File permissions in Linux

Project description

We are going to check the file permissions of the directories and locate hidden files. We are also going to change the permissions of these files.

Check file and directory details

```
researcher2@cd925d821e89:~/projects$ ls -a
.    .project_x.txt   project_k.txt   project_r.txt
..   drafts           project_m.txt   project_t.txt
researcher2@cd925d821e89:~/projects$ 
```

Describe the permissions string

```
researcher2@cd925d821e89:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 May 27 08:50 .
drwxr-xr-x 3 researcher2 research_team 4096 May 27 09:20 ..
-rw--w---- 1 researcher2 research_team   46 May 27 08:50 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 May 27 08:50 drafts
-rw-rw-rw- 1 researcher2 research_team   46 May 27 08:50 project_k.txt
-rw-r----- 1 researcher2 research_team   46 May 27 08:50 project_m.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_r.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_t.txt
researcher2@cd925d821e89:~/projects$ 
```

Change file permissions

```
researcher2@cd925d821e89:~/projects$ chmod o-w project_k.txt
researcher2@cd925d821e89:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 May 27 08:50 .
drwxr-xr-x 3 researcher2 research_team 4096 May 27 09:20 ..
-rw--w---- 1 researcher2 research_team   46 May 27 08:50 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 May 27 08:50 drafts
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_k.txt
-rw-r----- 1 researcher2 research_team   46 May 27 08:50 project_m.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_r.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_t.txt
researcher2@cd925d821e89:~/projects$
```

Change file permissions on a hidden file

.project_x.txt file is hidden and we are going to remove the write permission for the user.

```
researcher2@cd925d821e89:~/projects$ chmod u-w .project_x.txt
researcher2@cd925d821e89:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 May 27 08:50 .
drwxr-xr-x 3 researcher2 research_team 4096 May 27 09:20 ..
-r---w---- 1 researcher2 research_team   46 May 27 08:50 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 May 27 08:50 drafts
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_k.txt
-rw-r----- 1 researcher2 research_team   46 May 27 08:50 project_m.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_r.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_t.txt
researcher2@cd925d821e89:~/projects$
```

Change directory permissions

```
researcher2@cd925d821e89:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 May 27 08:50 .
drwxr-xr-x 3 researcher2 research_team 4096 May 27 09:20 ..
-r---w---- 1 researcher2 research_team   46 May 27 08:50 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 May 27 08:50 drafts
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_k.txt
-rw-r----- 1 researcher2 research_team   46 May 27 08:50 project_m.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_r.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 27 08:50 project_t.txt
researcher2@cd925d821e89:~/projects$ chmod g-x drafts
```

Summary

Here are all the commands used in this activity:

ls -la : to list the permissions of directories, files (including hidden files)
chmod : used in the beginning when you want to change the permissions of a file or directory
u-w : part of the command, used to remove the write permission for the user