



Name: Kerolos Youssef Ghobrial

LAB 3: Linux

Q13:

```
[kerolosyoussef@localhost ~]$ mkdir myteam
[kerolosyoussef@localhost ~]$ ls -ld myteam
drw-r-----. 2 kerolosyoussef kerolosyoussef 6 Aug 29 09:17 myteam
[kerolosyoussef@localhost ~]$ chmod u-w myteam
[kerolosyoussef@localhost ~]$ ls -ld myteam
dr--r-----. 2 kerolosyoussef kerolosyoussef 6 Aug 29 09:17 myteam
```

Q14 & Q15:

```
[kerolosyoussef@localhost ~]$ su - kero

Password:
[kero@localhost ~]$ cd /home/kerolosyoussef/myteam
-bash: cd: /home/kerolosyoussef/myteam: Permission denied
```

```
[kerolosyoussef@localhost ~]$ chmod o+rx myteam
[kerolosyoussef@localhost ~]$ chmod o+rx /home/kerolosyoussef
[kerolosyoussef@localhost ~]$ su - kero
Password:
[kero@localhost ~]$ cd /home/kerolosyoussef/myteam
[kero@localhost myteam]$
```

To change directory to myteam directory using another user, you should change permissions of directory and home of original directory user as shown in second screen.

Q16.1:

```
[kerolosyoussef@localhost ~]$ ls
Desktop docs Documents Downloads Music myteam oldpasswd Pictures Public Templates Videos
[kerolosyoussef@localhost ~]$ ls -ld oldpasswd
-rw-r--r--. 1 kerolosyoussef kerolosyoussef 2538 Aug 27 10:54 oldpasswd
[kerolosyoussef@localhost ~]$ chmod u+rw,g+wx,o+x
chmod: missing operand after 'u+rw,g+wx,o+x'
Try 'chmod --help' for more information.
[kerolosyoussef@localhost ~]$ chmod u+rw,g+wx,o+x oldpasswd
[kerolosyoussef@localhost ~]$ ls -ld oldpasswd
-rw-rwxr-x. 1 kerolosyoussef kerolosyoussef 2538 Aug 27 10:54 oldpasswd
[kerolosyoussef@localhost ~]$ chmod 631 oldpasswd
[kerolosyoussef@localhost ~]$ ls -ld oldpasswd
-rw--wx--x. 1 kerolosyoussef kerolosyoussef 2538 Aug 27 10:54 oldpasswd
```

Q16.2:

```
[kerolosyoussef@localhost ~]$ umask 146
[kerolosyoussef@localhost ~]$ mkdir kero

[kerolosyoussef@localhost ~]$
[kerolosyoussef@localhost ~]$
[kerolosyoussef@localhost ~]$ ls -ld kero
drw--wx--x. 2 kerolosyoussef kerolosyoussef 6 Aug 29 10:09 kero
```

Q16.3:

A file can have maximum permission of 666 in octal mode (read and write for owner, group and others).

A directory can have maximum permission of 777 in octal mode (read, write and execute for owner, group and others).

Q16.4:

```
[kerolosyoussef@localhost ~]$ umask 777
[kerolosyoussef@localhost ~]$ mkdir kero1
[kerolosyoussef@localhost ~]$ ls -ld kero1
d------. 2 kerolosyoussef kerolosyoussef 6 Aug 29 10:13 kero1

[kerolosyoussef@localhost ~]$ touch file1
[kerolosyoussef@localhost ~]$ ls -l file1
------. 1 kerolosyoussef kerolosyoussef 0 Aug 29 10:14 file1
```

Q17.1:

```
[kerolosyoussef@localhost ~]$ mkdir kero3
[kerolosyoussef@localhost ~]$ ls -ld kero3
d----- . 2 kerolosyoussef kerolosyoussef 6 Aug 29 10:41 kero3
[kerolosyoussef@localhost ~]$ mkdir kero4
[kerolosyoussef@localhost ~]$ ls -ld kero4
d----- . 2 kerolosyoussef kerolosyoussef 6 Aug 29 10:41 kero4
[kerolosyoussef@localhost ~]$ chmod u+r kero3
[kerolosyoussef@localhost ~]$ chmod u+w kero4
[kerolosyoussef@localhost ~]$ cp -r kero3 kero4
cp: cannot stat 'kero4/kero3': Permission denied

[kerolosyoussef@localhost ~]$

[kerolosyoussef@localhost ~]$
[kerolosyoussef@localhost ~]$ chmod u+rx kero3
[kerolosyoussef@localhost ~]$ chmod u+wx kero4
[kerolosyoussef@localhost ~]$ cp -r kero3 kero4
[kerolosyoussef@localhost ~]$
```

Minimum permission to copy a directory from source directory (is read and execute) to target directory (is write and execute).

