Lab 3

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

```
samaa@ubuntu:~$ mkdir myteam
```

```
samaa@ubuntu:~$ chmod u=r myteam
samaa@ubuntu:~$ ls -l
total 64
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Desktop
drwxrwxr-x 2 samaa samaa 4096 Nov 27 08:40 dir1
drwxrwxr-x 2 samaa samaa 4096 Nov 27 08:29 docs
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Documents
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Downloads
-rw-r--r-- 1 samaa samaa 8980 Nov 27 08:06 examples.desktop
-rw-rw-r-- 1 samaa samaa   12 Nov 28 05:53 gfile.txt
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Music
dr--rwxr-x 2 samaa samaa 4096 Nov 29 04:52 myteam
-rw-r--r-- 1 samaa samaa 2240 Nov 27 08:47 oldpasswd
drwxr-xr-x 2 samaa samaa 4096 Nov 28 05:34 Pictures
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Public
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Templates
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Videos
```

2. Log out and log in by another user.

```
samaa@ubuntu:~$ su islam
Password:
islam@ubuntu:/home/samaa$ exit
exit
samaa@ubuntu:~$ exit
root@ubuntu:/home/samaa#
```

3. Try to access the folder myteam that you have just created.

```
islam@ubuntu:/home/samaa$ cat myteam
cat: myteam: Is a directory
islam@ubuntu:/home/samaa$ ls my team
ls: cannot access 'my': No such file or directory
ls: cannot access 'team': No such file or directory
islam@ubuntu:/home/samaa$ ls myteam
islam@ubuntu:/home/samaa$ more myteam

*** myteam: directory ***

islam@ubuntu:/home/samaa$
```

4. Using the command Line:

• Change the permissions of oldpasswd file that was created in the

last lab, to give owner read and write permissions, and for group

write and execute, and execute only for the others(in 2 different

ways).

```
urwxr-xr-x 2 samaa samaa 4090 Nov 27 08:10 videos
samaa@ubuntu:~$ chmod 631 oldpasswd
samaa@ubuntu:~$ ls -l oldpasswd
-rw--wx--x 1 samaa samaa 2240 Nov 27 08:47 oldpasswd
samaa@ubuntu:~$ chmod u+rw,g+wx,o+x oldpasswd
samaa@ubuntu:~$ ls -l oldpasswd
-rw--wx--x 1 samaa samaa 2240 Nov 27 08:47 oldpasswd
samaa@ubuntu:~$
```

• Change your default permissions to be as above.

> **umask [mode]**

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

> **File rw-rw-rw- 664**

> **Directories rwxrwxrw- 775**

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

```
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Videos
samaa@ubuntu:~$ umask 777
samaa@ubuntu:~$ touch file
samaa@ubuntu:~$ ls -l
total 68
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Desktop
d--xrwxr-x 2 samaa samaa 4096 Nov 29 05:54 dir
drwxrwxr-x 2 samaa samaa 4096 Nov 27 08:40 dir1
drwxrwxr-x 2 samaa samaa 4096 Nov 27 08:29 docs
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Documents
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Downloads
-rw-r--r-- 1 samaa samaa 8980 Nov 27 08:06 examples.desktop
---------- 1 samaa samaa    0 Nov 29 06:01 f
---------- 1 samaa samaa    0 Nov 29 06:03 file
----rw-r-- 1 samaa samaa    0 Nov 29 05:51 file1
----rw-r-- 1 samaa samaa    0 Nov 29 06:00 file2
```

```
samaa@ubuntu:~$ mkdir direct
samaa@ubuntu:~$ ls -l
total 72
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Desktop
d--xrwxr-x 2 samaa samaa 4096 Nov 29 05:54 dir
drwxrwxr-x 2 samaa samaa 4096 Nov 27 08:40 dir1
d--------- 2 samaa samaa 4096 Nov 29 06:04 direct
drwxrwxr-x 2 samaa samaa 4096 Nov 27 08:29 docs
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Documents
```

5. What is the difference between the "x" permission for a file and for a directory?

Execute (x)

Execute permission on files means the right to execute them, if they are programs. (Files that are not programs should not be given the execute permission.) For directories, execute permission allows you to enter the directory (i.e., cd into it), and to access any of its file.

