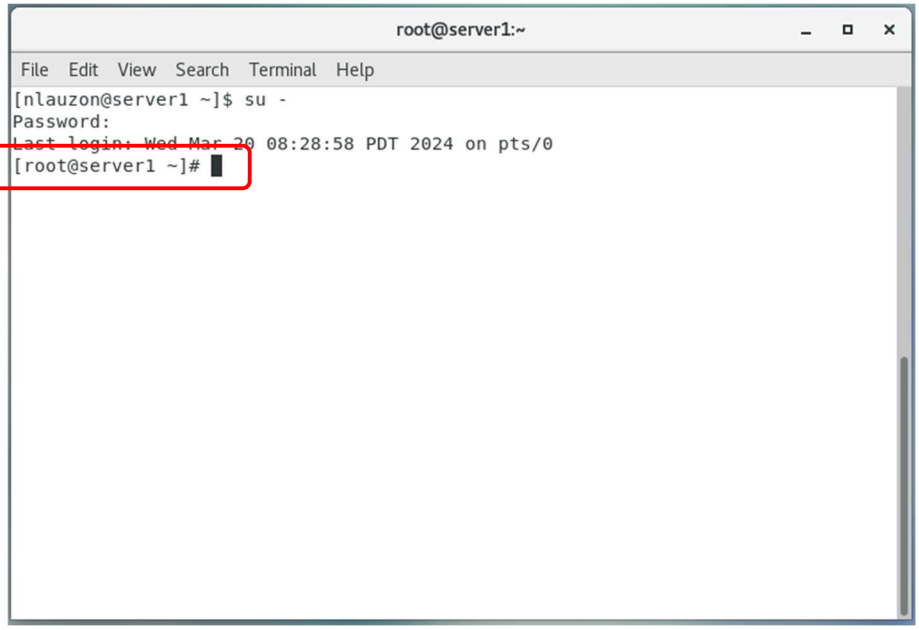
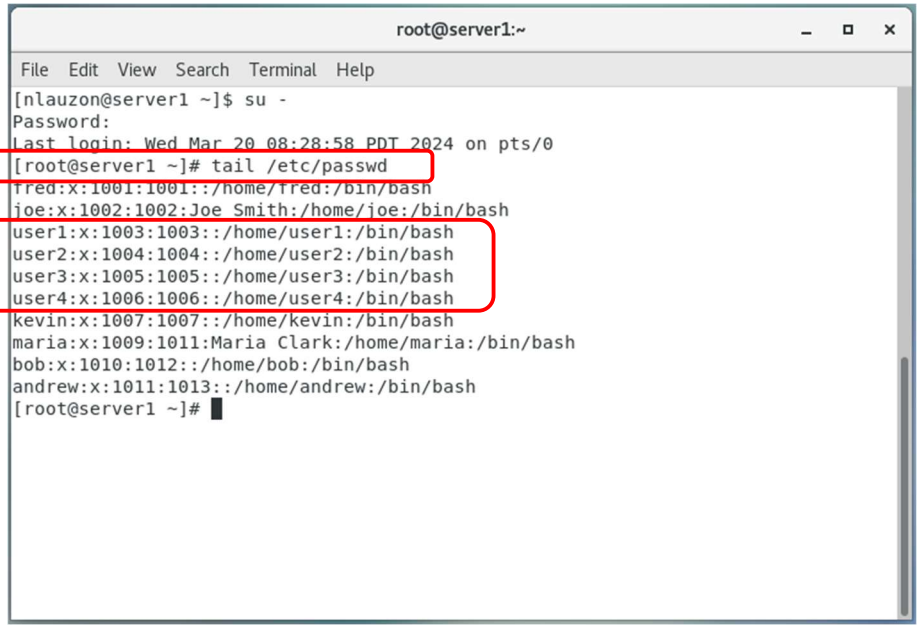
Ownership and Permissions 1
Nicolas Lauzon

1. **Log as root**



2. **Add a new user: user1 and set his password**

As a reminder, I already created user1 to user4 in a previous class. You insisted on us students doing it in class, saying it would be of some use to us later. I assume now is the time. Therefore, I will not repeat the process of creation here. I will mention it can be done with the following command: **[root@server1 ~]# useradd user1 ; passwd user1**. Below is the list of users I have already.



3. Add a new user: user2 and set his password

Please see question 2. It can be done with the following command:
[root@server1 ~]# useradd user2 ; passwd user2

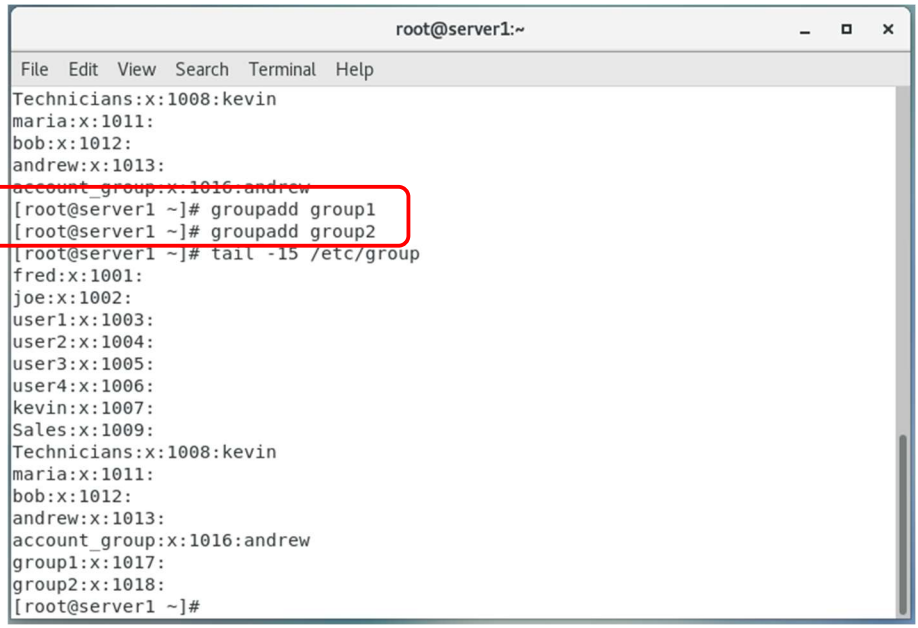
4. Add a new user: user3 and set his password

Please see question 2. It can be done with the following command:
[root@server1 ~]# useradd user3 ; passwd user3