Q17.2:

```
[kerolosyoussef@localhost ~]$ touch file2
[kerolosyoussef@localhost ~]$ mkdir kero5
[kerolosyoussef@localhost ~]$ ls -ld kero5
d----- . 2 kerolosyoussef kerolosyoussef 6 Aug 29 10:49 kero5
[kerolosyoussef@localhost ~]$ ls -l file2
----- . 1 kerolosyoussef kerolosyoussef 0 Aug 29 10:49 file2
[kerolosyoussef@localhost ~]$ chmod u+r file2
[kerolosyoussef@localhost ~]$ chmod u+w kero5
[kerolosyoussef@localhost ~]$ cp file2 kero5
cp: cannot stat 'kero5/file2': Permission denied
[kerolosyoussef@localhost ~]$ chmod u+wx kero5
[kerolosyoussef@localhost ~]$ cp file2 kero5
[kerolosyoussef@localhost ~]$
```

To copy a file minimum permission is read file and write, execute target directory.

Q17.3:

```
[kerolosyoussef@localhost ~]$ ls -l file2
----- . 1 kerolosyoussef kerolosyoussef 0 Aug 29 10:49 file2
[kerolosyoussef@localhost ~]$ chmod u+w file2
[kerolosyoussef@localhost ~]$ rm file2
[kerolosyoussef@localhost ~]$ ls -l file2
ls: cannot access 'file2': No such file or directory
[kerolosyoussef@localhost ~]$ touch file2
[kerolosyoussef@localhost ~]$ ls -l file2
----- . 1 kerolosyoussef kerolosyoussef 0 Aug 29 10:56 file2
[kerolosyoussef@localhost ~]$ chmod u+r file2
[kerolosyoussef@localhost ~]$ rm file2
rm: remove write-protected regular empty file 'file2'?
[kerolosyoussef@localhost ~]$ rm file2
rm: remove write-protected regular empty file 'file2'? y
```

To delete a file it can be read or written as screenshot shows.

Q17.4:

```
[kerolosyoussef@localhost ~]$ mkdir kero6
[kerolosyoussef@localhost ~]$ ls -ld kero6
d----- . 2 kerolosyoussef kerolosyoussef 6 Aug 29 11:01 kero6
[kerolosyoussef@localhost ~]$ cd ./kero6
bash: cd: ./kero6: Permission denied
[kerolosyoussef@localhost ~]$ chmod u+x kero6
[kerolosyoussef@localhost ~]$ cd ./kero6
[kerolosyoussef@localhost kero6]$
```

To change a directory, you need to make it executable.

Q17.5:

```
[kerolosyoussef@localhost ~]$ ls -ld kero6
d----- . 2 kerolosyoussef kerolosyoussef 6 Aug 29 11:01 kero6
[kerolosyoussef@localhost ~]$ chmod u+x kero6
[kerolosyoussef@localhost ~]$ cd ./kero6
[kerolosyoussef@localhost kero6]$ ls
ls: cannot open directory '.': Permission denied
[kerolosyoussef@localhost kero6]$ cd ..
[kerolosyoussef@localhost ~]$ chmod u+rx kero6
[kerolosyoussef@localhost ~]$ cd ./kero6
[kerolosyoussef@localhost kero6]$ ls
[kerolosyoussef@localhost kero6]$
```

To list what is inside a directory , you should make it readable and executable.

Q17.6:

```
[kerolosyoussef@localhost ~]$ ls -l file1
----- . 1 kerolosyoussef kerolosyoussef 0 Aug 29 10:14 file1
[kerolosyoussef@localhost ~]$ chmod u+r file1
[kerolosyoussef@localhost ~]$ more file1
[kerolosyoussef@localhost ~]$
```

To view a file content, you should make it readable.

