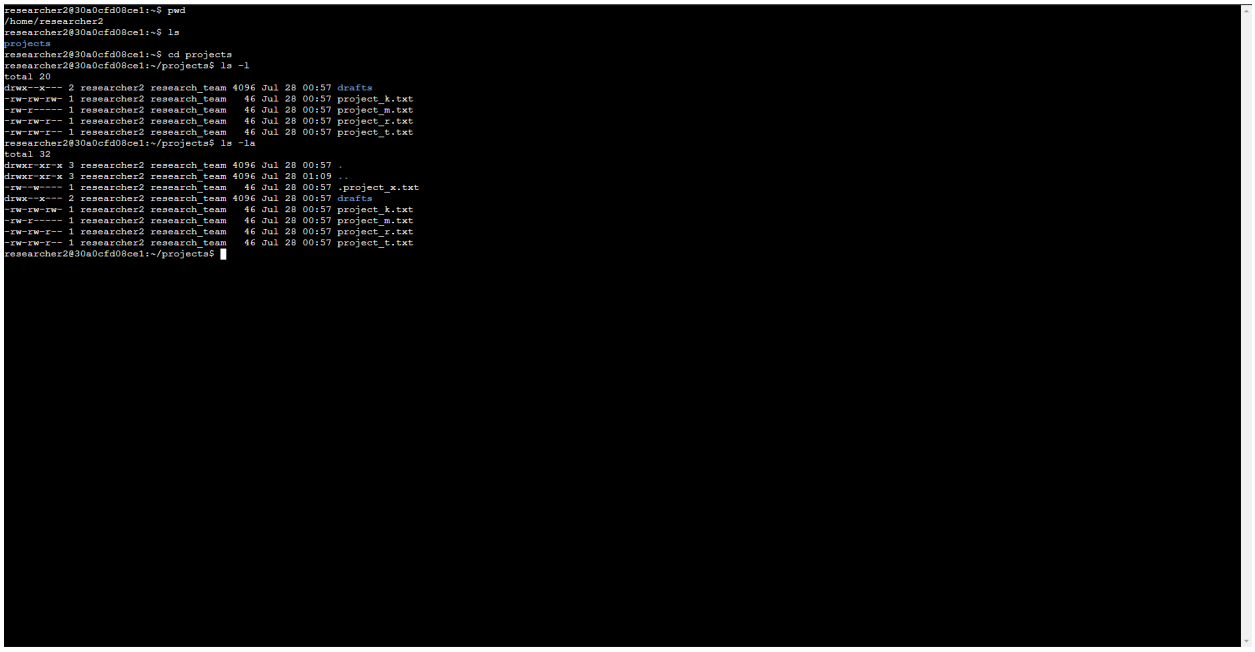
File permissions in Linux

Project description

Part of your job is to ensure users on this team are authorized with the appropriate permissions. This helps keep the system secure. I was tasked to examine existing permissions on the file system. I needed to determine if the permissions match the authorization that should be given. If they did not match, then I would need to modify the permissions to authorize the appropriate users and remove any unauthorized access.

Check file and directory details

I first used “pwd” to show where my current location is within the system. Then the command “ls” is used to display files and directories in the working directory. Next I used “cd project” to enter the project directory. “Ls” and “ls -la” is then followed to display permissions to files and directories including hidden files.



Describe the permissions string

The 10 character string represents who has permission to either a directory or a file. Starting the string with “d” shows that it’s a directory. On the other hand “-” starting the string indicates that it is a file.
d = directory

