

LAB 3

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

```
[esraatark@localhost admin1]$ mkdir myteam  
[esraatark@localhost admin1]$ chmod 400 myteam
```

2. Log out and log in by another user?

```
[islam@localhost ~]$ logout  
[esraatark@localhost ~]$ su - islam  
Password:  
su: Authentication failure  
[esraatark@localhost ~]$ sudo su - islam  
[islam@localhost ~]$ su - esraatark
```

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

```
[esraatark@localhost admin1]$ ls  
dir1 docs myteam  
[esraatark@localhost admin1]$ cd m+  
[esraatark@localhost myteam]$ ls  
[esraatark@localhost myteam]$ pwd  
/home/esraatark/admin1/myteam
```

4. 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)

```
[esraatark@localhost ~]$ chmod u=rw,g=wx,o=x passwd  
[esraatark@localhost ~]$ chmod 653 passwd
```

5. Change your default permissions to be as above.

```

[esraatark@localhost ~]$ umask
0022
[esraatark@localhost ~]$ umask 0024
[esraatark@localhost ~]$ umask
0024
[esraatark@localhost ~]$ ls -l
total 4
drwxr-xr-x. 5 esraatark esraatark 44 Dec 29 13:35 admin1
drwxr-xr-x. 2 esraatark esraatark 6 Dec 23 18:34 Desktop
drwxr-xr-x. 2 esraatark esraatark 18 Dec 24 09:11 Documents
drwxr-xr-x. 2 esraatark esraatark 6 Dec 23 18:34 Downloads
drwxr-xr-x. 2 esraatark esraatark 6 Dec 23 18:34 Music
-rw-r-x-wx. 1 esraatark esraatark 1973 Dec 24 11:24 passwd
drwxr-xr-x. 2 esraatark esraatark 6 Dec 23 18:34 Pictures
drwxr-xr-x. 2 esraatark esraatark 6 Dec 23 18:34 Public
drwxr-xr-x. 2 esraatark esraatark 6 Dec 23 18:34 Templates
drwxr-xr-x. 2 esraatark esraatark 6 Dec 23 18:34 Videos

```

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

For files: The maximum default permission is 666 (read and write for everyone).

- By default, files do not get the execute (x) bit.

For directories: The maximum default permission is 777 (read, write, and execute for everyone).

- The execute (x) bit allows navigation into the directory.

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

```

[esraatark@localhost admin1]$ umask 777
[esraatark@localhost admin1]$ mkdir dir
[esraatark@localhost admin1]$ ls -l
total 0
d-----, 2 esraatark esraatark  6 Dec 29 13:50 dir
drwxr-xr-x, 2 esraatark esraatark  6 Dec 24 10:18 dir1
drwxr-xr-x, 3 esraatark esraatark 31 Dec 24 10:27 docs
dr-----, 2 esraatark esraatark  6 Dec 29 13:35 myteam
[esraatark@localhost admin1]$ umask 022
[esraatark@localhost admin1]$ ls -l
total 0
d-----, 2 esraatark esraatark  6 Dec 29 13:50 dir
drwxr-xr-x, 2 esraatark esraatark  6 Dec 24 10:18 dir1
drwxr-xr-x, 3 esraatark esraatark 31 Dec 24 10:27 docs
dr-----, 2 esraatark esraatark  6 Dec 29 13:35 myteam
[esraatark@localhost admin1]$ mkdir dir1
mkdir: cannot create directory 'dir1': File exists
[esraatark@localhost admin1]$ mkdir dir2
[esraatark@localhost admin1]$ ls -l
total 0
d-----, 2 esraatark esraatark  6 Dec 29 13:50 dir
drwxr-xr-x, 2 esraatark esraatark  6 Dec 24 10:18 dir1
drwxr-xr-x, 2 esraatark esraatark  6 Dec 29 13:51 dir2
drwxr-xr-x, 3 esraatark esraatark 31 Dec 24 10:27 docs
dr-----, 2 esraatark esraatark  6 Dec 29 13:35 myteam
[esraatark@localhost admin1]$

```

8. What are the minimum permission needed for:

1. Copy a Directory

- Source Directory:
 - Read (r): To list the contents of the directory.
 - Execute (x): To traverse into the directory and its subdirectories.

Permissions required: r-x.

- Target Parent Directory:
 - Write (w): To create new files or directories.
 - Execute (x): To traverse into the directory.