6. What is the difference between the "w" permission for a file and for a directory?

Write (w)

Write permission implies the ability to change the contents of the file (for a file) or create new files in the directory (for a directory).

7. What is the difference between the "r" permission for a file and for a directory?

Read (r)

Having read permission on a file grants the right to read the contents of the file. Read permission on a directory implies the ability to list all the files in the directory.

8. What are the minimum permissions needed for:

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

- **source directory: execute and read permission.**
- **target directory: execute and write permission.**

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

- **source file: read permission.**
- **target file: you don't need any permission since it doesn't exit before you copy it. or write permission if the file exists.**

• Delete a file.

no-permissions.

• Change to a directory (cd command).

r-permissions and e-permissions on the directory

• List a directory content (ls command).

r-permissions on the directory.

• View a file content (more/cat command).

r-permissions on the file.

• Modify a file content.

r-permissions and w-permissions on the file.

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

```
drwxr-xr-x 2 samaa samaa 4096 Nov 27 08:16 Videos
samaa@ubuntu:~$ touch sama
samaa@ubuntu:~$ ls -l sama
-rw-rw-r-- 1 samaa samaa 0 Nov 29 07:35 sama
samaa@ubuntu:~$ chmod 444 sama
samaa@ubuntu:~$ ls -l sama
-r--r--r-- 1 samaa samaa 0 Nov 29 07:35 sama
samaa@ubuntu:~$ vi sama

[3]+  Stopped                 vi sama
samaa@ubuntu:~$ rm sama
rm: remove write-protected regular empty file 'sama'? Y
samaa@ubuntu:~$
```

```
samaa@ubuntu: ~
yywdfdf
dfsf
dfs
sg
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
E45: 'readonly' option is set (add ! to override)
```

10. List the permissions of the / directory recursively.

```
samaa@ubuntu:~$ ls -R
.:
Desktop   direct      Downloads        gfile.txt  mycv       Pictures   Videos
dir       docs        examples.desktop Music      myteam     Public
dir1      Documents   f                myclass    oldpasswd  Templates

./Desktop:
ls: cannot open directory './dir': Permission denied

./dir1:
ls: cannot open directory './direct': Permission denied

./docs:
mycv

./Documents:

./Downloads:

./Music:

./myclass:
```

11. Create a folder called myclass in your home directory. Who is the owner? Who is the group owner?

mkdir myclass

ls -l myclass

samaa , samaa

12. Change the primary group of the user Islam Askar to pgroup.

usermod -g pgroup Islam Askar

13. Change the group ownership of the folder myclass to pgroup. Who is the owner user now? Why?

chown :myclass pgroup

ls -l myclass

samaa   pgroup

Lab 2

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

```
samaa@ubuntu:~$ vi mycv
samaa@ubuntu:~$ cat mycv
my cv
name samaa hany
age 23
school 25 Jan
collage SCU FOE
exceprience No have
```

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

A. Search for the word "experience" in your CV.

    \exceprience

B. Copy line in the beginning of the file my CV, and then paste it.

    yy + p

C. Write some words and the undo changes.

    u

D. Write some words and quit without save them

    :qa!

E. Delete the line you are on.

    Select the line + dd

10. Second: sorts the output of ls command on / recursively, saving their output and error in 2 different files and sending them to the background.

To send the files to background, we use

bg

jobs

```
cat: our: No such file or directory
samaa@ubuntu:~$ cat out
.:
Desktop
dir
dir1
direct
docs
Documents
Downloads
error
examples.desktop
f
gfile.txt
Music
myclass
myclass.
mycv
myteam
oldpasswd
out
Pictures
Public
Templates
```

```
./Videos:
samaa@ubuntu:~$ cat error
ls: cannot open directory './dir': Permission denied
ls: cannot open directory './direct': Permission denied
samaa@ubuntu:~$
```