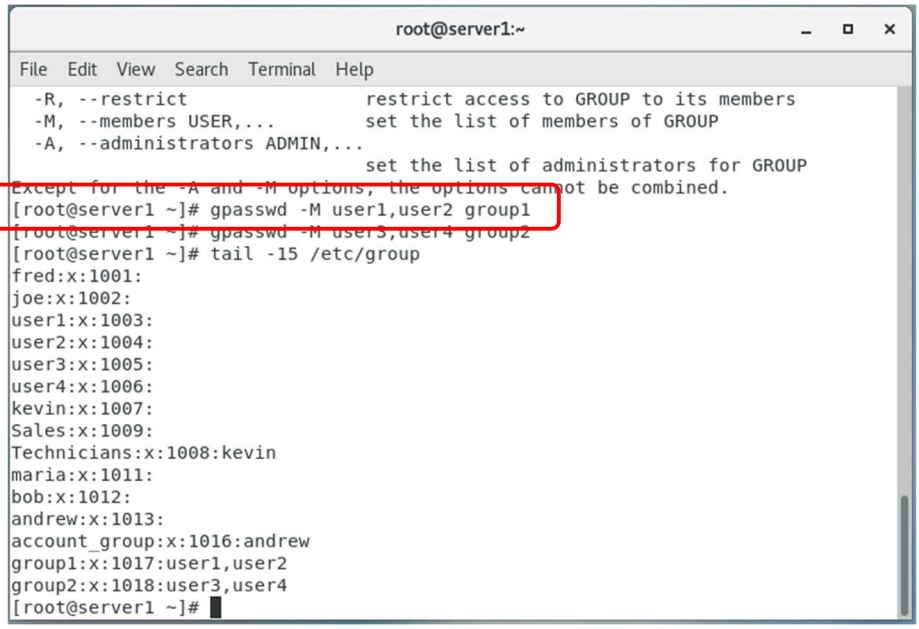
5. Add a new user: user4 and set his password

Please see question 2. It can be done with the following command:
[root@server1 ~]# useradd user4 ; passwd user4

