

# File permissions in Linux

## Project description

In this project I am exploring file and directory permissions. By using certain commands I can view these permissions and change them where needed.

## Check file and directory details

I can use the command `ls -l` to view the permissions of the current directory's contents

```
total 4
drwxr-xr-x 3 researcher2 research_team 4096 Jul 12 22:12 projects
researcher2@236a36a192b7:~$
```

## Describe the permissions string

This output shows me the string “drwxr-xr-x”. d means it is a directory. The User is represented in the next 3 letters, showing they can read, write, and execute files in this directory. The next 3 characters show that the Group can do all but write, as well as the last 3 which represent Other.

## Change file permissions

This organization does not allow other to write files. By entering this command I am taking away that permission.

```
chmod o-w project_k.txt
```

## Change file permissions on a hidden file

Files that are hidden are not shown using `ls -l`, and begin with a period. Hidden files are shown using `-ls -la`. The user and group should only be able to read the hidden file `.project_k.txt`, other should not have write permission. By using `=` I can quickly give each user their required permissions.

```
chmod u=r,g=r,o-w .project_x.txt
```

## Change directory permissions

Only the user “researcher2” should have access to the drafts directory. By using this command I take away the access from the group research\_team.

```
chmod g-x drafts
```

## Summary

In this project I was able to use simple commands to give and take away access to/from specific files, directories and users.