AdminLinux_Task6

Section 1:

1.

```
alaa@alaaHP:~$ mkdir myteam
alaa@alaaHP:~$ ls -lh | grep myteam
drwxrwxr-x 2 alaa alaa 4.0K Dec 15 12:32 myteam
alaa@alaaHP:~$ chmod 475 myteam
alaa@alaaHP:~$ ls -lh | grep myteam
dr--rwxr-x 2 alaa alaa 4.0K Dec 15 12:32 myteam
```

2. & 3.

```
alaa@alaaHP:~$ su mona
Password:
mona@alaaHP:/home/alaa$ cd myteam
bash: cd: myteam: Permission denied
mona@alaaHP:/home/alaa$
```

4.

a.

```
alaa@alaaHP:~$ ls -lh | grep oldpasswd
-rw-r--r-- 1 alaa alaa 2.9K 01:06 28 نوف  oldpasswd
alaa@alaaHP:~$ chmod g+x oldpasswd
alaa@alaaHP:~$ chmod g-r oldpasswd
alaa@alaaHP:~$ chmod g+w oldpasswd
alaa@alaaHP:~$ chmod o=x oldpasswd
alaa@alaaHP:~$ ls -lh | grep oldpasswd
-rw--wx--x 1 alaa alaa 2.9K 01:06 28 نوف  oldpasswd
alaa@alaaHP:~$
```

```
alaa@alaaHP:~$ chmod 631 oldpasswd
alaa@alaaHP:~$ ls -lh | grep oldpasswd
-rw--wx--x 1 alaa alaa 2.9K 01:06 28 نوف  oldpasswd
alaa@alaaHP:~$
```

b.

```
alaa@alaaHP:~$ umask 0146
alaa@alaaHP:~$ mkdir NewMask
alaa@alaaHP:~$ ls -lh | grep NewMask
drw--wx--x 2 alaa alaa 4.0K 10:42 21 سب  NewMask
alaa@alaaHP:~$
```

c. The maximum permissions a file can have by default when first created is 666, while the maximum permissions a directory can have is 777.

d.

```
alaa@alaaHP:~$ umask 777
alaa@alaaHP:~$ touch Fmask777
alaa@alaaHP:~$ mkdir mask777
alaa@alaaHP:~$ ls -lh | grep 'Fmask777|mask777'
alaa@alaaHP:~$ ls -lh | grep 'Fmask777|mask777\'
grep: Trailing backslash
alaa@alaaHP:~$ ls -l | grep 'Fmask777|mask777\'
grep: Trailing backslash
alaa@alaaHP:~$ ls -l | grep 'mask777\|Fmask777'
---------- 1 alaa alaa    0 10:54 21 سب  Fmask777
d--------- 2 alaa alaa 4096 10:54 21 سب  mask777
alaa@alaaHP:~$ 
```

e. Neither the owner of the file/directory nor the sudors can access the file/folder, but they can open the file using text editors but can't save the changes unless they use force flag like :wq!For example.
But they can't read the file/directory, or execute them. However, the root can read and execute the file/directory, but can't write to them.
The owner trying to write in the file:


```
Hello There
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
E45: 'readonly' option is set (add ! to override)        1,11           All
```

The root trying to write in the file:

```
root@alaaHP: /home/alaa                    Q   ≡   —   □   ✕

Hello There
This is Alaa ^_^
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
E45: 'readonly' option is set (add ! to override)        2,16              All
```

```
alaa@alaaHP:~$ cat Fmask777
cat: Fmask777: Permission denied
alaa@alaaHP:~$ █
```

```
alaa@alaaHP:~$ sudo cat Fmask777
[sudo] password for alaa:
cat: Fmask777: No such file or directory
alaa@alaaHP:~$ █
```

```
alaa@alaaHP:~$ cd mask777
bash: cd: mask777: Permission denied
alaa@alaaHP:~$ sudo cd mask777
[sudo] password for alaa:
sudo: cd: command not found
sudo: "cd" is a shell built-in command, it cannot be run directly.
sudo: the -s option may be used to run a privileged shell.
sudo: the -D option may be used to run a command in a specific directory.
alaa@alaaHP:~$ █
```

```
alaa@alaaHP:~$ mv file1 mask777/
mv: cannot stat 'mask777/file1': Permission denied
alaa@alaaHP:~$ █
```

The root reading and executing the file:

```
root@alaaHP:/home/alaa# cat Fmask777
Hello There
This is Alaa ^_^
root@alaaHP:/home/alaa# /.Fmask777
bash: /.Fmask777: No such file or directory
root@alaaHP:/home/alaa# source Fmask777
Command 'Hello' not found, did you mean:
  command 'hello' from snap hello (2.10)
  command 'hello' from deb hello (2.10-2ubuntu4)
  command 'hello' from deb hello-traditional (2.10-5)
  command 'jello' from deb jello (1.5.2-1)
See 'snap info <snapname>' for additional versions.
This: command not found
root@alaaHP:/home/alaa#
```

5.

```
alaa@alaaHP:~$ touch filepre444
alaa@alaaHP:~$ chmod 444 filepre444
alaa@alaaHP:~$ ls -lh | grep filepre444
-r--r--r-- 1 alaa alaa    0 11:19 21 نس  filepre444
alaa@alaaHP:~$ vi filepre444
alaa@alaaHP:~$ cat filepre444
alaa@alaaHP:~$ rm filepre444
rm: remove write-protected regular empty file 'filepre444'? yes
alaa@alaaHP:~$ ls -lh | grep filepre444
alaa@alaaHP:~$
```

I can't edit the file or remove it, because it is protected and I have no permissions for doing this. However I can do it in another way.

