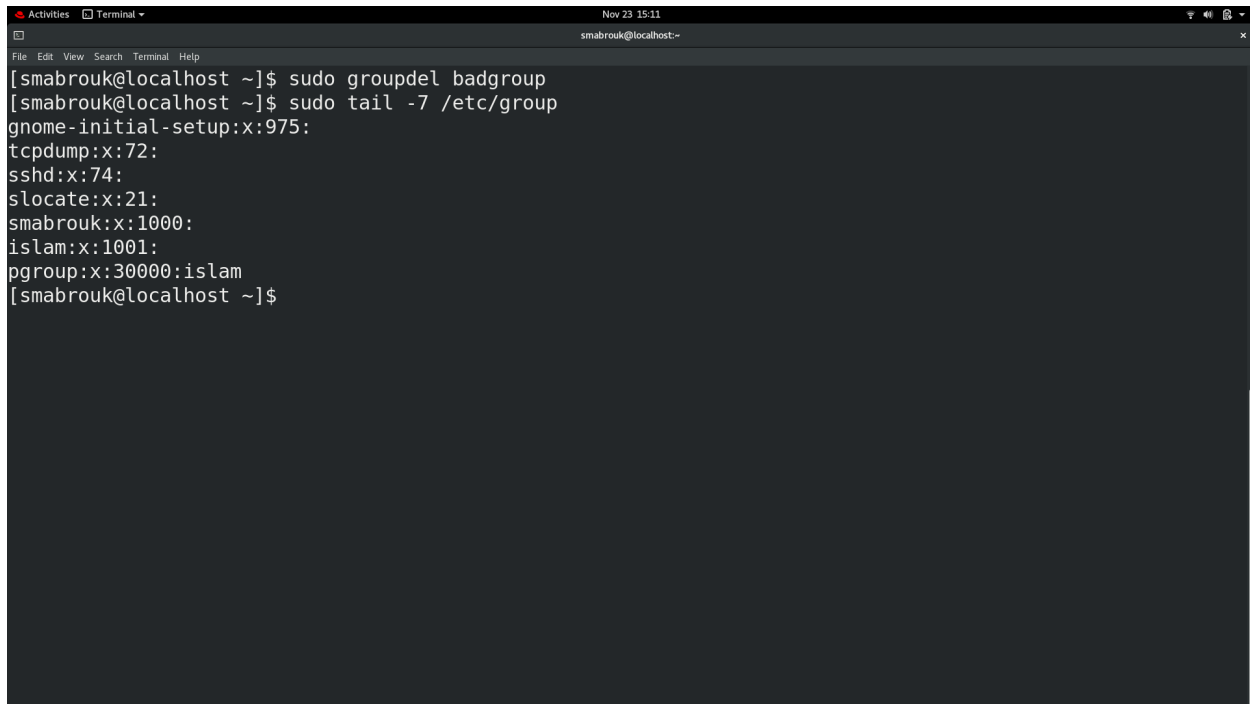
```
[smabrouk@localhost ~]$ sudo usermod -L baduser
[smabrouk@localhost ~]$ su badusr
su: user badusr does not exist
[smabrouk@localhost ~]$ su baduser
Password:
su: Authentication failure
[smabrouk@localhost ~]$
```

## 9. Delete bad user account

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 23 15:06, smabrouk@localhost). The terminal shows the following commands and output:

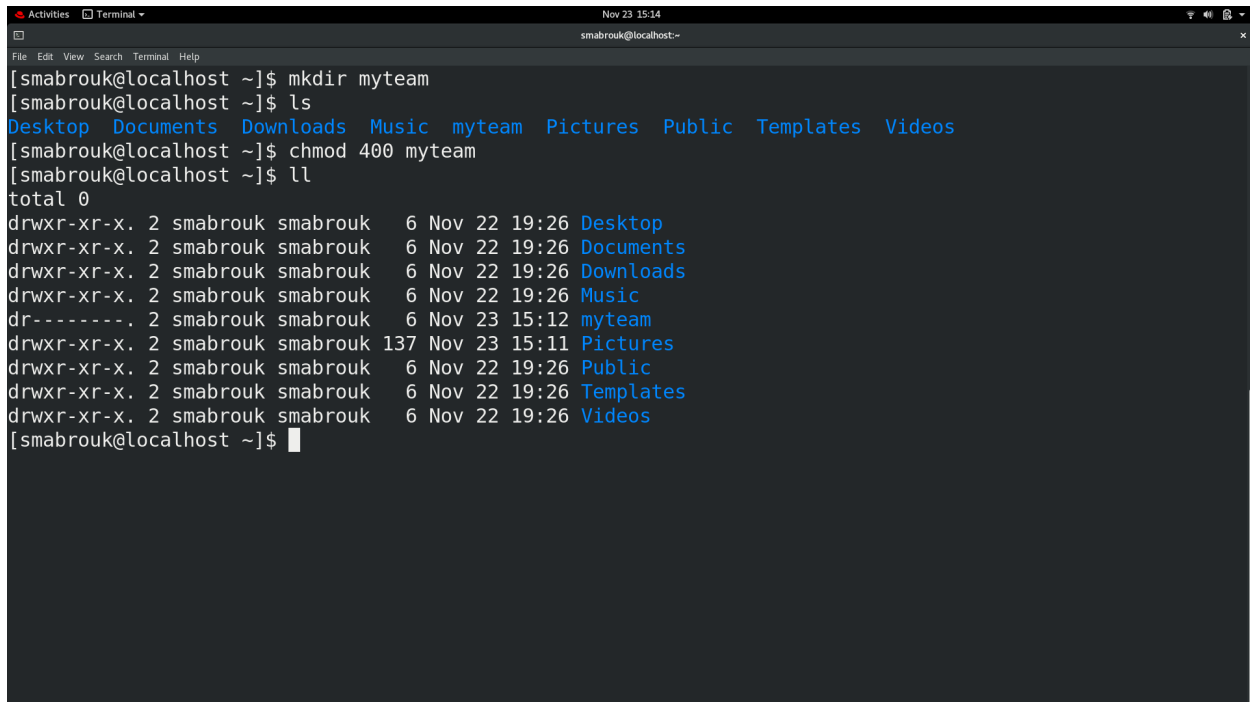
```
[smabrouk@localhost ~]$ sudo userdel baduser
[smabrouk@localhost ~]$ sudo tail -7 /etc/shadow
rpcuser:!!:19318:::::::
gdm:!!:19318:::::::
gnome-initial-setup:!!:19318:::::::
tcpdump:!!:19318:::::::
sshd:!!:19318:::::::
smabrouk:$6$j66hWyhXj39Ls2F0$2quCoawNUqDtVCejzw6BXJNcpwuNjUcBwN/uXldyoiImjiK4d.jQE4QCAy2e3cCZKiRDbJjKFL
obWdPhTZn0::0:99999:7:::
islam:$6$514gJT.oKTzLzche$FulhdvIrJWm4ANDSWrqDPksRo86nxedRPAR/xYbURzWpMoRad7nnVz.kzSEcaCA5MEeoYB2cjJ2yoa5
THQg69/:19319:0:30:7:::
[smabrouk@localhost ~]$
```