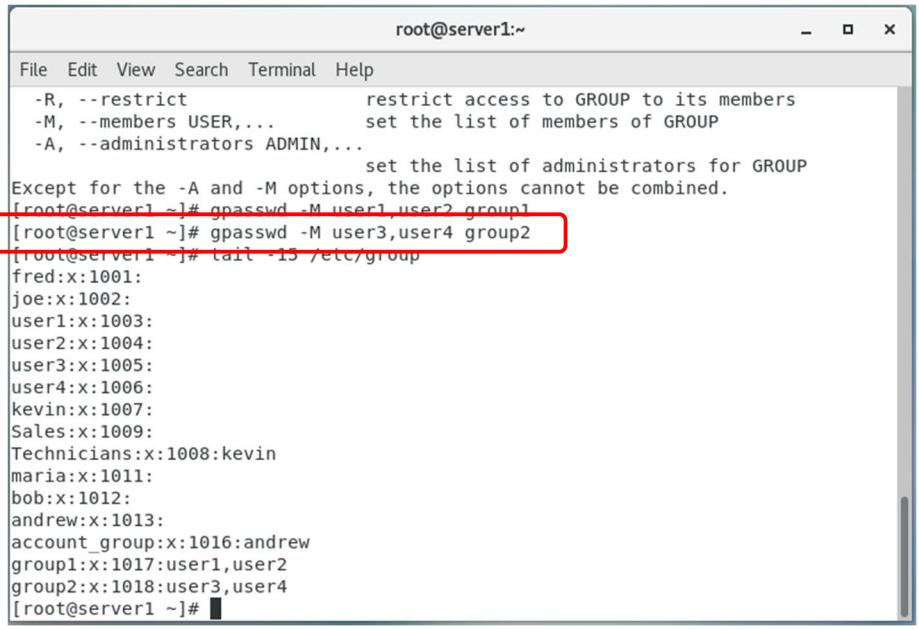
6. Create two groups: group1 and group2



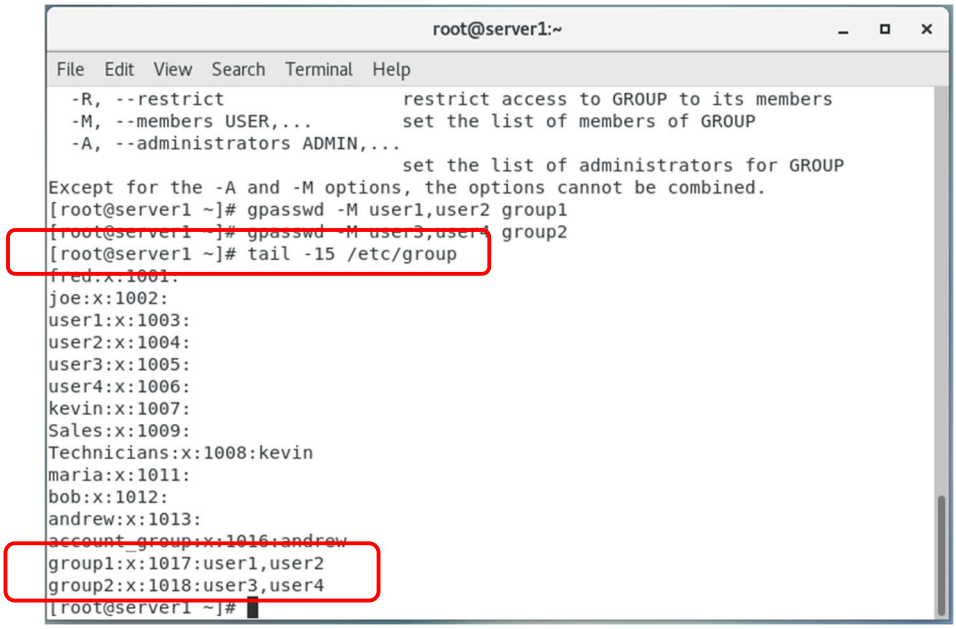
7. Add the user1 and user2 to group1



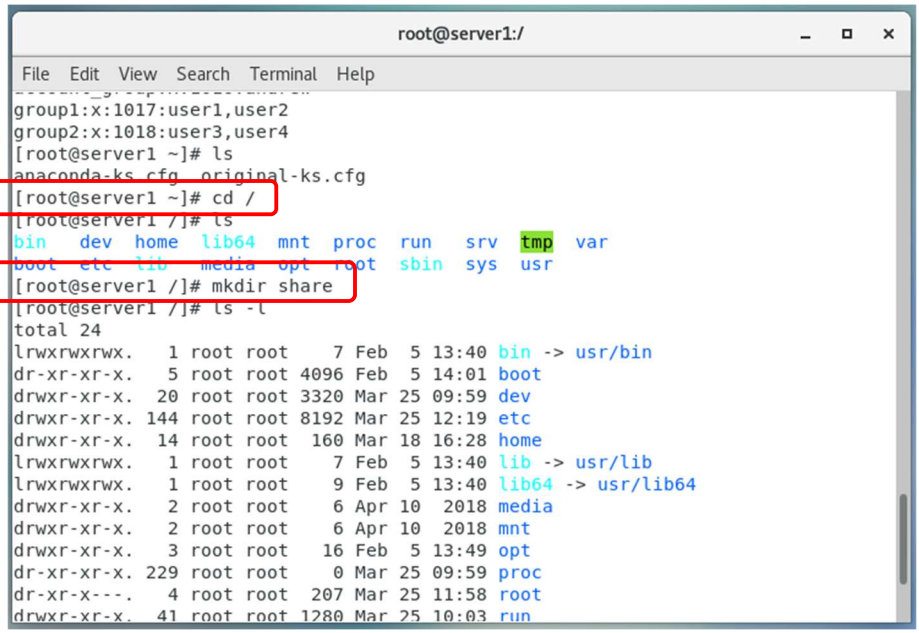
8. Add the user3 and user4 to group2



9. Verify your groups configuration



10. Create a directory /share



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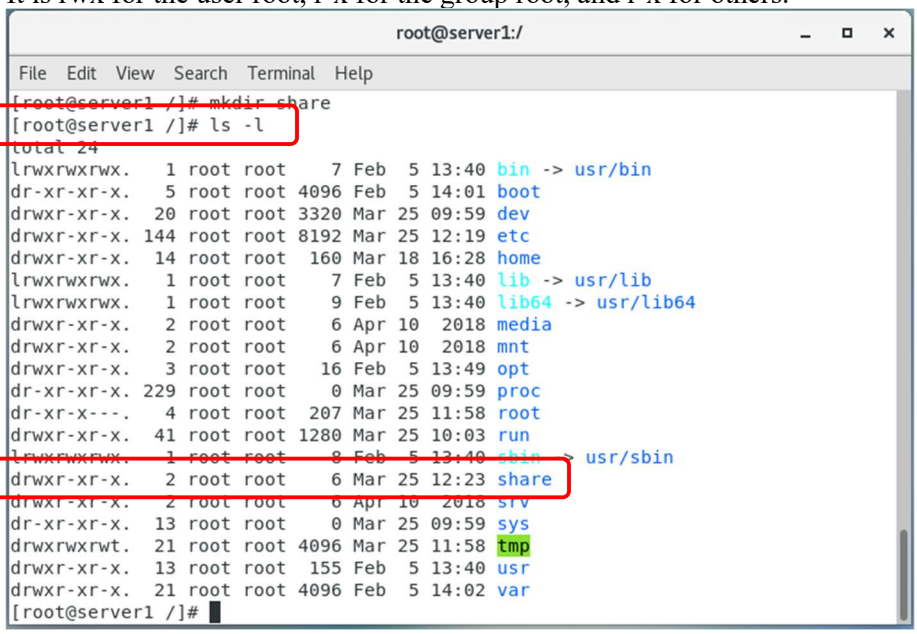
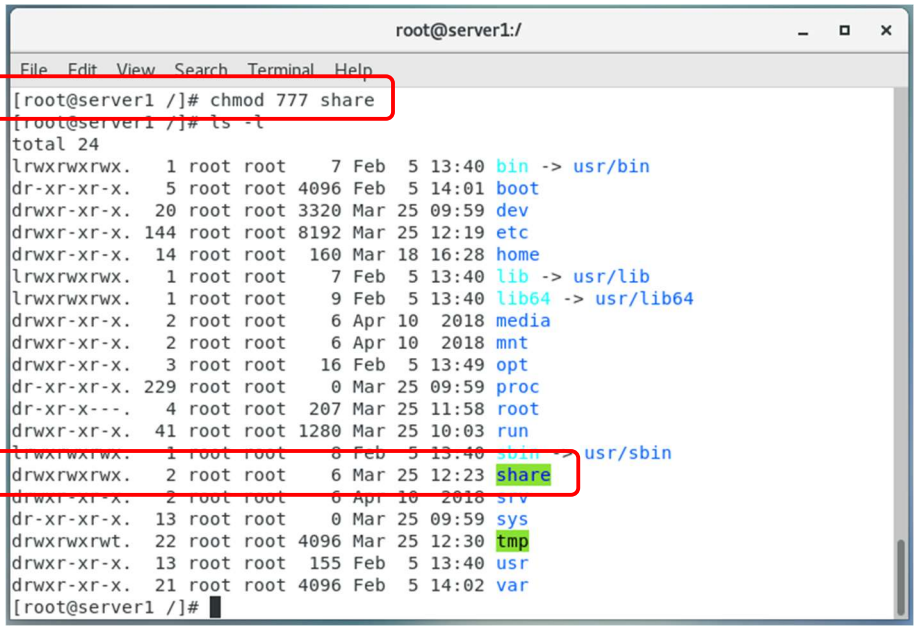
11. What are the permissions for the directory /share ?

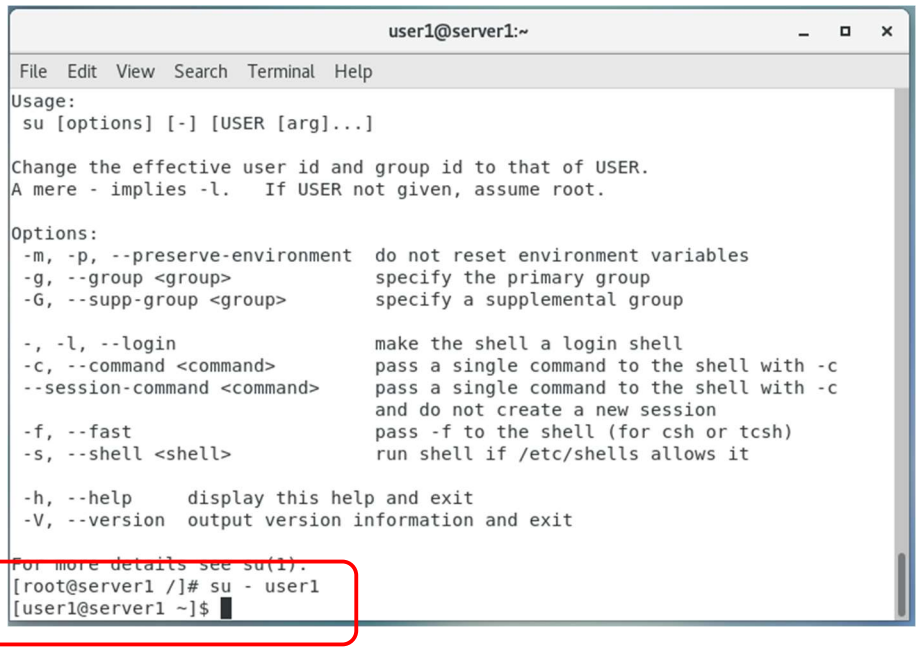
It is rwx for the user root, r-x for the group root, and r-x for others.



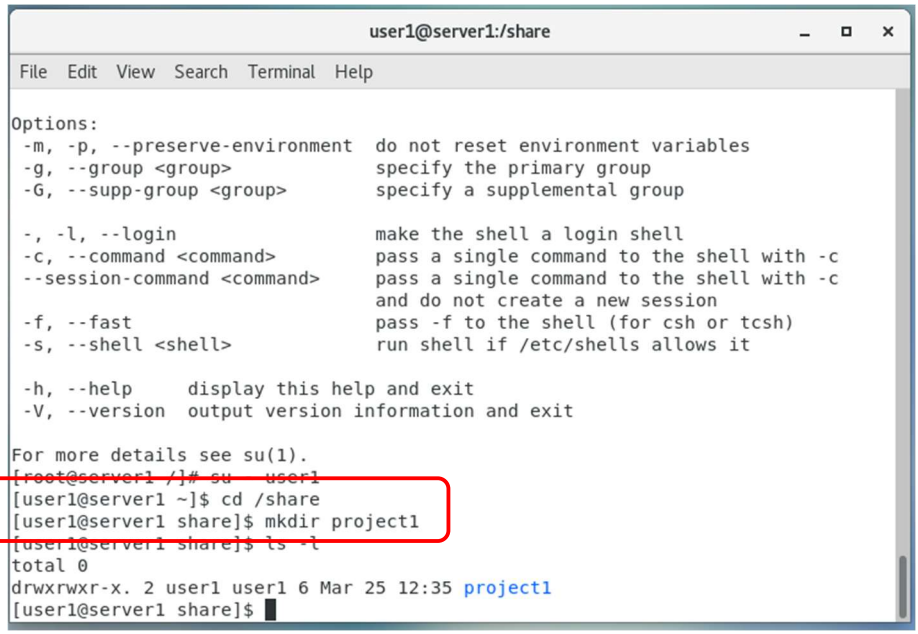
12. Allow read, write and execute to everyone (rwxrwxrwx) for the share directory



