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Description automatically generatedCSCI 7873 Shell Programming

Summer 2025

Lab 04: Users and Permissions

|  |  |
| --- | --- |
| Name: |  |
| Student ID: |  |

**Instructions:**

* Login to Linux and start up the terminal emulator.
* Answer all questions by inserting screenshots below each question.
  + **Ensure that the screenshot shows both the command and result.**
* Upon completion, rename the file to reflect your first and last name, and submit it (in docx or pdf format) on WebCampus.

**Questions:**

Note: Most commands will require administrator privileges, either root user or sudo privileges should work.

1. Create a new user named user1 and change the default shell to /bin/bash. You can change the default shell using the option -s or --shell as you create the user using the useradd command, or after the user is created using usermod command.
2. Set a password for user1.
3. Login to user1, show current working directory, and exit out of user1.
4. Repeat steps 1, 2, and 3 for another two users: user2 and user3.
5. Create a new group named group1 and add user1 and user2 to group1. Note: use usermod with -aG to add the user to a new group.
6. Show the groups of user1, user2 and user3.
7. Switch to user1 and create a new directory named lab04. In lab04, create two empty files named one, two and three, and add some content to the files (by redirecting the output of some commands to these files).
8. Switch to user2. Can you view the content of directory /home/user1/lab04?
9. Switch back to user1 and change the group of user1 home directory (/home/user1) to group1.
10. Run the command ls -l /home and note the owners and groups for all users.
11. Switch back to user2. Can you view the content of directory /home/user1/lab04?
12. Can you read and change the content of file one?
13. Switch back to user1 and change the read permissions of the files as follows:

* one: only owner can read.
* two: only owner and group can read.
* three: anyone can read.

1. Change the owner and group of the files as follows:

|  |  |  |
| --- | --- | --- |
|  | Owner | Group |
| one | user1 | user1 |
| two | user1 | group1 |
| three | user2 | user2 |

1. Try to view the content of the files one, two, and three from all three users and complete the table below to indicate who can read what.

|  |  |  |  |
| --- | --- | --- | --- |
|  | user1 | user2 | user3 |
| one |  |  |  |
| two |  |  |  |
| three |  |  |  |