# File permissions in Linux

## Project description

This exercise involved changing user permissions via chmod for files and directories on Linux.

## Check file and directory details

```
researcher2@2fabe9ffc6ab:~$ cd projects
researcher2@2fabe9ffc6ab:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 May 15 15:40 .
drwxr-xr-x 3 researcher2 research_team 4096 May 15 16:21 ..
-rw--w---- 1 researcher2 research_team   46 May 15 15:40 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 May 15 15:40 drafts
-rw-rw-rw- 1 researcher2 research_team   46 May 15 15:40 project_k.txt
-rw-r----- 1 researcher2 research_team   46 May 15 15:40 project_m.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 15 15:40 project_r.txt
-rw-rw-r-- 1 researcher2 research_team   46 May 15 15:40 project_t.txt
```

## Change file permissions

Changing file permissions for the other users to remove the write permission.

```
-rw-rw-r-- 1 researcher2 research_team   46 May 15 15:40 project_t.txt
researcher2@2fabe9ffc6ab:~/projects$ chmod o-w project_k.txt
researcher2@2fabe9ffc6ab:~/projects$ ^C
```

## Change file permissions on a hidden file

Only allow user and group to read the file, disable any other permissions.

```
researcher2@2fabe9ffc6ab:~/projects$ chmod u-w .project_x.txt
researcher2@2fabe9ffc6ab:~/projects$ chmod g-w+r .project_x.txt
```

```
researcher2@2fabe9ffc6ab:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 May 15 15:40 .
drwxr-xr-x 3 researcher2 research_team 4096 May 15 16:21 ..
-r--r----- 1 researcher2 research_team   46 May 15 15:40 .project_x.txt
drwx--x--- 2 researcher2 research_team 4096 May 15 15:40 drafts
-rw-rw-r-- 1 researcher2 research_team   46 May 15 15:40 project_k.txt
```

## Change directory permissions

Removing permission to access the directory for group.

```
researcher2@2fabe9ffc6ab:~/projects$ chmod g-x drafts
researcher2@2fabe9ffc6ab:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 May 15 15:40 .
drwxr-xr-x 3 researcher2 research_team 4096 May 15 16:21 ..
-r--r----- 1 researcher2 research_team   46 May 15 15:40 .project_x.txt
drwx------ 2 researcher2 research_team 4096 May 15 15:40 drafts
-rw-rw-r-- 1 researcher2 research_team   46 May 15 15:40 project_k.txt
```

## Summary

Through this exercise, I gained practical experience in managing permissions via chmod Linux command.