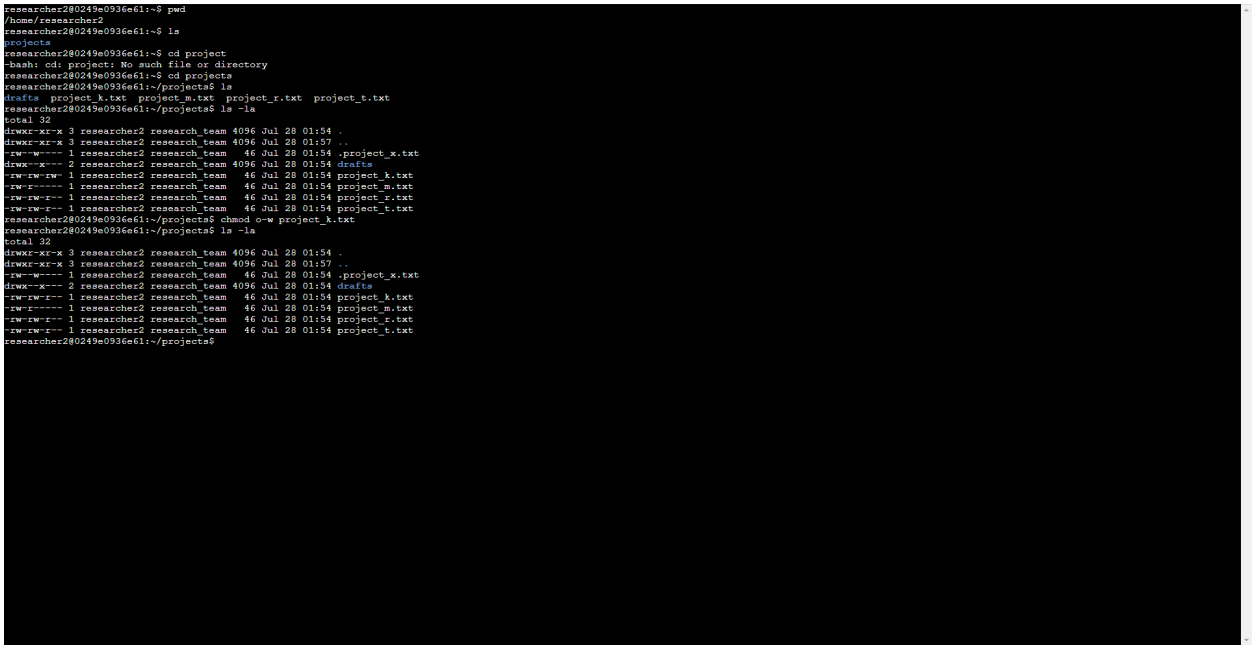
“-” = file
r = read
w = write
x = execute
The first three letters after “d” or “-” are used to show the user’s permissions. The next three are groups and the last three are others.
I will be using project_k.txt as my example.

- “-” indicates that project_k is a file. Not a directory.
- “rw- “ shows us that the user, group and others have access to Read and Write permissions in that file.

In the directory “Draft”

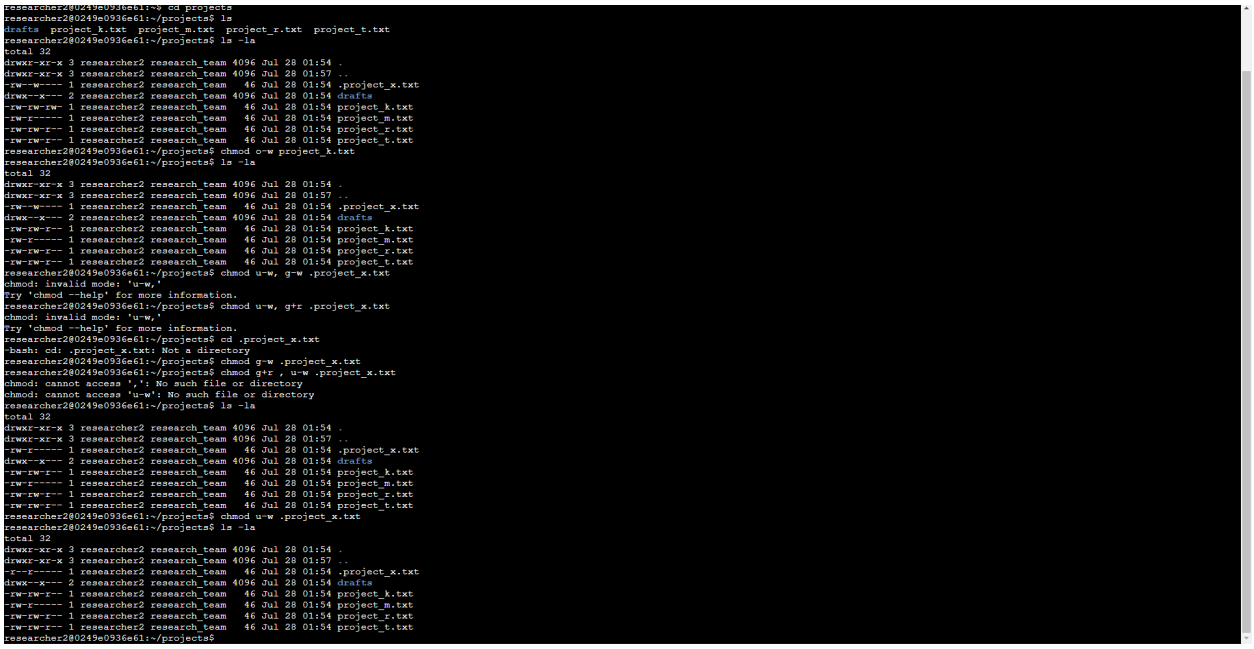
- “D” indicates that it is a directory.
- “rwx” indicates that “user” has permissions to Read, Write and Execute permissions.
- “-x-” indicates that group only has permissions to execute