Q17.7:

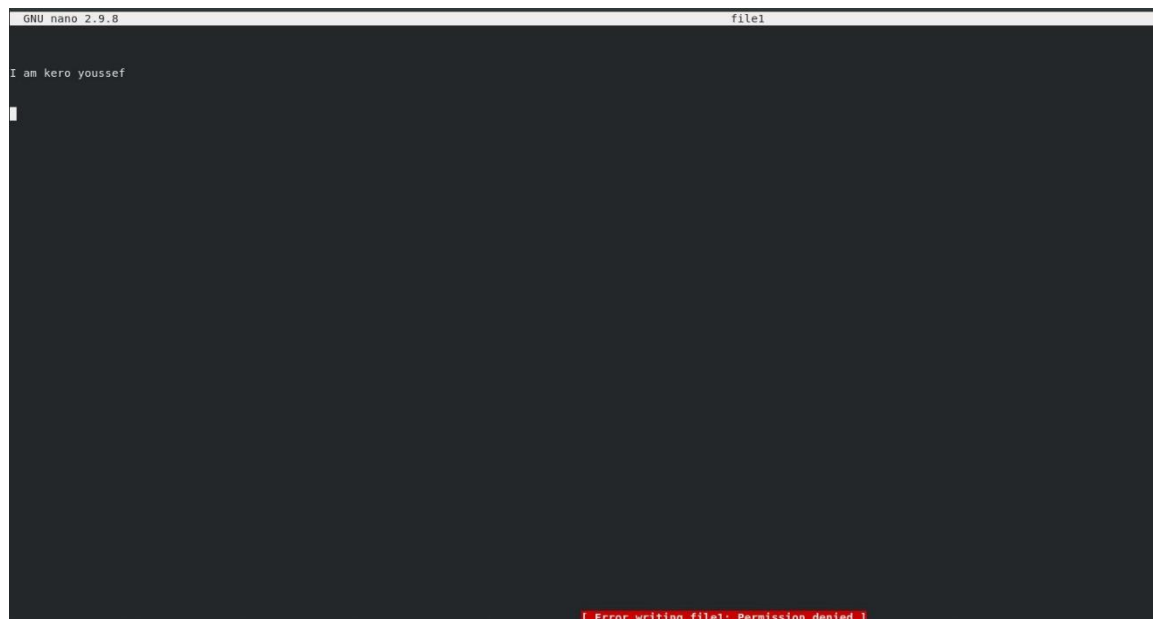
```
[kerolosyoussef@localhost ~]$ ls -l file1
------. 1 kerolosyoussef kerolosyoussef 0 Aug 29 10:14 file1
[kerolosyoussef@localhost ~]$ chmod u+w file1
[kerolosyoussef@localhost ~]$ nano file1
[kerolosyoussef@localhost ~]$ more file1
more: cannot open file1: Permission denied
[kerolosyoussef@localhost ~]$ chmod u+r file1
[kerolosyoussef@localhost ~]$ more file1
I am kero
[kerolosyoussef@localhost ~]$
```

To modify a file content, we make file 1 writable and to show the content of it, we make it readable as shown in screen.

Q18:

```
[kerolosyoussef@localhost ~]$ chmod 444 file1
[kerolosyoussef@localhost ~]$ ls -ld file1
-r--r--r--. 1 kerolosyoussef kerolosyoussef 11 Aug 29 11:15 file1
[kerolosyoussef@localhost ~]$ rm file1
rm: remove write-protected regular file 'file1'? y
```

```
[kerolosyoussef@localhost ~]$ touch file1
[kerolosyoussef@localhost ~]$ chmod 444 file1
[kerolosyoussef@localhost ~]$ ls -ld file1
-r--r--r--. 1 kerolosyoussef kerolosyoussef 0 Aug 29 11:20 file1
[kerolosyoussef@localhost ~]$ nano file1
```



To modify a content by making the file readable only, an error writing file 1 appears: permission denied as shown in screen.

Q19:

X permission (execute) for a file means it is treated as an executable program (such as .exe in windows) whereas for a directory, it permits the directory to be entered and the files or directories inside that directory to be accessed and listed.