10. Delete the supplementary group called badgroup.



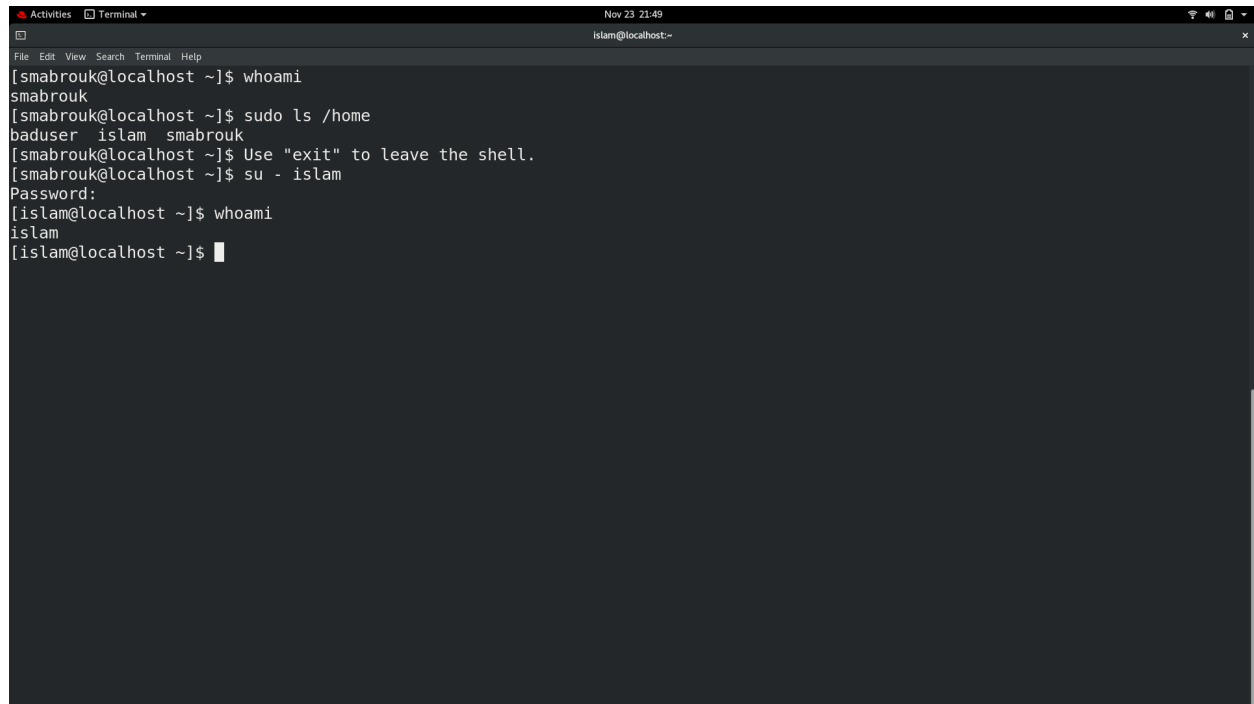
```
Nov 23 15:11
smabrouk@localhost~
File Edit View Search Terminal Help
[smabrouk@localhost ~]$ sudo groupdel badgroup
[smabrouk@localhost ~]$ sudo tail -7 /etc/group
gnome-initial-setup:x:975:
tcpdump:x:72:
sshd:x:74:
slocate:x:21:
smabrouk:x:1000:
islam:x:1001:
pgroup:x:30000:islam
[smabrouk@localhost ~]$
```

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



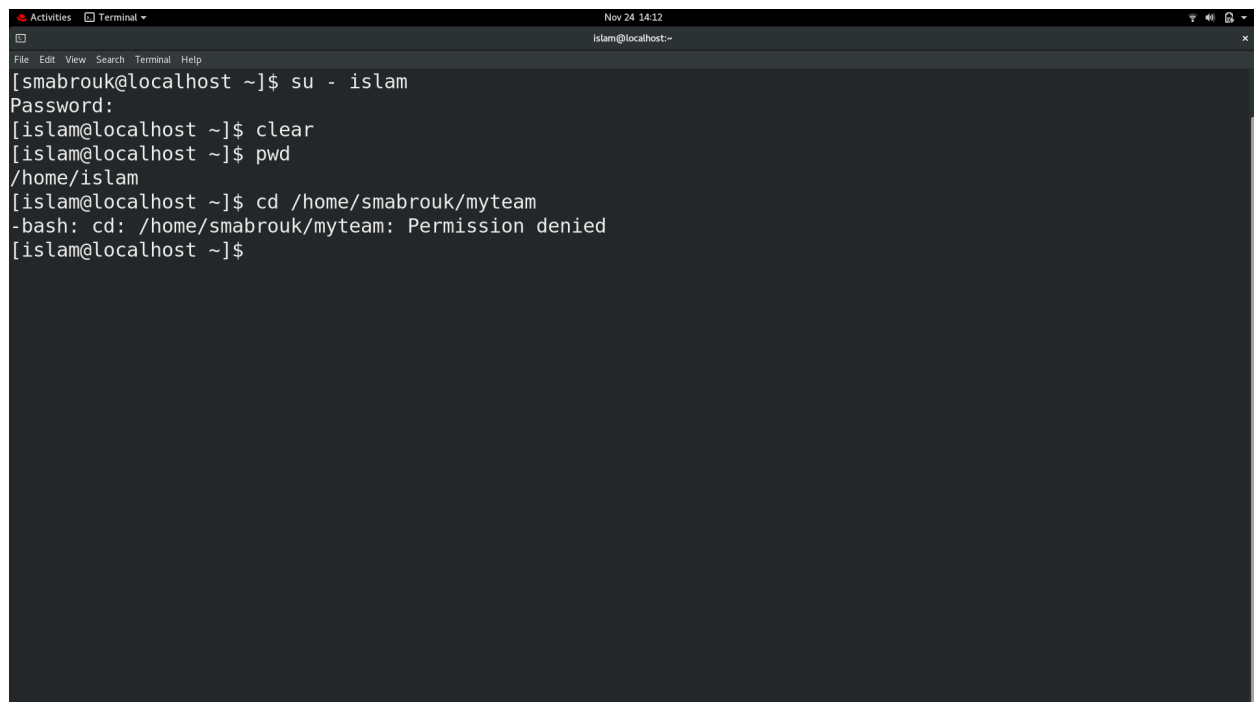
```
Nov 23 15:14
smabrouk@localhost~
File Edit View Search Terminal Help
[smabrouk@localhost ~]$ mkdir myteam
[smabrouk@localhost ~]$ ls
Desktop Documents Downloads Music myteam Pictures Public Templates Videos
[smabrouk@localhost ~]$ chmod 400 myteam
[smabrouk@localhost ~]$ ll
total 0
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Desktop
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Documents
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Downloads
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Music
dr----- 2 smabrouk smabrouk  6 Nov 23 15:12 myteam
drwxr-xr-x. 2 smabrouk smabrouk 137 Nov 23 15:11 Pictures
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Public
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Templates
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Videos
[smabrouk@localhost ~]$
```

