

-Delete bad user account

```
mohamed@mohamed-GF62-8RE:~$ sudo userdel -r baduser
[sudo] password for mohamed:
Sorry, try again.
[sudo] password for mohamed:
userdel: baduser mail spool (/var/mail/baduser) not found
userdel: baduser home directory (/home/baduser) not found
mohamed@mohamed-GF62-8RE:~$ id baduser
id: 'baduser': no such user
```

-Delete the supplementary group called badgroup.

```
mohamed@mohamed-GF62-8RE:~$ sudo groupdel -f badgroup
mohamed@mohamed-GF62-8RE:~$
```

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

```
mohamed@mohamed-GF62-8RE:~$ sudo mkdir myteam
mohamed@mohamed-GF62-8RE:~$ ls
Desktop  Documents  Music  Pictures  snap      Videos
docs     Downloads  myteam  Public    Templates
```

```
mohamed@mohamed-GF62-8RE:~$ sudo chmod 400 myteam
mohamed@mohamed-GF62-8RE:~$ ls -l
total 44
drwxr-xr-x 2 mohamed mohamed 4096 Mar 15 20:54 Desktop
drwxr-xr-x 2 root    root    4096 Mar 15 16:16 docs
drwxr-xr-x 2 mohamed mohamed 4096 Mar 16 18:12 Documents
drwxr-xr-x 2 mohamed mohamed 4096 Mar 16 18:12 Downloads
drwxr-xr-x 2 mohamed mohamed 4096 Mar 15 00:35 Music
dr----- 2 root    root    4096 Mar 18 12:55 myteam
drwxr-xr-x 2 mohamed mohamed 4096 Mar 18 12:49 Pictures
drwxr-xr-x 2 mohamed mohamed 4096 Mar 15 00:35 Public
drwx----- 4 mohamed mohamed 4096 Mar 16 09:49 snap
drwxr-xr-x 2 mohamed mohamed 4096 Mar 15 00:35 Templates
drwxr-xr-x 2 mohamed mohamed 4096 Mar 15 00:35 Videos
mohamed@mohamed-GF62-8RE:~$
```

Log out and log in by another user

```
mohamed@mohamed-GF62-8RE:~$ su - islam
Password:
```

```
$ whoami
islam
```

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

```
mohamed@mohamed-GF62-8RE:~$ cd myteam
bash: cd: myteam: Permission denied
mohamed@mohamed-GF62-8RE:~$
```

Using the command Line

- 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)

```
mohamed@mohamed-GF62-8RE:/home$ sudo chmod 631 oldpasswd
mohamed@mohamed-GF62-8RE:/home$ ls -l
total 12
drwxr-xr-x  3 root    root    4096 Mar 16 10:41 docs
drwxr-xr-x 22 mohamed mohamed 4096 Mar 18 12:55 mohamed
-rw--wx--x  1 root    root    2900 Mar 15 19:51 oldpasswd
```

```
mohamed@mohamed-GF62-8RE:/home$ sudo chmod u=rw,g=wx,o=x oldpasswd
mohamed@mohamed-GF62-8RE:/home$ ls -l
total 12
drwxr-xr-x  3 root    root    4096 Mar 16 10:41 docs
drwxr-xr-x 22 mohamed mohamed 4096 Mar 18 12:55 mohamed
-rw--wx--x  1 root    root    2900 Mar 15 19:51 oldpasswd
mohamed@mohamed-GF62-8RE:/home$
```

- Change your default permissions to be as above.

```
mohamed@mohamed-GF62-8RE:~$ umask 146
mohamed@mohamed-GF62-8RE:~$ umask
0146
```

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

```
mohamed@mohamed-GF62-8RE:~$ mkdir d99
mohamed@mohamed-GF62-8RE:~$ ls -l d99
total 0
mohamed@mohamed-GF62-8RE:~$ ls -ld d99
drw--wx--x 2 mohamed mohamed 4096 Mar 18 14:37 d99
```

```
mohamed@mohamed-GF62-8RE:~$ touch file55
mohamed@mohamed-GF62-8RE:~$ ls -l file55
-rw--w---- 1 mohamed mohamed 0 Mar 18 14:40 file55
```

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

```
mohamed@mohamed-GF62-8RE:~$ umask 777
mohamed@mohamed-GF62-8RE:~$ mkdir dir66
mohamed@mohamed-GF62-8RE:~$ ls -ld dir66
d----- 2 mohamed mohamed 4096 Mar 18 14:43 dir66
mohamed@mohamed-GF62-8RE:~$ touch file66
mohamed@mohamed-GF62-8RE:~$ ls -l file66
----- 1 mohamed mohamed 0 Mar 18 14:43 file66
mohamed@mohamed-GF62-8RE:~$
```

What are the minimum permission needed for:

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

source directory= read and execute

target directory= write and execute

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

source file = read permission

target directory= write and execute

- Delete a file

Write permission

- Change to a directory

execute

- List a directory content (ls command)

Read permission

- View a file content (more/cat command)

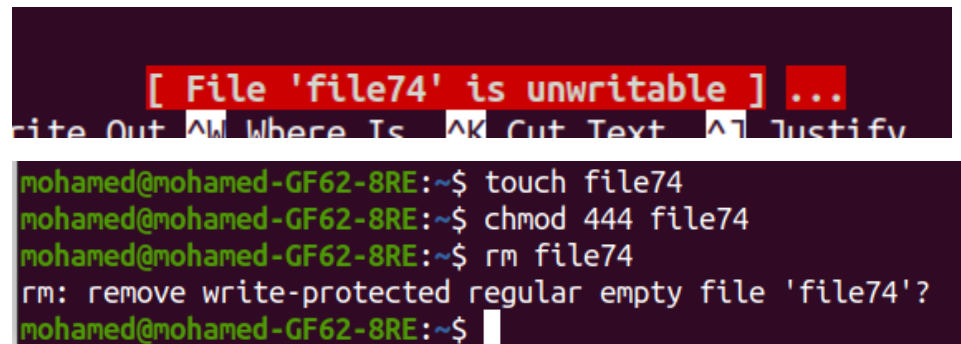
Read permission

- Modify a file content

Write permission

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

Can't edit or remove

A terminal window with a dark purple background. At the top, a red error message is displayed: "[File 'file74' is unwritable] ...". Below this, a menu bar is partially visible with options like "File", "Edit", "Format", "Tools", "Window", and "Help". The terminal shows the following commands and output:

```
mohamed@mohamed-GF62-8RE:~$ touch file74
mohamed@mohamed-GF62-8RE:~$ chmod 444 file74
mohamed@mohamed-GF62-8RE:~$ rm file74
rm: remove write-protected regular empty file 'file74'?
mohamed@mohamed-GF62-8RE:~$
```

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

For file:

You can execute the file if it is an executable. You can execute a shell script if you also have read and execute permissions.

For directory:

You can use the cd command to access the directory. If you also have read access, you can run the ls -l command on the directory to list contents.