# File permissions in Linux

## Project description

This project demonstrates how to list the permissions on subdirectories and files within a directory, including hidden files and how to change permissions on files and subdirectories.

## Check file and directory details

ls -la

This will display a list of subdirectories and files, including hidden files, along with their current permissions.

In the /home/researcher2/projects directory, there are five files with the following

names and permissions:

● project\_k.txt

○ -rw-rw-rw-

● project\_m.txt

○ -rw-r—--

● project\_r.txt

○ -rw-rw-r–

● project\_t.txt

○ -rw-rw-r–

● .project\_x.txt

○ -rw–w—-

There is also one subdirectory inside the projects directory named drafts. The

permissions on drafts are:

● drwx–x—

## Describe the permissions string

Using project\_k.txt as an example to describe the listed permissions:

1. - indicates it is a file
2. r indicates it is readable by the user
3. w indicates it is writable by the user
4. - indicates it is not executable by the user
5. r indicates it is readable by the group
6. w indicates it is writable by the group
7. - indicates it is not executable by the group
8. r indicates it is readable by others
9. w indicates it is writable by others
10. - indicates it is not executable by others

## Change file permissions

project\_k.txt

chmod o-w project\_k.txt

This removes the write permission from others.

## Change file permissions on a hidden file

.project\_k.txt

chmod u-w,g-w .project\_k.txt

This removes the write permission from the user and group.

## Change directory permissions

./drafts

chmod g-x drafts

This removes the execute permission from the group.

## Summary

Permissions on subdirectories and files, including hidden files, were displayed. The 10 character permissions for each subdirectory and file were explained. The permissions on file project\_k.txt were changed to remove write permission from others. The permissions on file .project\_k.txt were changed to remove write permission from the user and group. The permissions on subdirectory drafts were changed to remove execute permission from the group.