## 12. Log out and log in by another user

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 23 21:49, islam@localhost:~). The terminal shows the user 'smabrouk' running 'whoami' (output: smabrouk), 'sudo ls /home' (output: baduser islam smabrouk), and 'su - islam' (prompt: Password:). After logging in as 'islam', 'whoami' returns 'islam'.

```
[smabrouk@localhost ~]$ whoami
smabrouk
[smabrouk@localhost ~]$ sudo ls /home
baduser  islam  smabrouk
[smabrouk@localhost ~]$ Use "exit" to leave the shell.
[smabrouk@localhost ~]$ su - islam
Password:
[islam@localhost ~]$ whoami
islam
[islam@localhost ~]$
```

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

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 24 14:12, islam@localhost:~). The terminal shows the user 'smabrouk' running 'su - islam' (prompt: Password:), then 'clear', 'pwd' (output: /home/islam), and 'cd /home/smabrouk/myteam' (output: -bash: cd: /home/smabrouk/myteam: Permission denied).

```
[smabrouk@localhost ~]$ su - islam
Password:
[islam@localhost ~]$ clear
[islam@localhost ~]$ pwd
/home/islam
[islam@localhost ~]$ cd /home/smabrouk/myteam
-bash: cd: /home/smabrouk/myteam: Permission denied
[islam@localhost ~]$
```

14. 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).

```
Nov 24 14:27
smabrouk@localhost~
File Edit View Search Terminal Help

[smabrouk@localhost ~]$ cp -R /etc/passwd /home/smabrouk/oldpasswd
[smabrouk@localhost ~]$ ls
Desktop Documents Downloads Music myteam oldpasswd Pictures Public Templates Videos
[smabrouk@localhost ~]$ ll
total 4
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Desktop
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Documents
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Downloads
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Music
dr----- 2 smabrouk smabrouk  6 Nov 23 15:12 myteam
-rw-r--r-- 1 smabrouk smabrouk 2617 Nov 24 14:22 oldpasswd
drwxr-xr-x. 2 smabrouk smabrouk 212 Nov 24 14:12 Pictures
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Public
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Templates
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Videos
[smabrouk@localhost ~]$ chmod u=rw, g=wx, o=x oldpasswd
chmod: invalid mode: 'u=rw,'
Try 'chmod --help' for more information.
[smabrouk@localhost ~]$ chmod u=rw,g=wx,o=x oldpasswd
[smabrouk@localhost ~]$ ll
total 4
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Desktop
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Documents
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Downloads
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Music
dr----- 2 smabrouk smabrouk  6 Nov 23 15:12 myteam
-rw--wx--x. 1 smabrouk smabrouk 2617 Nov 24 14:22 oldpasswd
drwxr-xr-x. 2 smabrouk smabrouk 212 Nov 24 14:12 Pictures
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Public
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Templates
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Videos
[smabrouk@localhost ~]$
```

