Section 1:

1) Creating myTeam Folder in home directory & changing its permission to read only by user

2) Logging out and logging in by another user
3) Trying to access the created myTeam folder using cd command

as_new@as-pc: /home/abdallah

```
abdallah@as-pc:~$ man adduser
abdallah@as-pc:~$ sudo adduser as_new
[sudo] password for abdallah:
Adding user `as_new' ...
Adding new group `as_new' (1002) ...
Adding new user `as_new' (1001) with group `as_new' ...
Creating home directory `/home/as_new' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
Sorry, passwords do not match.
New password:
BAD PASSWORD: The password fails the dictionary check - it is too simplistic/systematic
Retype new password:
passwd: password updated successfully
Changing the user information for as_new
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] Y
abdallah@as-pc:~$ su as_new
Password:
as_new@as-pc:/home/abdallah$ pwd
/home/abdallah
as_new@as-pc:/home/abdallah$ ls
ls: cannot open directory '.': Permission denied
as_new@as-pc:/home/abdallah$ cd myTeam
bash: cd: myTeam: Permission denied
as_new@as-pc:/home/abdallah$
```

4) a. changing oldpasswd file permissions.

abdallah@as-pc: ~

```
abdallah@as-pc:~$ chmod u=rw,g=wx,o=x oldpasswd
abdallah@as-pc:~$ ls -lh oldpasswd
-rw--wx--x 1 abdallah abdallah 0 Jan  3 02:43 oldpasswd
abdallah@as-pc:~$ chmod 631 oldpasswd
abdallah@as-pc:~$ ls -lh oldpasswd
-rw--wx--x 1 abdallah abdallah 0 Jan  3 02:43 oldpasswd
abdallah@as-pc:~$
```

b. changing the default permission to be as above

```
abdallah@as-pc:~$ uma
umask    umax_pp
abdallah@as-pc:~$ umask 146
abdallah@as-pc:~$ touch def_file
abdallah@as-pc:~$ ls lh def_file
ls: cannot access 'lh': No such file or directory
def_file
abdallah@as-pc:~$ ls -lh def_file
-rw--w---- 1 abdallah abdallah 0 Jan  3 03:24 def_file
abdallah@as-pc:~$
```
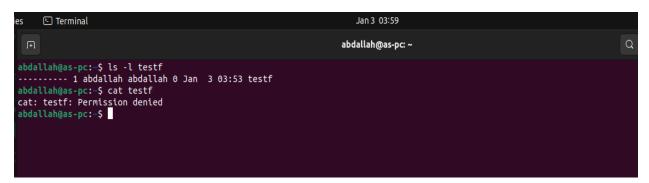
c. **Maximum permissions by default**:

- Files: 666 (read and write for all)
- Directories: 777 (read, write, execute for all)

d. Changing my permission to have no permission & creating a file

```
abdallah@as-pc:~$ umask 777
abdallah@as-pc:~$ mkdir testd
abdallah@as-pc:~$ touch testf
abdallah@as-pc:~$ ls -ld testdir testfile
ls: cannot access 'testdir': No such file or directory
ls: cannot access 'testfile': No such file or directory
abdallah@as-pc:~$ ls -lh testfile
ls: cannot access 'testfile': No such file or directory
abdallah@as-pc:~$ ls
as          Desktop    Downloads       google-chrome-stable_current_amd64.deb  myTeam      Pictures  snap       testd    testf
def_file  Documents  EmbeddedLinux  Music                                      oldpasswd  Public    Templates  testDir  Videos
abdallah@as-pc:~$ ls -ld testd testf
d--------- 2 abdallah abdallah 4096 Jan  3 03:53 testd
---------- 1 abdallah abdallah    0 Jan  3 03:53 testf
abdallah@as-pc:~$
```

e. Stating who can access this file: it can't be accessed or removed without changing the permission

```
abdallah@as-pc:~$ ls -l testf
---------- 1 abdallah abdallah 0 Jan  3 03:53 testf
abdallah@as-pc:~$ cat testf
cat: testf: Permission denied
abdallah@as-pc:~$
```

5) Changing a file permission to 444 & trying to edit or remove it : it can't be accessed or removed without changing the permission

```
abdallah@as-pc:~$ ls -l testf
---------- 1 abdallah abdallah 0 Jan  3 03:53 testf
abdallah@as-pc:~$ cat testf
cat: testf: Permission denied
abdallah@as-pc:~$ chmod 444 testf
abdallah@as-pc:~$ echo "Test" >> testf
bash: testf: Permission denied
abdallah@as-pc:~$ rm testf
rm: remove write-protected regular empty file 'testf'?
abdallah@as-pc:~$
```

6) Difference between "x" permission for a file & directory
- File: Allows execution (if it's a script or program).
- Directory: Allows traversal (you can enter the directory).