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13. Create a folder called myteam in your home directory

```
hoda@hoda-virtual-machine:~$ mkdir myteam
hoda@hoda-virtual-machine:~$ ls
Desktop  dir1  Documents  Downloads  Music  myteam  Pictures  Public  snap  Templates  Videos
hoda@hoda-virtual-machine:~$ ls -ld myteam
drwxrwxr-x 2 hoda hoda 4096 04:38 17 نس myteam
hoda@hoda-virtual-machine:~$ chmod u=r myteam
hoda@hoda-virtual-machine:~$ ls -ld myteam
dr--rwxr-x 2 hoda hoda 4096 04:38 17 نس myteam
hoda@hoda-virtual-machine:~$ chmod 400 myteam
hoda@hoda-virtual-machine:~$ ls -ld myteam
dr-------- 2 hoda hoda 4096 04:38 17 نس myteam
hoda@hoda-virtual-machine:~$
```

and change its permissions to read only for the owner.

```
hoda@hoda-virtual-machine:~$ su - islam
Password:
islam@hoda-virtual-machine:~$ logout
hoda@hoda-virtual-machine:~$
```

14. Log out and log in by another user

```
hoda@hoda-virtual-machine:~$ cd ~/myteam
bash: cd: /home/hoda/myteam: Permission denied
hoda@hoda-virtual-machine:~$ 
```

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

16. 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)

```
hoda@hoda-virtual-machine:~$ touch oldpasswd
hoda@hoda-virtual-machine:~$ ls -l oldpasswd
-rw-rw-r-- 1 hoda hoda 0 06:47 17 سى oldpasswd
hoda@hoda-virtual-machine:~$ chmod u=rw,g=wx,o=x oldpasswd
hoda@hoda-virtual-machine:~$ ls -l
total 44
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Desktop
drwxrwxr-x 2 hoda hoda 4096 10:15 11 سى dir1
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Documents
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Downloads
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Music
dr-x------ 2 hoda hoda 4096 06:09 17 سى myteam
-rw--wx--x 1 hoda hoda    0 06:47 17 سى oldpasswd
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Pictures
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Public
drwx------ 3 hoda hoda 4096 06:58 11 سى snap
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Templates
drwxr-xr-x 2 hoda hoda 4096 06:57 11 سى Videos
hoda@hoda-virtual-machine:~$
```

```
hoda@hoda-virtual-machine:~$ chmod 631 oldpasswd
hoda@hoda-virtual-machine:~$ ls -l oldpasswd
-rw--wx--x 1 hoda hoda 0 06:47 17 سى oldpasswd
hoda@hoda-virtual-machine:~$
```

● **Change your default permissions to be as above**

```
hoda@hoda-virtual-machine:~$ umask 146
hoda@hoda-virtual-machine:~$ touch filetest ; mkdir dirtest
hoda@hoda-virtual-machine:~$ ls -ld filetest dirtest/
drw--wx--x 2 hoda hoda 4096 07:09 17 سى dirtest/
-rw--w---- 1 hoda hoda    0 07:09 17 سى filetest
hoda@hoda-virtual-machine:~$
```

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

1. For files:666(rw-.rw-.rw-)
2. For directory : 777 (rwx.rwx.rwx)

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

```
hoda@hoda-virtual-machine:~$ umask 777
hoda@hoda-virtual-machine:~$ touch filev ; mkdir dirv
hoda@hoda-virtual-machine:~$ ls -ld filev dirv/
d--------- 2 hoda hoda 4096 07:21 17 سب dirv/
--------- 1 hoda hoda    0 07:21 17 سب filev
hoda@hoda-virtual-machine:~$
```

17. What are the minimum permission needed for:

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

Source directory : {r} read permission is required

target parent directory : {w} write permission is needed

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

Source directory : {r} read permission is required

target parent directory : {w} write permission is needed

● Delete a file

File:{w} write permission is needed for file itself

directory containing the file : {w} write permission is needed for the parent directory

● Change to a directory

Directory: {x} execute permission is required for the directory

● List a directory content (ls command)

Directory: {r} read permission is required for the directory

● View a file content (more/cat command)

Directory: {r} read permission is required for the file

● Modify a file content

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

```
hoda@hoda-virtual-machine:~$ touch myfile
hoda@hoda-virtual-machine:~$ chmod 444 myfile
hoda@hoda-virtual-machine:~$ ls -ld myfile
-r--r--r-- 1 hoda hoda 0 12:17 17 سب myfile
```

read permission only, but no write or execute permission

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 executed as a program or script. If a user has execute permission on a file, they can run the file as a command in the terminal.

For a directory: the "x" (execute) permission on a directory is necessary to access the contents of the directory. Without execute permission, even if a user has read permission for a directory, they won't be able to list its contents or access files within it.