15. Change your default permissions to be as above.

```
Nov 24 14:38
smabrouk@localhost~
File Edit View Search Terminal Help

[smabrouk@localhost ~]$ umask 146
[smabrouk@localhost ~]$ umask
0146
[smabrouk@localhost ~]$
```

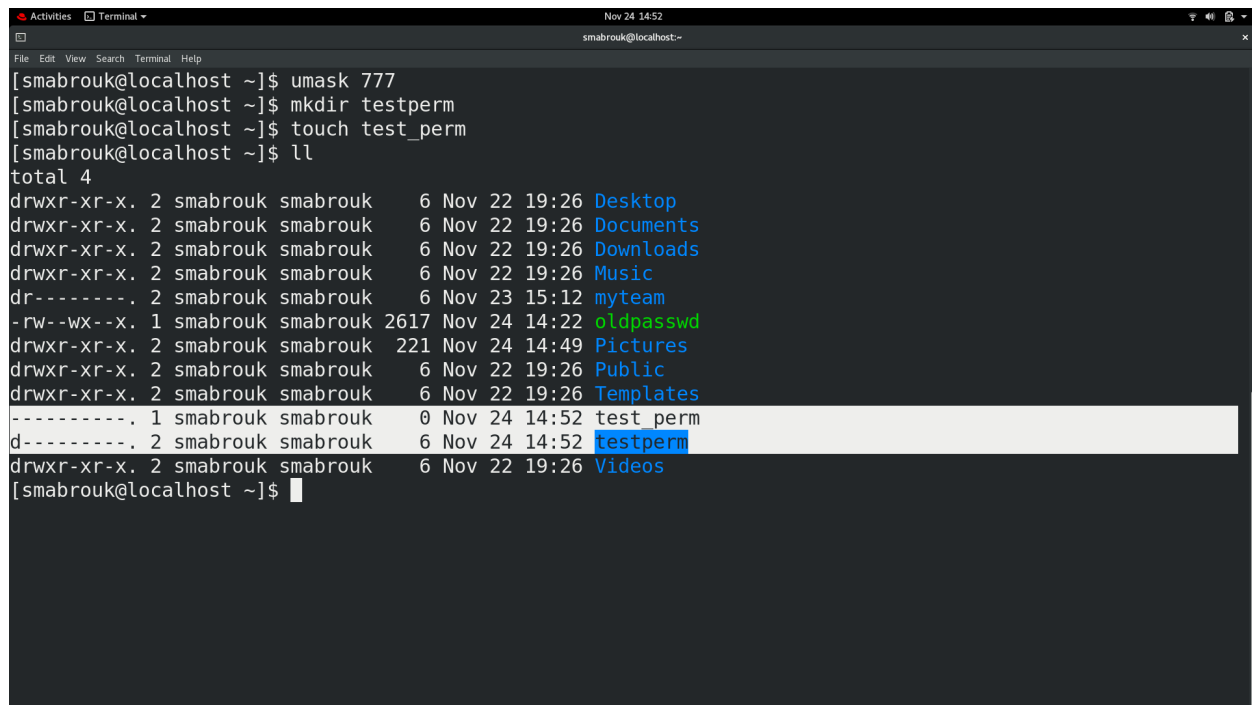


16. What is the maximum permission a file can have, by default when it is just created? And what is that for directory.

*Max. permissions for a file are: read & write.*

*Max. permissions for a directory are: read, write & execute.*

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



```
Nov 24 14:52
smabrouk@localhost:~
File Edit View Search Terminal Help
[smabrouk@localhost ~]$ umask 777
[smabrouk@localhost ~]$ mkdir testperm
[smabrouk@localhost ~]$ touch test_perm
[smabrouk@localhost ~]$ ll
total 4
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Desktop
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Documents
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Downloads
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Music
dr----- 2 smabrouk smabrouk  6 Nov 23 15:12 myteam
-rw--wx--x. 1 smabrouk smabrouk 2617 Nov 24 14:22 oldpasswd
drwxr-xr-x. 2 smabrouk smabrouk 221 Nov 24 14:49 Pictures
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Public
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Templates
----- 1 smabrouk smabrouk  0 Nov 24 14:52 test_perm
d----- 2 smabrouk smabrouk  6 Nov 24 14:52 testperm
drwxr-xr-x. 2 smabrouk smabrouk  6 Nov 22 19:26 Videos
[smabrouk@localhost ~]$
```