13. Log as user1

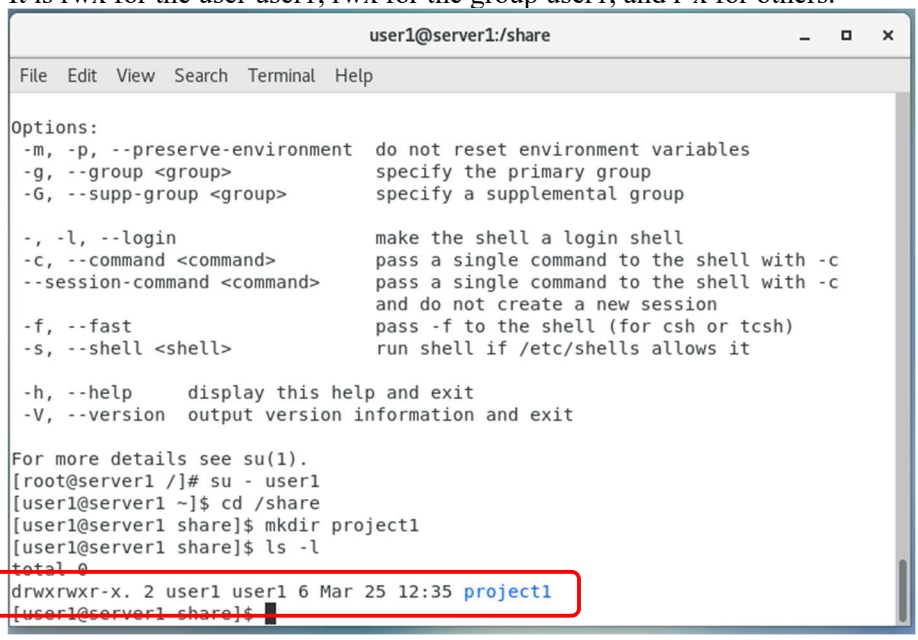


14. Create a directory named project1 under the share directory (/share/project1)

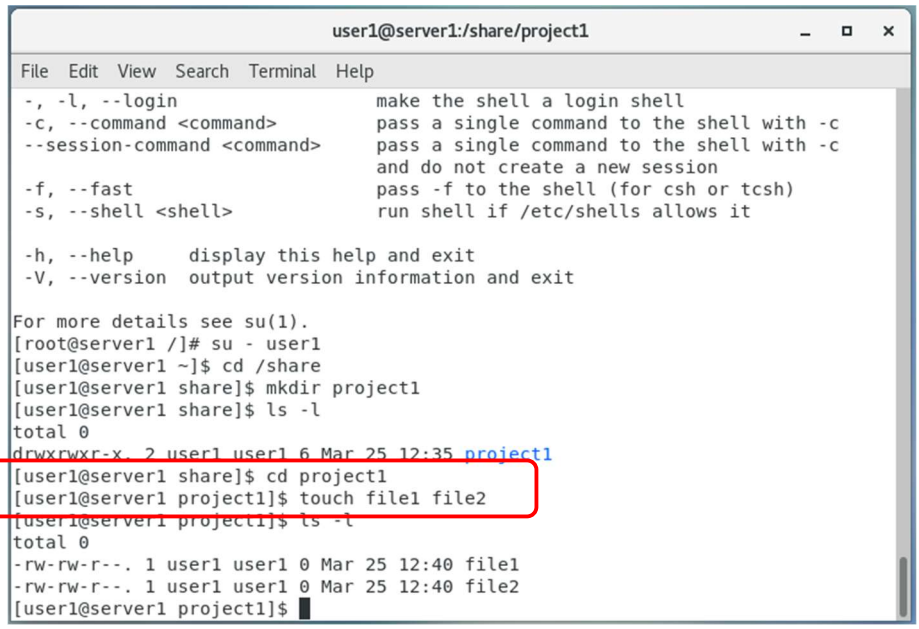


15. What are the permissions for the directory project1?

It is rwx for the user user1, rwx for the group user1, and r-x for others.



16. Create two files named file1 and file2 under the project1 directory



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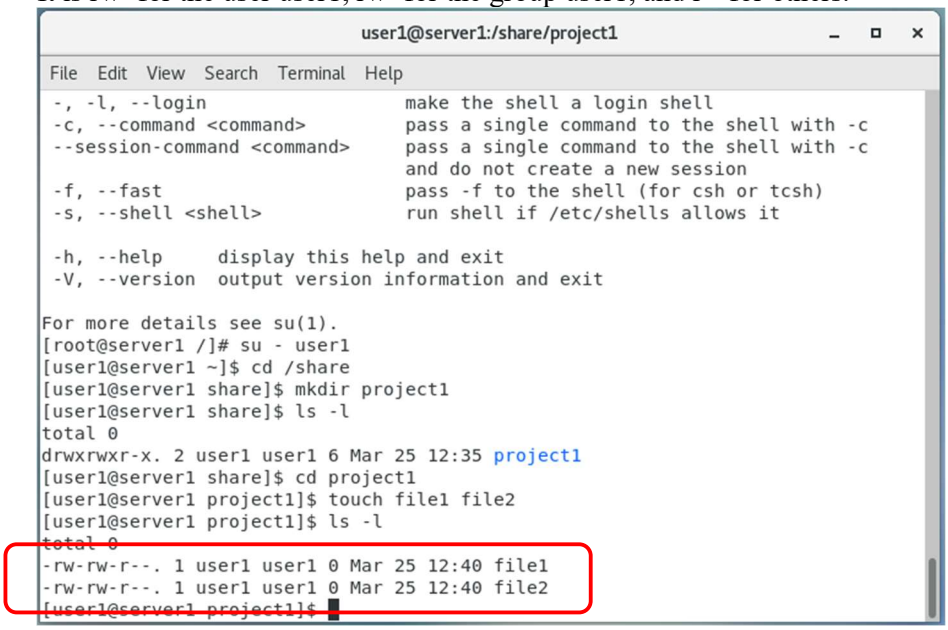
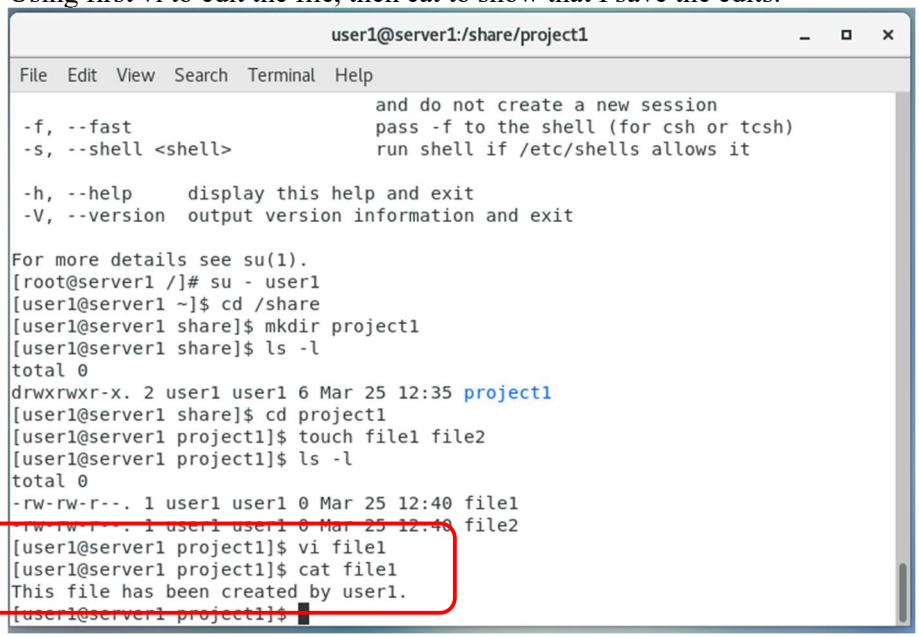
17. What are the permissions for file1 and file2?

