

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

```
[Eng.mahmoud@localhost ~]$ pwd
/home/Eng.mahmoud
[Eng.mahmoud@localhost ~]$ mkdir myteam
[Eng.mahmoud@localhost ~]$ ls
Desktop  docs  Documents  Downloads  Music  myteam  Pictures  Public  Templates  Videos
[Eng.mahmoud@localhost ~]$ chmod 400 myteam
[Eng.mahmoud@localhost ~]$ ll
total 4
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud   6 Nov 22 20:21 Desktop
drwxrwxr-x. 2 Eng.mahmoud Eng.mahmoud  18 Nov 22 21:25 docs
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud   6 Nov 21 12:40 Documents
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud  38 Nov 23 00:36 Downloads
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud   6 Nov 21 12:40 Music
dr----- 2 Eng.mahmoud Eng.mahmoud   6 Nov 23 12:54 myteam
drwxr-xr-x. 5 Eng.mahmoud Eng.mahmoud 4096 Nov 22 23:31 Pictures
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud   6 Nov 21 12:40 Public
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud   6 Nov 21 12:40 Templates
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud   6 Nov 21 12:40 Videos
[Eng.mahmoud@localhost ~]$
```

- Log out and log in by another user

```
[Eng.mahmoud@localhost ~]$ su -
Password:
[root@localhost ~]# logout
[Eng.mahmoud@localhost ~]$ su - islam
Password:
[islam@localhost ~]$
```

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

```
[islam@localhost ~]$ cd ../Eng.mahmoud/myteam
-bash: cd: ../Eng.mahmoud/myteam: Permission denied
```

- 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)

```
[islam@localhost ~]$ sudo chmod 631 /home/Eng.mahmoud/oldpasswd
[islam@localhost ~]$ sudo ls -l /home/Eng.mahmoud/oldpasswd
-rw--wx--x. 1 Eng.mahmoud Eng.mahmoud 2618 Nov 23 13:18 /home/Eng.mahmoud/oldpasswd
```

```
[islam@localhost ~]$ sudo chmod u=rw,g=wx,o=x /home/Eng.mahmoud/oldpasswd
[islam@localhost ~]$ sudo ls -l /home/Eng.mahmoud/oldpasswd
-rw--wx--x. 1 Eng.mahmoud Eng.mahmoud 2618 Nov 23 13:18 /home/Eng.mahmoud/oldpasswd
```

- Change your default permissions to be as above.

```
[Eng.mahmoud@localhost ~]$ umask 146
[Eng.mahmoud@localhost ~]$ ls
Desktop docs Documents Downloads Music myteam oldpasswd Pictures Public Templates Videos
[Eng.mahmoud@localhost ~]$ mkdir dir1
[Eng.mahmoud@localhost ~]$ touch dir1/file1
touch: cannot touch 'dir1/file1': Permission denied
[Eng.mahmoud@localhost ~]$ touch file1
[Eng.mahmoud@localhost ~]$ ls -l
total 8
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 6 Nov 22 20:21 Desktop
drw--wx--x. 2 Eng.mahmoud Eng.mahmoud 6 Nov 24 13:49 dir1
drwxrwxr-x. 2 Eng.mahmoud Eng.mahmoud 18 Nov 22 21:25 docs
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 6 Nov 21 12:40 Documents
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 38 Nov 23 00:36 Downloads
-rw--w----. 1 Eng.mahmoud Eng.mahmoud 0 Nov 24 13:49 file1
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 6 Nov 21 12:40 Music
dr----- 2 Eng.mahmoud Eng.mahmoud 6 Nov 23 12:54 myteam
-rw--wx--x. 1 Eng.mahmoud Eng.mahmoud 2618 Nov 23 13:18 oldpasswd
drwxr-xr-x. 6 Eng.mahmoud Eng.mahmoud 4096 Nov 23 12:58 Pictures
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 6 Nov 21 12:40 Public
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 6 Nov 21 12:40 Templates
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 6 Nov 21 12:40 Videos
```

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

for

- file : can give by default read & write permission
- directory : can give by default read & write & execute

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

```
[Eng.mahmoud@localhost ~]$ umask 777
[Eng.mahmoud@localhost ~]$ mkdir dir2
[Eng.mahmoud@localhost ~]$ ll
total 8
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud  6 Nov 22 20:21 Desktop
drw--wx--x. 2 Eng.mahmoud Eng.mahmoud  6 Nov 24 13:49 dir1
d----- . 2 Eng.mahmoud Eng.mahmoud  6 Nov 24 14:13 dir2
```

-What are the minimum permission needed for:

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

```
[Eng.mahmoud@localhost ~]$ mkdir dir2 dir3
[Eng.mahmoud@localhost ~]$ touch dir2/file1
[Eng.mahmoud@localhost ~]$ ll
total 8
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud  6 Nov 22 20:21 Desktop
drw--wx--x. 2 Eng.mahmoud Eng.mahmoud  6 Nov 24 13:49 dir1
dr-xr-xr-x. 2 Eng.mahmoud Eng.mahmoud 19 Nov 26 12:26 dir2
d-wx-wx-wx. 2 Eng.mahmoud Eng.mahmoud  6 Nov 26 12:26 dir3
[Eng.mahmoud@localhost ~]$ cp -r dir2 dir3
[Eng.mahmoud@localhost ~]$ ll
```

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

```
d-wx-wx-wx. 3 Eng.mahmoud Eng.mahmoud 18 Nov 26 12:30 dir3
drwxrwxr-x. 2 Eng.mahmoud Eng.mahmoud 18 Nov 22 21:25 docs
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud  6 Nov 21 12:40 Docume
drwxr-xr-x. 2 Eng.mahmoud Eng.mahmoud 82 Nov 24 15:08 Downlo
-r--r--r--. 1 Eng.mahmoud Eng.mahmoud 15 Nov 26 12:38 file1
[Eng.mahmoud@localhost ~]$ cp file1 dir3
[Eng.mahmoud@localhost ~]$ ll
```

- Delete a file

```
d-wx-wx-wx. 3 Eng.mahmoud Eng.mahmoud 18 Nov 26 12:46 dir3
-----. 1 Eng.mahmoud Eng.mahmoud 0 Nov 26 12:46 file1
[Eng.mahmoud@localhost ~]$ rm dir3/file1
rm: remove write-protected regular file 'dir3/file1'? y
[Eng.mahmoud@localhost ~]$ ls dir3
```

- Change to a directory

```
[Eng.mahmoud@192 ~]$ chmod a=x dir3
[Eng.mahmoud@192 ~]$ ll

[Eng.mahmoud@192 ~]$ cd dir3
[Eng.mahmoud@192 dir3]$
```

- List a directory content (ls command)

```
[Eng.mahmoud@192 ~]$ chmod a=r dir3
[Eng.mahmoud@192 ~]$ ls dir3
ls: cannot access 'dir3/dir2': Permission denied
dir2
```

- View a file content (more/cat command)

```
[Eng.mahmoud@192 ~]$ chmod a=r file1
[Eng.mahmoud@192 ~]$ cat file1
mahmoud hassan
```

- Modify a file content

```
[Eng.mahmoud@192 ~]$ chmod a=rw file1
```

Q : 18 & 19

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

```
~  
-- INSERT -- W10: Warning: Changing a readonly file  
[Eng.mahmoud@192 ~]$ rm file1  
rm: remove write-protected regular empty file 'file1'? y
```

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

for

-file :

x permission on file prevent read or write on the file but we can execute it only.

-directory:

x permission allow cd command but prevent cp or mv or ls commands.