18. What are the minimum permission needed for:

- Copy a directory (permission for source directory and permissions for target parent directory)

*Source: r,x      Destination: w,x*

- Copy a file (permission for source file and permission for target parent directory)

*Source: r,x      Destination: w,x*

- Delete a file

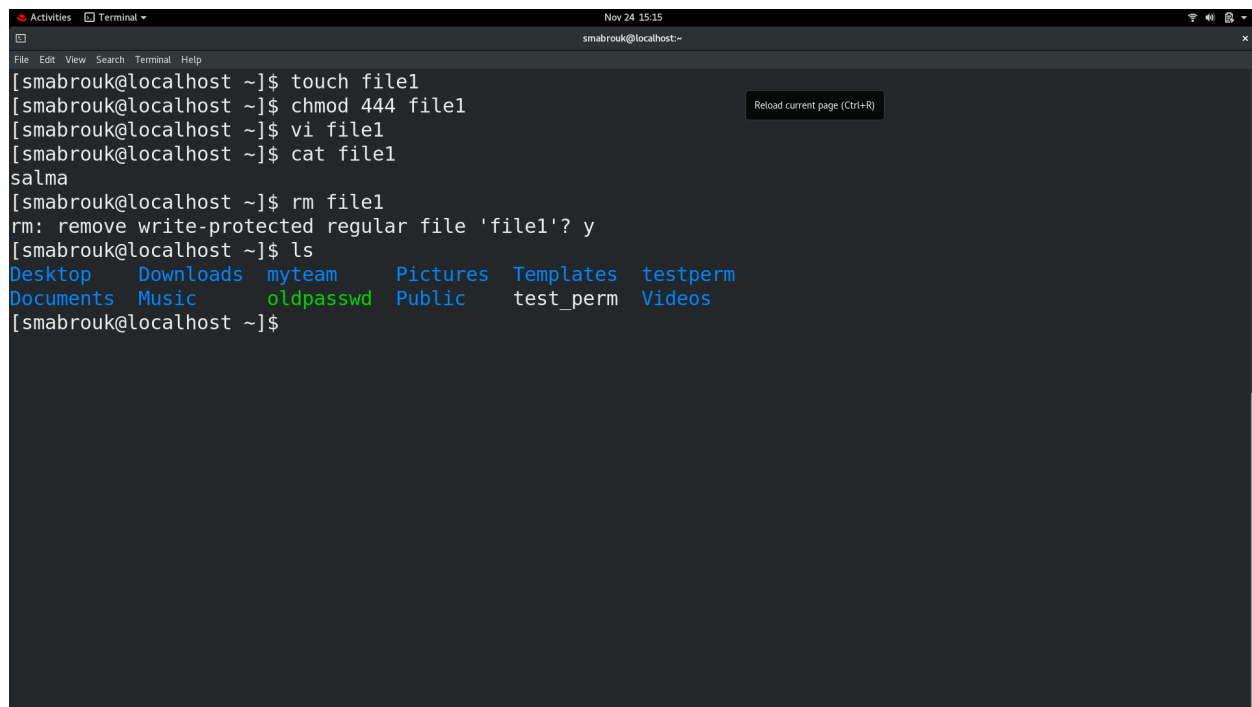
*Source (parent): w,x*

- Change to a directory

*w,x*

- List a directory content (ls command)  
*r*
- View a file content (more/cat command)  
*r*
- Modify a file content  
*w*

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



```

[smabrouk@localhost ~]$ touch file1
[smabrouk@localhost ~]$ chmod 444 file1
[smabrouk@localhost ~]$ vi file1
[smabrouk@localhost ~]$ cat file1
salma
[smabrouk@localhost ~]$ rm file1
rm: remove write-protected regular file 'file1'? y
[smabrouk@localhost ~]$ ls
Desktop  Downloads  myteam    Pictures  Templates testperm
Documents Music      oldpasswd Public    test_perm Videos
[smabrouk@localhost ~]$

```

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

*X permission is granted for directories by default and not granted to files by default.*