Linux Labs – Questions and Instructions

Lab 1: Ownership and Permissions Basics

1. Create three files: file1.txt, file2.txt, file3.txt.

2. Who owns the files?

3. What are the group permissions?

4. Which files are writable?

5. Clean everything.

Lab 2: Working with Permissions and Access

Step 1: Explore Your Home Directory (home/users)

- Open a terminal and go to your home directory.

- List your files and folders.

- Identify owners, groups, and permission symbols (rwx, etc.).

Step 2: Analyze and Copy a System File

- Examine the file /etc/passwd.

- Try to move it to your home directory.

- Try to copy it instead.

- Reflect on which command works and why.

Step 3: Inspect Ownership and Permissions

- After copying the file /etc/passwd as datafile.txt, inspect:

- Who owns it?

- What are its access rights?

Step 4: Test Read Restrictions

- Try reading datafile.txt.

- Then remove your own read access.

- Try reading it again — what happens?

Step 5: Make the File Read-Only

- Change permissions so the file is readable but not writable by anyone.

Step 6: Directory Access Test

- Create a folder (project/) and a file inside it.

- Remove execute permission from the folder.

- Try listing and accessing the file.

Step 7: Modify Access Again

- Remove read permission, but restore execute permission.

- Attempt to enter the folder and open a file.

Step 8: Restore Full Access

- Grant yourself full rights (rwx) on the project/ directory again.

Step 9: Lock Down a Documents Folder

- Create a folder structure: documents/versions/ with text files.

- Set permissions so only you can modify, but others may read or traverse.

Step 10: Read-Only Files

- Change all the files in documents/versions/ to read-only for everyone (including yourself).

Step 11: Script Directory Access

- Create a scripts/ folder and sample script files.

- Give yourself full access.

- Allow your group to execute, but block all access for others.

Step 12: Restrict Execution

- Set script files so that only you and your group can run them, with no access for others.

Step 13: Group Ownership Practice

- Create folders: course/labwork/ and course/tests/.

- Change their group ownership to a common group (e.g., users).

Step 14: Set Permissions for Course Materials

- For the course/ structure:

- Main folder: only owner and group can access.

- labwork/: group can read and enter.

- tests/: no access to group or others.

Step 15: Secure Test & Lab Files

- Create files under labwork/ and tests/.

- Set them so only you can read and write them.

Step 16: Edit Draft Permissions

- Create a drafts/ folder and sample files.

- Remove all access for group and others on the folder.

- Then remove read access from group on the individual files.

Step 17: Open Access to Project Files

- Grant read access to everyone on files inside the project/ directory.

Step 18: Check Your umask

- Run the umask command.

- Write down the value you see.

- What does it mean?

Steps 19–21: Experiment with umask

- Create files before and after changing the umask value (e.g., to 000).

- Observe how default permissions differ.

(Optional) Cleanup

- Optionally delete all files and folders created during the lab.