Linux System Administration Task 1 (first half)

Task 1

a. create a user with the username "testuser" , shell as bash, home directory at /home/user1 and assign them a password
b. Grant "testuser" sudo privileges
c. Change the ownership of the directory named "data" to "testuser" and make sure only owner has read, write ans execute permissions
d. Create a group named "developers" and add "testuser" to that group
e. Set the permissions of a file named "script.sh" to allow read and execute permissions for the owner and group only

Task 2

a. . Create a symbolic link named "mylink" that points to a file named "myfile.txt" in the current directory
b. Verify that the link works by accessing the contents of "myfile.txt" through "mylink"

Task 3

a. Create a file named "original.txt" and add some content to it.
b.   Create a hard link named "link1.txt" to "original.txt".
c. Verify that both "original.txt" and "link1.txt" have the same content.
d. Modify the content of "original.txt" and confirm that the changes are reflected in "link1.txt"

Task 4

    a. Create a tar archive named "backup.tar" containing all the files and directories in a folder named "/etc/ssh/".

    b. Extract the contents of "backup.tar" into a directory named "restore" preserving the directory structure

    c. Compress the "backup.tar" archive using gzip to create a file named "backup.tar.gz". (find the appropriate options for gzip compression)

    d. . Extract the contents of the compressed archive "backup.tar.gz" into a directory named "/restore" preserving the directory structure.

Task 5

You have a directory named "sensitive_data" with multiple subdirectories and files inside it. Currently, the ownership is set to "user1" as the owner and "group1" as the group.

    a. You need to change the ownership of the directory and all its contents to "user2" as the owner and "group2" as the group, ensuring that all subdirectories and files inherit the new ownership.

    b. Set the appropriate permissions to ensure that only the owner can read, write, and execute, the group can read and execute, and others have no access to the directory and its contents.

Task 6

    a. You have a user account named "salesuser" on the system, and you need to modify its primary group to "sales" instead of the current group. Update the user account "salesuser" to have the "sales" group as its primary group

Task 7

    a. The group "sales" is no longer required, and you need to remove it from the system. However, before deleting the group, you want to ensure that all files owned by the "sales" group are assigned to the "backup_sales" group instead.

Task 8

    a. The user "developer2" has left the organization, and you need to remove their user account from the system, including their home directory and mail spool. However, you want to ensure that the user's files are backup in a directory named "developer2_backup" within the "/backups" directory before deletion.