# File permissions in Linux

## Project description

[through the utilisation of these commands I understand how to create efficient methods of changing file and directory permissions as well as hidden file permissions , also learning how to see directories , sub directories and switching between directories. Furthermore, understanding how to read and change the permissions of the user , group and other.]

## Check file and directory details

* **When checking for the directories available I use the ls command to see what is available then shortly after switching to that directory using the cd command. In order to see the current file permissions and hidden files I used ls -la to indicate which files had certain permissions and used ls – a to show hidden files.**

[researcher2@a1197c207b21:~$ ls

projects

researcher2@a1197c207b21:~$ cd projects

researcher2@a1197c207b21:~/projects$ ls

drafts project\_k.txt project\_m.txt project\_r.txt project\_t.txt

researcher2@a1197c207b21:~/projects$ ls -la

total 32

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 06:26 .

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 07:07 ..

-rw--w---- 1 researcher2 research\_team 46 Jan 8 06:26 .project\_x.txt

drwx--x--- 2 researcher2 research\_team 4096 Jan 8 06:26 drafts

-rw-rw-rw- 1 researcher2 research\_team 46 Jan 8 06:26 project\_k.txt

-rw-r----- 1 researcher2 research\_team 46 Jan 8 06:26 project\_m.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_r.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_t.txt

researcher2@a1197c207b21:~/projects$ ls -a

. .project\_x.txt project\_k.txt project\_r.txt

.. drafts project\_m.txt project\_t.txt

researcher2@a1197c207b21:~/projects$]

## Describe the permissions string

[drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 06:26 .]

* This string demonstrates that it is a directory with the owner having all privileges. group only have execute and read privileges and the other having only execute privileges.

## Change file permissions

**[I changed file permissions for project k and project m where project k needed the user to lose writing permission and for project m needed to lose group reading permissions so I performed the following commands to achieve that** ]

researcher2@a1197c207b21:~/projects$ ls -la

total 32

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 06:26 .

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 07:07 ..

-rw--w---- 1 researcher2 research\_team 46 Jan 8 06:26 .project\_x.txt

drwx--x--- 2 researcher2 research\_team 4096 Jan 8 06:26 drafts

-rw-rw-rw- 1 researcher2 research\_team 46 Jan 8 06:26 project\_k.txt

-rw-r----- 1 researcher2 research\_team 46 Jan 8 06:26 project\_m.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_r.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_t.txt

researcher2@a1197c207b21:~/projects$ chmod o-w project\_k.txt

researcher2@a1197c207b21:~/projects$ ls -la

total 32

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 06:26 .

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 07:07 ..

-rw--w---- 1 researcher2 research\_team 46 Jan 8 06:26 .project\_x.txt

drwx--x--- 2 researcher2 research\_team 4096 Jan 8 06:26 drafts

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_k.txt

-rw-r----- 1 researcher2 research\_team 46 Jan 8 06:26 project\_m.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_r.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_t.txt

researcher2@a1197c207b21:~/projects$ ls -l

total 20

drwx--x--- 2 researcher2 research\_team 4096 Jan 8 06:26 drafts

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_k.txt

-rw-r----- 1 researcher2 research\_team 46 Jan 8 06:26 project\_m.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_r.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_t.txt

researcher2@a1197c207b21:~/projects$ chmod g-r project\_m.txt

## Change file permissions on a hidden file

[**changing the hidden file permissions for project x is quite simple essentially all is needed is to create chmod command where we give the user and group the read permissions only and remove the write permissions from both user and group as it should not be authorized** .]

chmod gu-w,g+r .project\_x.txt

researcher2@a1197c207b21:~/projects$ ls -la

total 32

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 06:26 .

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 07:07 ..

-r--r----- 1 researcher2 research\_team 46 Jan 8 06:26 .project\_x.txt

drwx--x--- 2 researcher2 research\_team 4096 Jan 8 06:26 drafts

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_k.txt

-rw------- 1 researcher2 research\_team 46 Jan 8 06:26 project\_m.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_r.txt

-rw-rw-r-- 1 researcher2 research\_team 46 Jan 8 06:26 project\_t.txt

## Change directory permissions

[**in order to change directory permission it is the same process as changing file except obviously we state the directory name and what permission we want to remove** ]

researcher2@35c27afc1c05:~$ ls

projects

researcher2@35c27afc1c05:~$ cd projects

researcher2@35c27afc1c05:~/projects$ ls

drafts project\_k.txt project\_m.txt project\_r.txt project\_t.txt

researcher2@35c27afc1c05:~/projects$ cd drafts

researcher2@35c27afc1c05:~/projects/drafts$ ls

researcher2@35c27afc1c05:~/projects/drafts$ ls -la

total 8

drwx--x--- 2 researcher2 research\_team 4096 Jan 8 07:51 .

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 07:51 ..

researcher2@35c27afc1c05:~/projects/drafts$ chmod g-x drafts

chmod: cannot access 'drafts': No such file or directory

researcher2@35c27afc1c05:~/projects/drafts$ chmod g-x /home/researcher2/projects/drafts

researcher2@35c27afc1c05:~/projects/drafts$ ls -latotal 8

drwx------ 2 researcher2 research\_team 4096 Jan 8 07:51 .

drwxr-xr-x 3 researcher2 research\_team 4096 Jan 8 07:51 ..

researcher2@35c27afc1c05:~/projects/drafts$

## Summary

[in conclusion I have demonstrated my commands that I utilised to complete this portfolio project in order to convey how to change directories , change permissions on hidden files , files and directories and understanding permissions between user, group and other.]