File permissions in Linux

Project description

Using Linux commands, I can send instructions to the operating system. In this project, they will be used for managing permissions of directories and files.

Check file and directory details

Using **ls -l** command

```
researcher2@f7ef21236893:~/projects$ ls -l
total 20
drwx--x--- 2 researcher2 research_team 4096 Apr 24 01:50 drafts
-rw-rw-rw- 1 researcher2 research_team   46 Apr 24 01:50 project_k.txt
-rw-r----- 1 researcher2 research_team   46 Apr 24 01:50 project_m.txt
-rw-rw-r-- 1 researcher2 research_team   46 Apr 24 01:50 project_r.txt
-rw-rw-r-- 1 researcher2 research_team   46 Apr 24 01:50 project_t.txt
```

And **ls -la** command to show also hidden directories or files

```
researcher2@f7ef21236893:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Apr 24 01:50 .
drwxr-xr-x 3 researcher2 research_team 4096 Apr 24 02:33 ..
-rw--w---- 1 researcher2 research_team   46 Apr 24 01:50 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 Apr 24 01:50 drafts
-rw-rw-rw- 1 researcher2 research_team   46 Apr 24 01:50 project_k.txt
-rw-r----- 1 researcher2 research_team   46 Apr 24 01:50 project_m.txt
-rw-rw-r-- 1 researcher2 research_team   46 Apr 24 01:50 project_r.txt
-rw-rw-r-- 1 researcher2 research_team   46 Apr 24 01:50 project_t.txt
```

Describe the permissions string

drwxrwxrwx, first character means directory, if the first character is a -, indicates is file, the last 9 characters are divided in 3 groups, first group to user, second group to group, third group to others; each group of characters indicates the permissions of this directory or file; **r** to read, **w** to write and **x** to execute.

Change file permissions

Using **chmod** command to modify the files permissions

```
researcher2@f7ef21236893:~/projects$ chmod o-w project_k.txt
researcher2@f7ef21236893:~/projects$ chmod g-r project_m.txt
```

Change file permissions on a hidden file

Using **chmod** command

```
researcher2@f7ef21236893:~/projects$ chmod u=r,g=r .project_x.txt
```

Change directory permissions

```
researcher2@f7ef21236893:~/projects$ chmod g-x drafts/
```