6. The executing permission of the file allows to execute the content of the file, while executing permission of a directory allows to change the working directory to this directory or pass through it, it also allows to look at extended information on files in the directory (bu using ls -l).

Section 2:
1.

```
alaa@alaaHP:~$ mkdir newdir
alaa@alaaHP:~$ chmod o+t newdir
alaa@alaaHP:~$ ls -lh | rep newdir
Command 'rep' not found, but can be installed with:
sudo apt install rep
alaa@alaaHP:~$ ls -lh | grep newdir
drwxrwxr-t 2 alaa alaa 4.0K Dec 21 16:44 newdir
```

2.

```
drwxrwxr-t 2 alaa alaa 4.0K Dec 21 16:44 newdir
alaa@alaaHP:~$ chmod g+s newdir
alaa@alaaHP:~$ ls -lh | grep newdir
drwxrwsr-t 2 alaa alaa 4.0K Dec 21 16:44 newdir
alaa@alaaHP:~$ ▯
```

```
alaa@alaaHP:~$ ls -lh | grep newdir
drwxrwsr-t 2 alaa alaa 4.0K 17:44 21 ديس newdir
alaa@alaaHP:~$ chmod u+s newdir
alaa@alaaHP:~$ ls -lh | grep newdir
drwsrwsr-t 2 alaa alaa 4.0K 17:44 21 ديس newdir
```

3.

```
alaa@alaaHP:~$ tail -3 /etc/passwd
alaa:x:1000:1000:Alaa,,,:/home/alaa:/bin/bash
mona:x:1001:1001:,,,:/home/mona:/bin/bash
laila:x:1002:1002:Laila,15,,:/home/laila:/bin/bash
```

4.

```
alaa@alaaHP:~/newdir$ sudo usermod -aG alaa mona
[sudo] password for alaa:
alaa@alaaHP:~/newdir$ sudo usermod -aG alaa laila
alaa@alaaHP:~/newdir$ cat /etc/group | grap alaa
Command 'grap' not found, but can be installed with:
sudo apt install grap
alaa@alaaHP:~/newdir$ cat /etc/group | grep alaa
adm:x:4:syslog,alaa
cdrom:x:24:alaa
sudo:x:27:alaa,mona
dip:x:30:alaa
plugdev:x:46:alaa
lpadmin:x:122:alaa
lxd:x:135:alaa
alaa:x:1000:mona,laila
sambashare:x:136:alaa
```

```
alaa@alaaHP:~/newdir$ su mona
Password:
mona@alaaHP:/home/alaa/newdir$ touch monaFile
mona@alaaHP:/home/alaa/newdir$ ls
monaFile
mona@alaaHP:/home/alaa/newdir$ su laila
Password:
laila@alaaHP:/home/alaa/newdir$ touch lailaFile
laila@alaaHP:/home/alaa/newdir$ ls
lailaFile  monaFile
laila@alaaHP:/home/alaa/newdir$ su alaa
Password:
21 2023 ,سس EET 05:56:39 م
This is bashrc
alaa@alaaHP:~/newdir$ touch alaaFile
alaa@alaaHP:~/newdir$ ls
alaaFile  lailaFile  monaFile
alaa@alaaHP:~/newdir$ 
```

5. & 6.

```
mona@alaaHP:/home/alaa/newdir$ mv lailaFile Laila
mv: cannot move 'lailaFile' to 'Laila': Operation not permitted
mona@alaaHP:/home/alaa/newdir$ rm lailaFile
rm: cannot remove 'lailaFile': Operation not permitted
mona@alaaHP:/home/alaa/newdir$ su laila
Password:
laila@alaaHP:/home/alaa/newdir$ mv alaaFile Alaa
mv: cannot move 'alaaFile' to 'Alaa': Operation not permitted
laila@alaaHP:/home/alaa/newdir$ rm alaaFile
rm: cannot remove 'alaaFile': Operation not permitted
```

```
laila@alaaHP:/home/alaa/newdir$ su alaa
Password:
21 2023 ,سس EET 06:06:05 م
This is bashrc
alaa@alaaHP:~/newdir$ mv monaFile Mona
alaa@alaaHP:~/newdir$ ls
alaaFile  lailaFile  Mona
alaa@alaaHP:~/newdir$ rm lailaFile
alaa@alaaHP:~/newdir$ ls
alaaFile  Mona
alaa@alaaHP:~/newdir$ vi Mona
alaa@alaaHP:~/newdir$ 
```

7.

```
alaa@alaaHP:~$ ls -lh | grep newdir
drwsrwsr-t 2 alaa alaa 4.0K 18:08 21 سس newdir
alaa@alaaHP:~$ ls newdir/
alaaFile  Mona
alaa@alaaHP:~$ 
```

List the permission passwd command has and explain why it has S

```
alaa@alaaHP:~$ whereis passwd
passwd: /usr/bin/passwd /etc/passwd /usr/share/man/man1/passwd.1.gz /usr/share/m
an/man1/passwd.1ssl.gz /usr/share/man/man5/passwd.5.gz
alaa@alaaHP:~$ ls -lh /usr/bin/ | grep passwd
-rwsr-xr-x 1 root root     71K 2022  24 نوف gpasswd
-rwxr-xr-x 1 root root    257K 2022  18 سب grub-mkpasswd-pbkdf2
-rwsr-xr-x 1 root root     59K 2022  24 نوف passwd
alaa@alaaHP:~$ 
```

The s in the permissions of the command passwd refers to the setuid special command, which used to allow any user to execute the file as the owner of the file. This permission is used here to allow all the users to run this command as the owner which is the root here.