Permissions required: wx.

2. Copy a File

- Source File:
 - Read (r): To read the file's content for copying.

Permissions required: r--.

- **Target Parent Directory:**
 - **Write (w):** To create a new file.
 - **Execute (x):** To traverse into the directory.

Permissions required: wx.

3. Delete a File

- **Parent Directory:**
 - **Write (w):** To modify the directory (remove the file entry).
 - **Execute (x):** To traverse into the directory.

Permissions required: wx.

4. Change to a Directory

- **Directory:**
 - **Execute (x):** To access the directory.

Permissions required: --x.

5. List a Directory's Content (ls Command)

- **Directory:**
 - **Read (r):** To list the contents.
 - **Execute (x):** To traverse into the directory.

Permissions required: r-x.

6. View a File's Content (more/cat Command)

- **File:**
 - **Read (r):** To read the content of the file.

Permissions required: r--.

7. Modify a File's Content

- **File:**
 - **Write (w):** To modify the content.
 - **Read (r) (optional):** If the modification requires reading the current content.

Permissions required: rw- or w-- (depending on whether reading is necessary).

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

```
[esraatark@localhost admin1]$ touch testfile
[esraatark@localhost admin1]$ chmod 444 testfile
[esraatark@localhost admin1]$ nano testfile
```

```
GNU nano 5.6.1      testfile      Modified
dffdf
dfddf

```

[Error writing testfile: Permission denied]

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^_ Go To Line

permission denied

```
[esraatark@localhost admin1]$ touch testfile
[esraatark@localhost admin1]$ chmod 444 testfile
[esraatark@localhost admin1]$ ls -l testfile
-r--r--r--. 1 esraatark esraatark 0 Dec 29 14:03 testfile
[esraatark@localhost admin1]$ rm testfile
rm: remove write-protected regular empty file 'testfile'? y
[esraatark@localhost admin1]$
```

Remove regularly

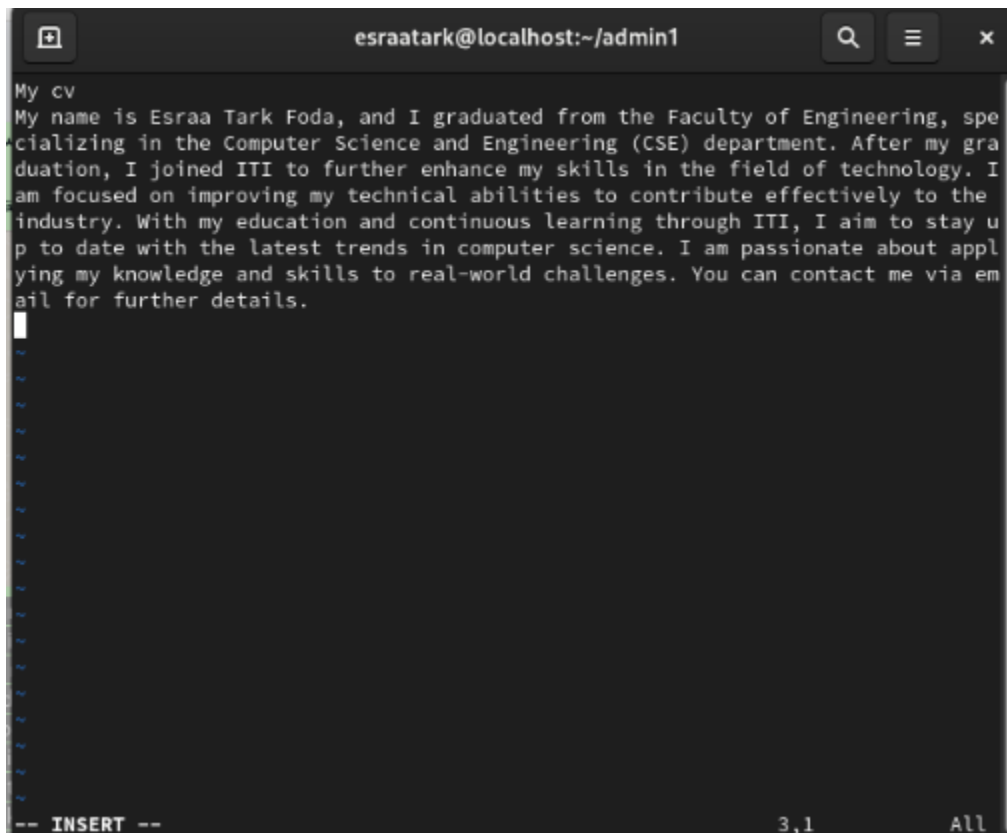
10. What is the difference between the “x” permission for a file and for a directory?