It is rw- for the user user1, rw- for the group user1, and r-- for others.



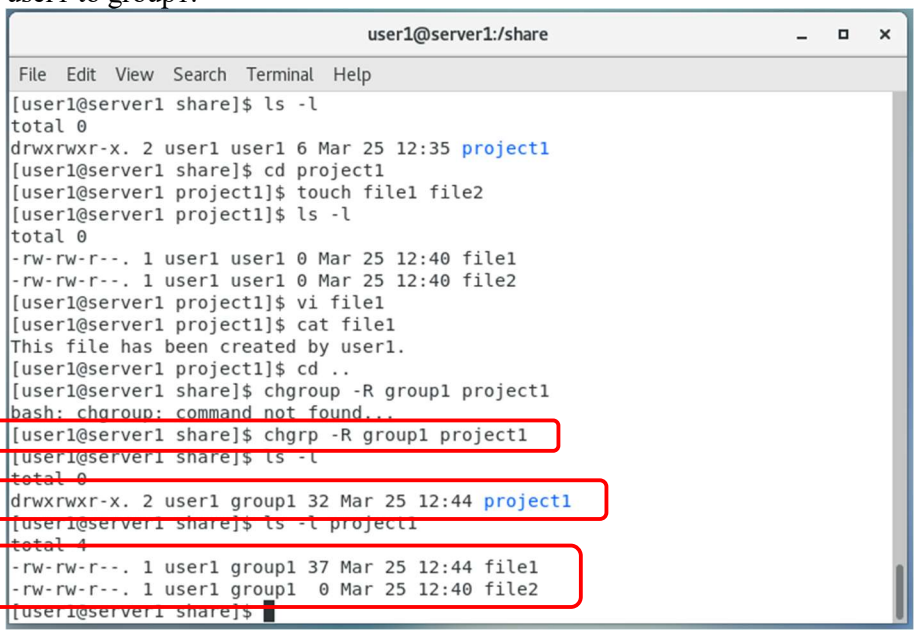
18. Edit the file1, add “this file has been created by user1” then save.

Using first vi to edit the file, then cat to show that I save the edits.

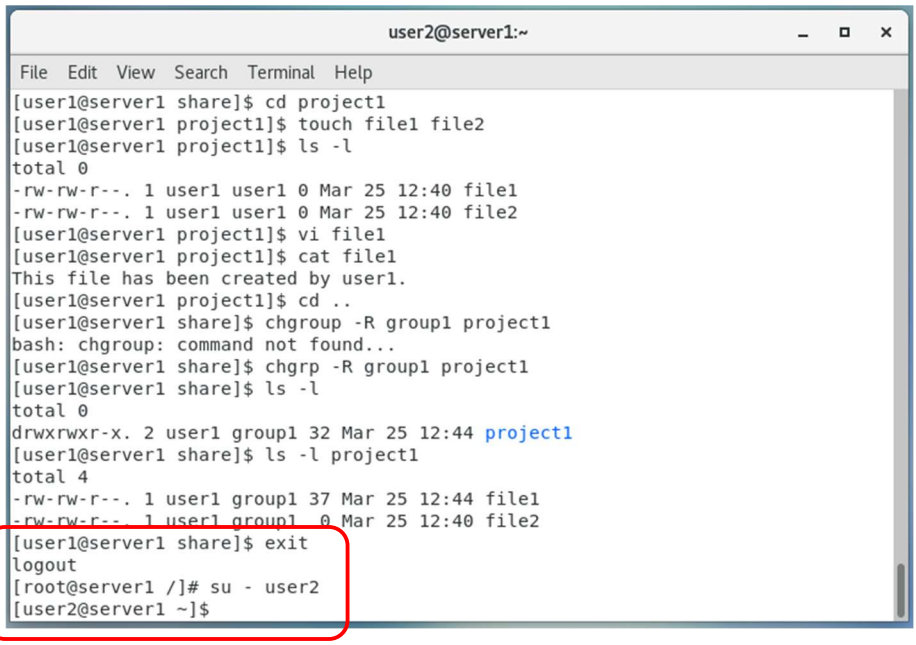


19. Change the group owner of the directory project1 to group1 (including files and subdirectory within it) and verify the new permissions.

The permissions are the same as those verified in questions 15 (rwxrwxr-x) and 17 (rw-rw-r--), because the command chgrp does not affect permissions. The group has however switched from user1 to group1.

