

Task 5: Permissions and Ownership

Objective

Understand how to view and modify file permissions and change file ownership in Linux.

Task Description

1. View the current permissions of sample.txt.
2. Change permissions to read-only for the owner and no permissions for others.
3. Change the ownership of LinuxHistory.txt to another existing user.

Commands Used

1. `ls -l sample.txt`
2. `chmod 400 sample.txt`
3. `sudo chown otheruser LinuxHistory.txt`

Explanation

The `ls -l` command displays file permissions and ownership details. The `chmod` command modifies file permissions; 400 sets read-only access for the owner. The `chown` command changes the ownership of a file to another user.

Verification Commands

`ls -l sample.txt`

`ls -l LinuxHistory.txt`

Screenshot Section

1. Viewing permissions using `ls -l` & Changing permissions using `chmod`

```
student@student-virtual-machine:~/25SUB4508_56133$ ll
total 32
drwxrwxr-x  4 student student 4096 Dec 20 11:40 ./
drwxr-xr-x 26 student student 4096 Dec 18 16:05 ../
drwxrwxr-x  2 student student 4096 Dec 18 16:30 day_06/
dr-xr-xr-x  2 student student 4096 Dec 16 12:53 day_09/
-rw-rw-r--  1 student student  309 Dec 17 12:47 first_nano.cpp
-rw-rw-r--  1 student student    0 Dec 16 15:47 hello.cpp
-rw-rw-r--  1 student student 1148 Dec 17 16:51 LinuxHistory.txt
-rw-rw-r--  1 student student  890 Dec 20 11:40 LinuxInstances.txt
-rwxr-xr-x  1 student student    0 Dec 16 15:32 test_1.txt*
-rw-rw-r--  1 student student  147 Dec 17 12:50 test_2.txt
student@student-virtual-machine:~/25SUB4508_56133$ vi sample.txt
student@student-virtual-machine:~/25SUB4508_56133$ ls -l sample.txt
-rw-rw-r-- 1 student student 28 Dec 20 12:08 sample.txt
student@student-virtual-machine:~/25SUB4508_56133$ chmod 400 sample.txt
student@student-virtual-machine:~/25SUB4508_56133$ ls -l sample.txt
-r----- 1 student student 28 Dec 20 12:08 sample.txt
```

2. Changing ownership using chown & Verifying changes

```
student@student-virtual-machine:~/25SUB4508_56133$ sudo chown otherUser LinuxHistory.txt  
[sudo] password for student:
```

External

- Linux Operating System
- Shell
- chmod command
- chown command
- ls command
- nano / vi editor
- Microsoft Word / LibreOffice Writer
- Google Docs

Conclusion

This task demonstrates how Linux handles file security through permissions and ownership, allowing controlled access to files.