The x permission has different meanings for files and directories:

- For Files: It allows the file to be executed as a program or script. Without it, the file cannot be executed.

- For Directories: It allows traversal into the directory (e.g., using cd) and access to its contents if their names are known. Without it, the directory cannot be accessed or navigated.

11. Using vi write your CV in the file mycv. Your CV should include your name, age, school,college, experience,...



The screenshot shows a terminal window titled 'esraatark@localhost:~/admin1'. Inside, a file named 'mycv' is being edited with the vi editor. The text of the CV is as follows:

```
My cv
My name is Esraa Tark Foda, and I graduated from the Faculty of Engineering, spe
cializing in the Computer Science and Engineering (CSE) department. After my gra
duation, I joined ITI to further enhance my skills in the field of technology. I
am focused on improving my technical abilities to contribute effectively to the
industry. With my education and continuous learning through ITI, I aim to stay u
p to date with the latest trends in computer science. I am passionate about appl
ying my knowledge and skills to real-world challenges. You can contact me via em
ail for further details.
```

The cursor is at the end of the first line. The status bar at the bottom indicates '-- INSERT --', '3,1', and 'All'.

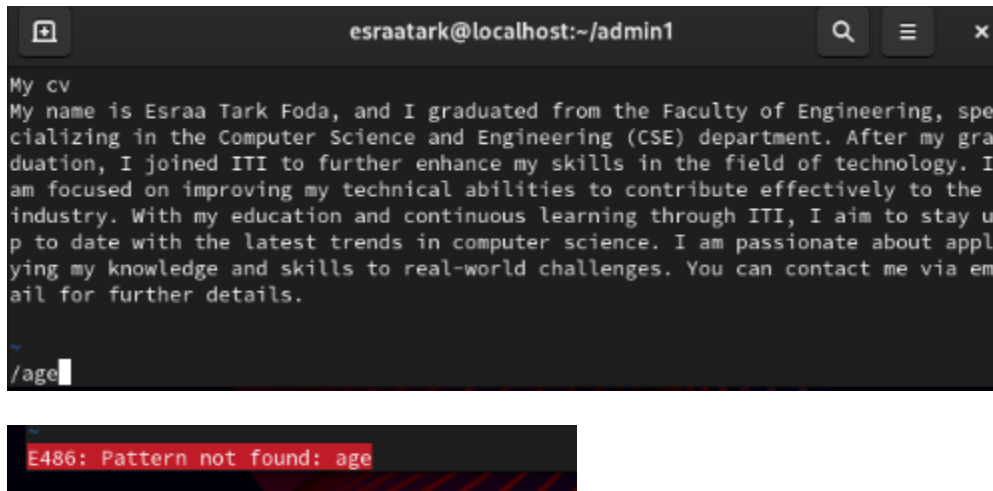
```
:wq
```

```
[esraatark@localhost admin1]$ vi mycv
[esraatark@localhost admin1]$
```

12. Open mycv file using vi command then: Without using arrows state how to:

- a. Move the cursor down one line at time. Press j
- b. Move the cursor up one line at time. Press k

c. Search for word age /age



The screenshot shows a terminal window with the prompt `esraatark@localhost:~/admin1`. The user has entered `My cv` and the terminal displays the contents of the file `cv`. The text in the file is: "My name is Esraa Tark Foda, and I graduated from the Faculty of Engineering, specializing in the Computer Science and Engineering (CSE) department. After my graduation, I joined ITI to further enhance my skills in the field of technology. I am focused on improving my technical abilities to contribute effectively to the industry. With my education and continuous learning through ITI, I aim to stay up to date with the latest trends in computer science. I am passionate about applying my knowledge and skills to real-world challenges. You can contact me via email for further details." The user has then entered `/age` to search for the word "age". Below the terminal window, a red error message is displayed: `E486: Pattern not found: age`.

d. Step to line 5 (assuming that you are in line 1 and file is more than 5 lines). Press 5G

e. Delete the line you are on and line 5. Type 5dd

f. How to step to the end of line and change to writing mode in one-step. Press A

Esraa tark foda

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