A SIMPLE WAY TO LEARN AS A DEVOPS ENGINEER BY READING FILE PERMISSION

1- Explain this Linux output drwxr r-x x-r.

The Linux set "drwxr-xr-x" is a specific expression of permissions to three groups composed by owner, group owner and all other users, respectively for a file or directory in a Linux file system.

 "d", indicates that the item is a directory and «-" indicates that the item is a file.

The first three characters, "rwx", indicates the permissions for the owner of the file or directory.

The second three characters, "rwx", indicates the permissions for the group owner of the file or directory.

The third three characters, "rwx", indicates the permissions for all other users of the file or directory.

"r" is for read. "w" is for write. "x" is for execute.

In this case, the Linux output "drwxr r-x x-r" means that the **owner** of the file has the specific permission to read, write, and execute; the group owner has the specific permission to read and execute; and all other users have the specific permission to read and to execute.

Permissions	score
read	4
write	2
execute	1

2- Explain the meaning of r, w, x

"r" is for read. "w" is for write. "x" is for execute.

3- Create devopsdir/ testpermission.txt

Run these Linux command

→ sudo mkdir devopsdir

→ sudo touch testpermission.txt

4- Create 2users of your choice

Run these Linux command

→ sudo useradd mokobe1

→ sudo useradd mokobe2

5- create a group of your choice

Run this Linux command

→ sudo groupadd mamamokobe

`mamamokobe:x:3162:`

Check with: `cat /etc/group |grep mamamokobe`

6- Add the two user you created to devops group

Run these Linux command

→ sudo usermod -a -G devops mokobe1

→ sudo usermod -a -G devops mokobe2

`devops:x:1240:wesley1,wesley2,julie1,julie2,`**`mokobe1,mokobe2`**

 Check with: `cat /etc/group |grep devops`

7- change the ownership for the directory devopsdir as this:
mokobe1 =mokobe2, group ownership devops

Run this Linux command

→ sudo chown mokobe2:devops devopsdir

```
drwxr-x-w-  2 mokobe2 devops  4096 Feb  1 13:47 devopsdir
```

Check with: ls -l |grep devopsdir

8- for the devopsdir change permission as this:
for other users remove execute and read permissions

Run this Linux command

→ sudo chmod 752 devopsdir

```
drwxr-x-w-  2 mokobe1 devops  4096 Feb  1 13:47 devopsdir
```

Check with: ls -l |grep devopsdir

9- Add write permission for the group for the directory devopsdir

Run this Linux command

→ sudo chmod 772 devopsdir

```
drwxrwx-w-  2 mokobe1 devops  4096 Feb  1 13:47 devopsdir
```

Check with: ls -l |grep devopsdir

10- Explain this command chmod 640 folder

- Owner has the specific permission to read 'folder' and write in the 'folder'

- Group owner has the specific permission to read the 'folder'

- all other users have no specific permission to read 'folder', write in the 'folder' and execute the 'folder'.

11- create a directory webdata

Run this Linux command

→ sudo mkdir webdata

```
SESSION-01-DEVELOPMENT    croko2.txt   devopsdir        four
mother    testpermission.txt
     admin_directory      dead.letter     firstfile.txt     jacky
     mysanta   webdata
```

12- Change ownership as follow mokobe2 = mokobe1, group=devops

Run this Linux command

→ sudo chown mokobe1:devops devopsdir

```
drwxrwx-w-  2 mokobe1 devops   4096 Feb  1 13:47 devopsdir
```

13- change permissions as follow for webdata :
give full permission to group owner
give no permission for other users using numeric method

Run this Linux command

→ sudo chmod 770 webdata

```
drwxrwx---  2 root    root    4096 Feb  1 14:27 webdata
```

14- Change the specific permission for webdata as follow:
- give full permission to owner
- read and write permission to group owner
- no permission for other users

Run this Linux command

→ sudo chmod 760 webdata

```
drwxrw----  2 root    root    4096 Feb  1 14:27 webdata
```