Change file permissions



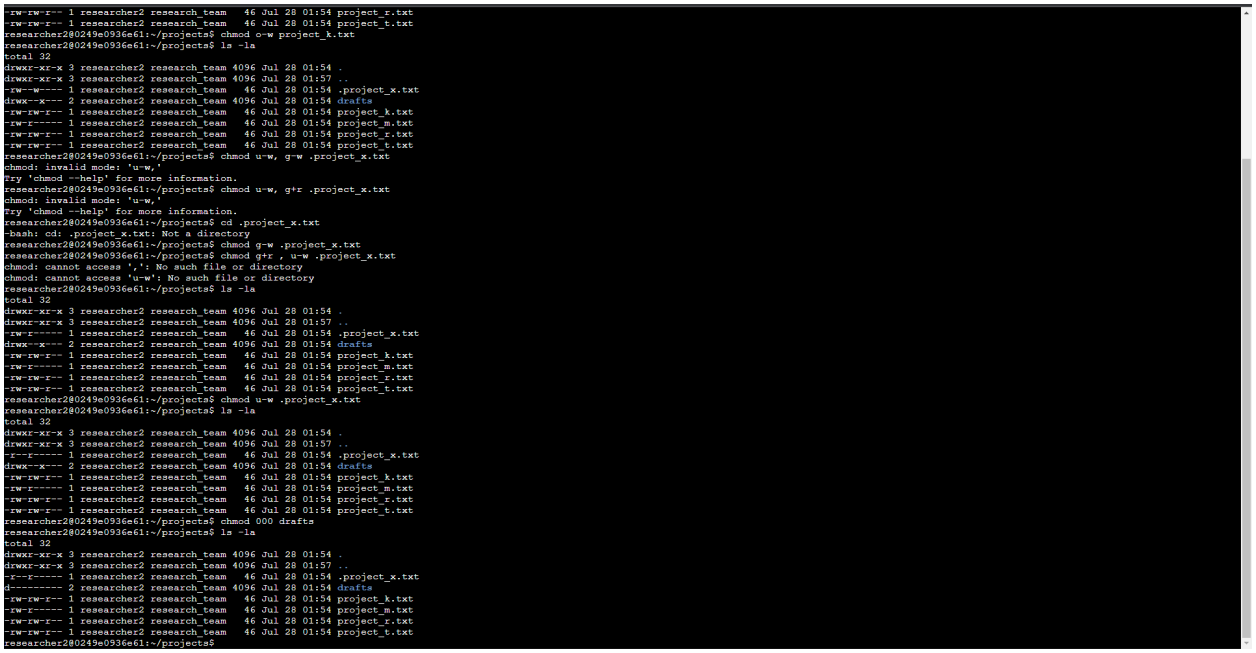
I used the command output “chmod o-w project_k.txt” to remove write permissions from other users from the file project_k.txt.

Change file permissions on a hidden file



I used the commands “chmod u-w .project_x.txt” to remove write permissions from the user on the file. I also did the same for group permissions and added read permissions.

Change directory permissions



To remove all permissions from the Drafts directory, I used “chmod 000 drafts”.

Summary

I changed the permissions of multiple files. Using ls -la displayed all files, hidden files and their permissions. I then utilized the command chmod to change each permission that as needed.