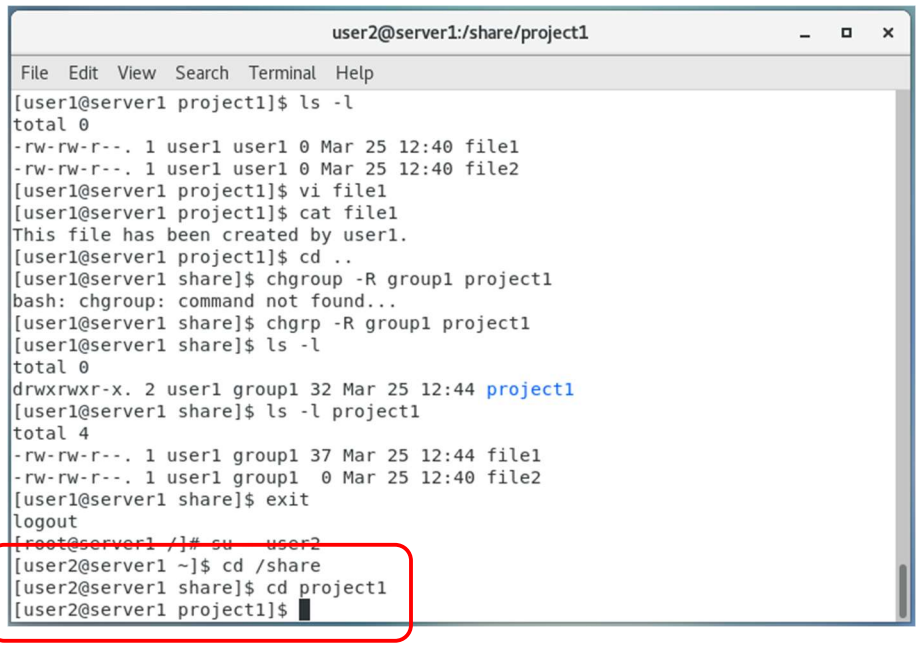


20. <u>Log as user2</u>



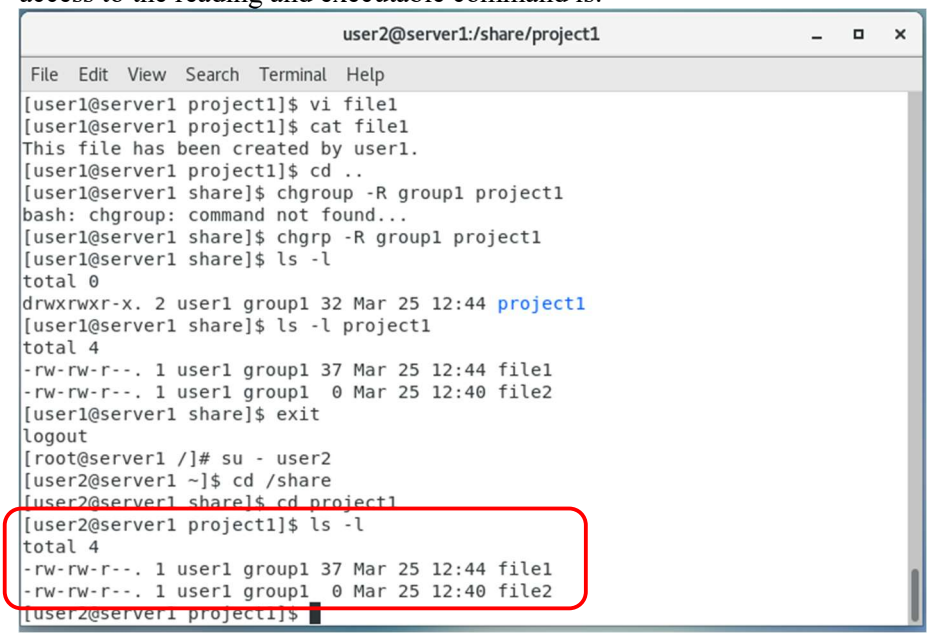
21. Are you able to cd to the directory project1? Why?

Yes, given that user2 belongs to group1. Permission for group1 are rwx for the directory, giving access to the executable command cd.



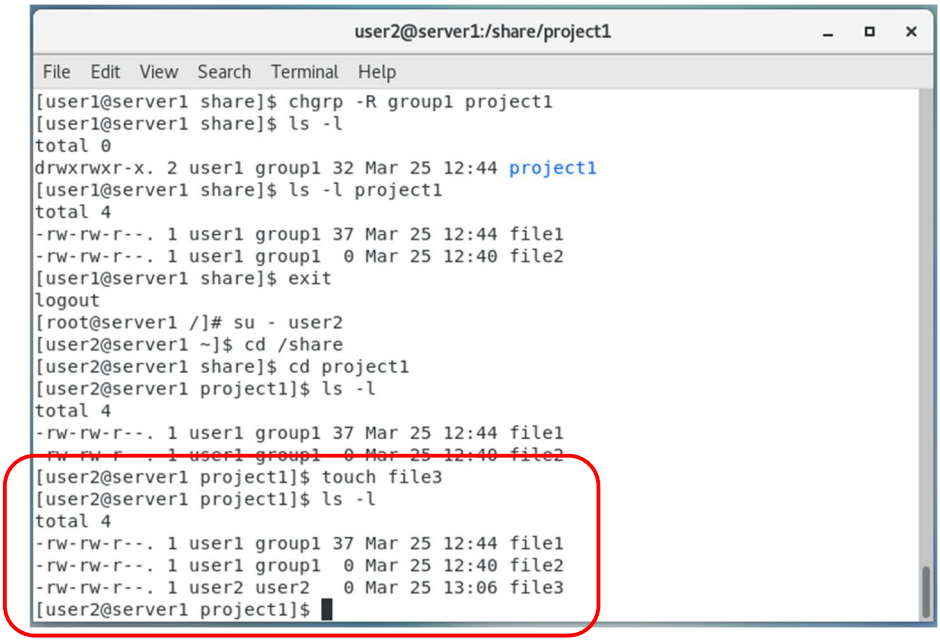
22. Can you list the directory project1 contents? Why?

Yes, given that user2 belongs to group1. Permission for group1 are rwx for the directory, giving access to the reading and executable command ls.



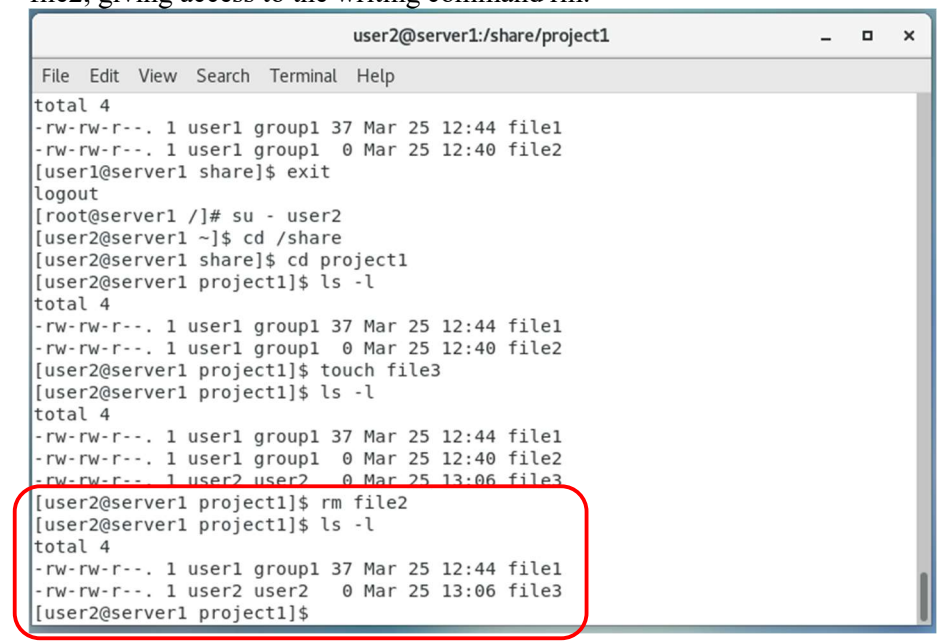
23. Are you able to create a new file in project1 directory? Why?

Yes, given that user2 belongs to group1. Permission for group1 are rwx for the directory, giving access to the writing command touch. The new file is however associated to user user2 and group user2.



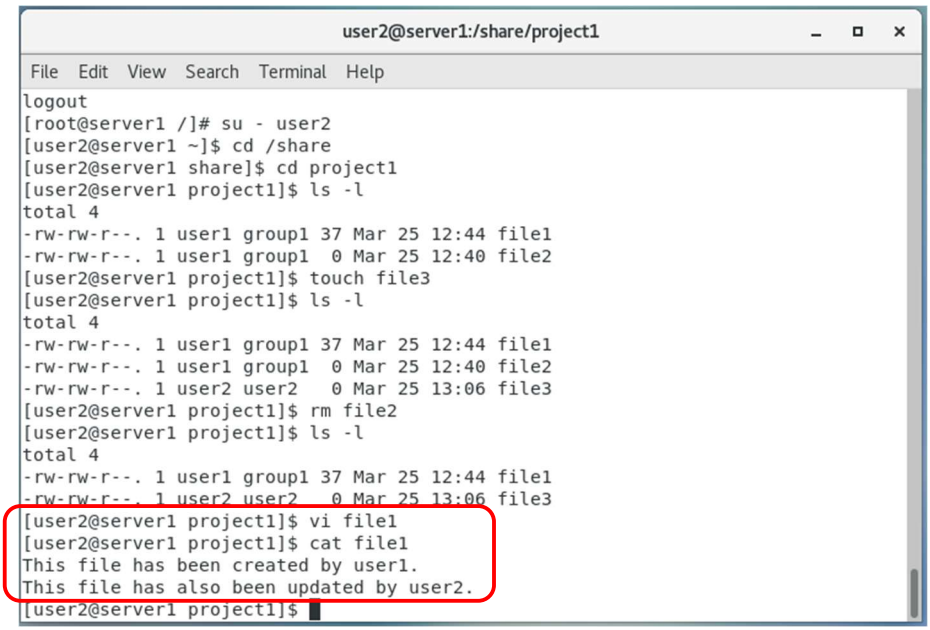
24. Are you able to delete file2 in project1 directory? Why?

Yes, given that user2 belongs to group1. Permission for group1 are rw- for the directory containing file2, giving access to the writing command rm.

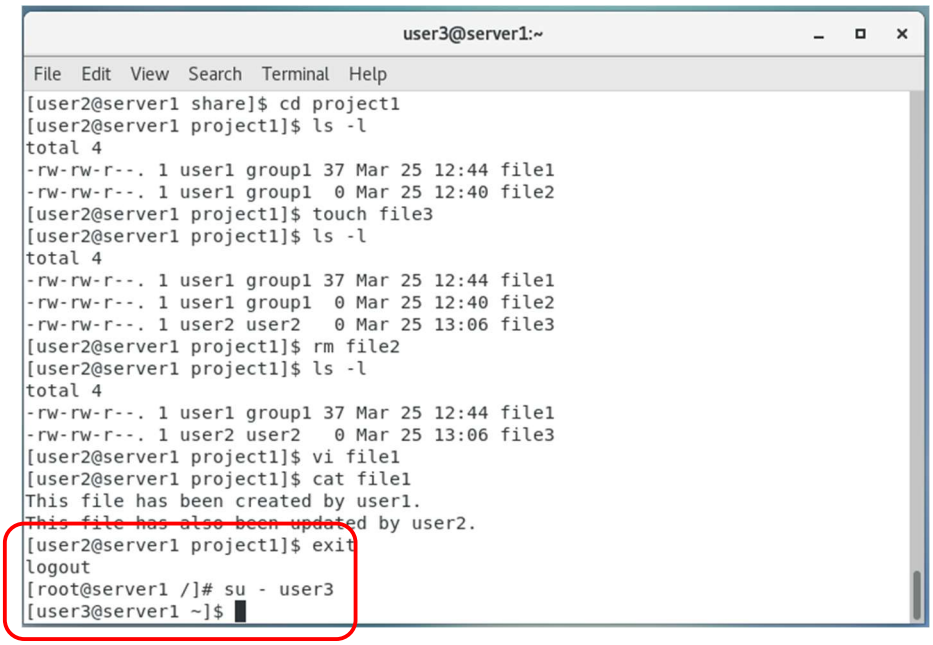


25. Are you able to change the file1? Why?

Yes, given that user2 belongs to group1. Permission for group1 are rw- for file1, giving access to the editor vi.

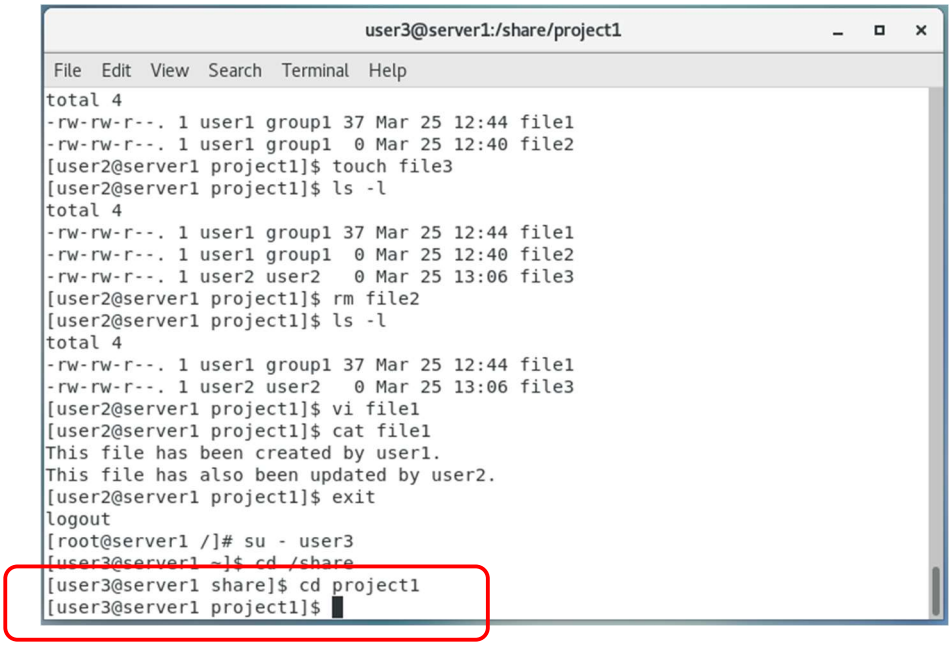


26. Log as user3



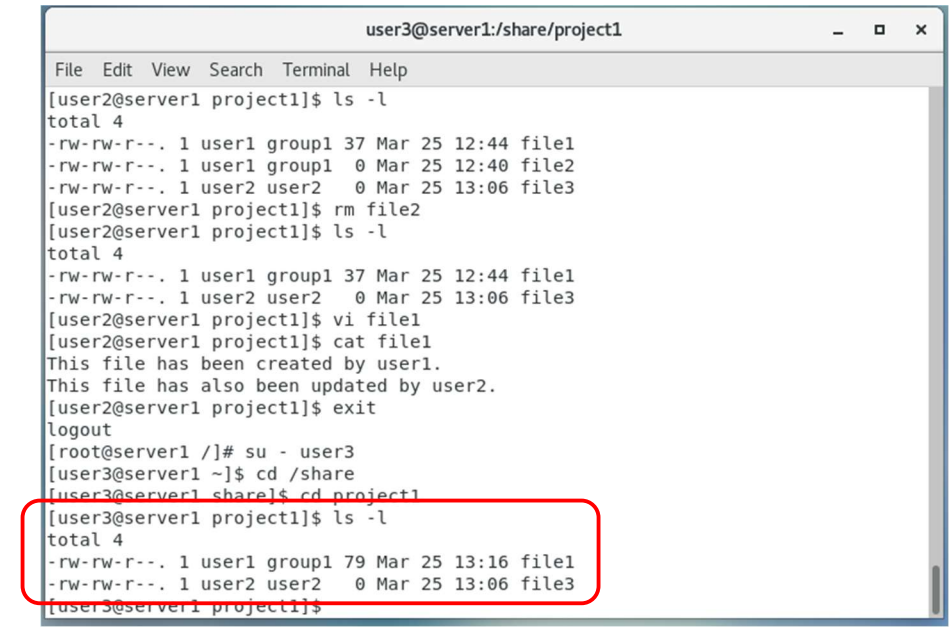
27. Are you able to cd to the directory project1? Why?

The user user3 belons to the other category, that is, he is neither user1 nor belonging to group1. Permissions for others are r-x for project1, and user 3 can access the directory from the executable command cd.



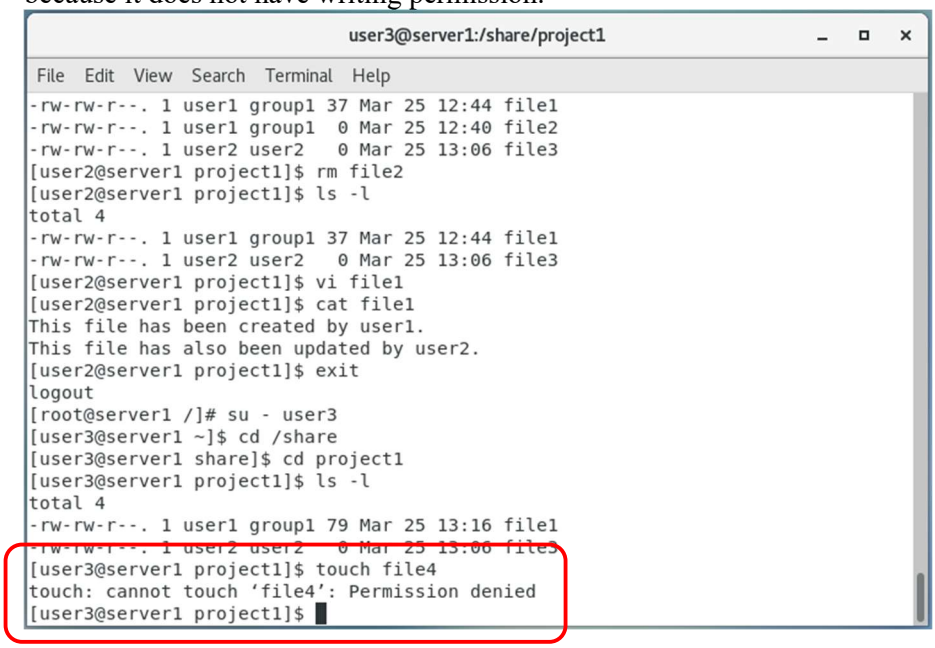
28. Can you list the directory project1 contents? Why?

The user user3 belons to the other category, that is, he is neither user1 nor belonging to group1. Permissions for others are r-x for project1, and user 3 can access the directory from the reading and executable command ls.



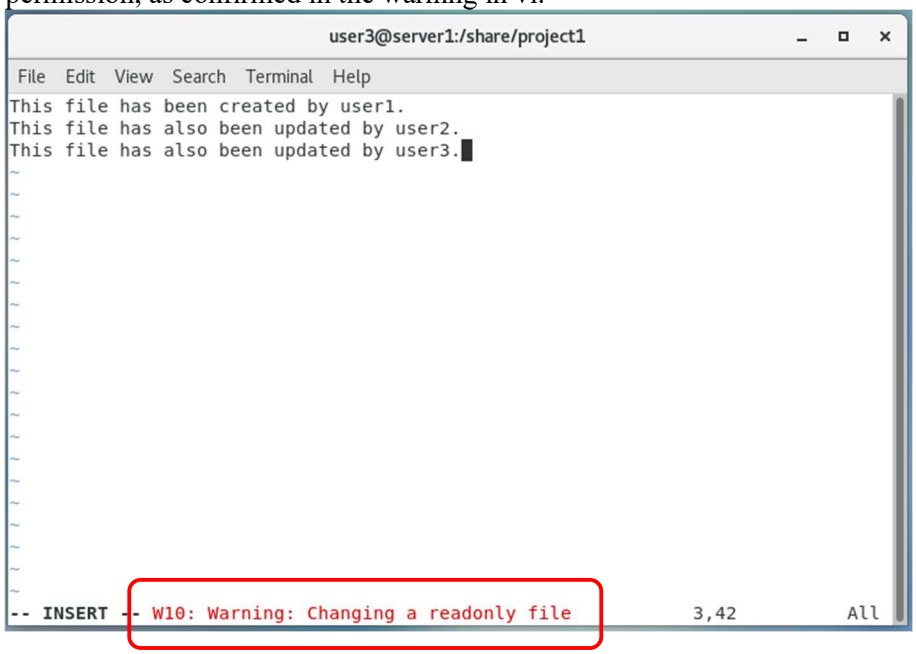
29. Are you able to create a new file in project1 directory? Why?

The user user3 belons to the other category, that is, he is neither user1 nor belonging to group1. Permissions for others are r-x for project1, and user 3 cannot write a new file in the directory because it does not have writing permission.

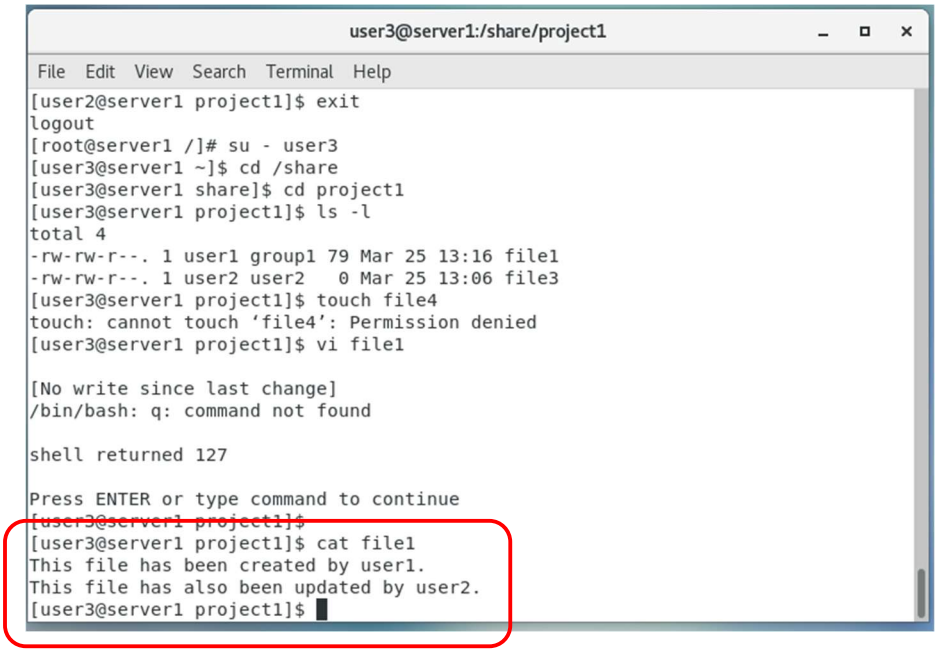


30. Are you able to change the file1? Why?

The user user3 belons to the other category, that is, he is neither user1 nor belonging to group1. Permissions for others are r-- for file1, and user 3 cannot write file1 because it does not have writing permission, as confirmed in the warning in vi.



The next screen shows the results of not saving file1, by using cat. However, vi offered me to override the read-only permission by using a specific command (I did not try though).



31. Are you able to delete file1 in project1 directory? Why?

The user user3 belons to the other category, that is, he is neither user1 nor belonging to group1. Permissions for others are r-- for file1, and user 3 cannot delete file1 because it does not have writing permission.