## Lab 4 – Theory questions

**Please submit your answers to the following theory questions in a text document on Moodle under the link “Lab 4 Theory Upload”.**

1a. What command is used to change the password of a user.

**passwd**

b. What are the requirements of a good UNIX password.

**Requirements of a good UNIX password typically include:**

* **Length: A good password should be of sufficient length, typically at least 8 characters.**
* **Complexity: It should include a mix of uppercase and lowercase letters, numbers, and special characters.**
* **Unpredictability: Avoid using easily guessable information like common words, phrases, or patterns.**
* **Uniqueness: Do not reuse passwords across multiple accounts.**
* **Regular Changes: Periodically change passwords to enhance security.**
* **Non-Dictionary: Avoid using dictionary words or easily guessable combinations.**

2. Explain the following:

1. user

**A user is an individual account created for a specific person or entity. Users have their own home directories, access to system resources, and permissions, allowing them to log in and perform tasks on the system. Each user has a unique username and user ID (UID) associated with them.**

1. group

**A group is a collection of users with similar permissions and access rights. Groups are used to simplify access control and manage permissions efficiently. Users can belong to one or more groups, and each group has a unique name and group ID (GID). When files and directories are assigned group ownership, all users in that group can access those files with the group's permissions.**

1. Permission

**Permissions in UNIX-like systems refer to the access rights and restrictions on files and directories. There are three types of permissions: read (r), write (w), and execute (x). Permissions can be set for three categories: owner, group, and others. For example, "rwxr-xr--" means the owner has read, write, and execute permissions, the group has read and execute permissions, and others have read-only permissions for a file.**

3. Can a user be part of multiple goups?

**Yes, a user can be part of multiple groups in UNIX-like operating systems. This feature allows users to have different sets of permissions and access to various resources based on the groups they belong to. A user's primary group is typically specified in their user account settings, but they can also be members of multiple supplementary groups.**

4. What are the 2 things that the command *userdel USER\_NAME* do ?

**The "userdel" command is used to delete a user account. It removes the user's information and associated files. It performs two main actions:**

**a. It removes the user's home directory (if specified). b. It deletes the user's entry from the system's user database, typically found in the "/etc/passwd" file.**

5. What is the main advantage to using the Command Line Interface to manage users ?

**The main advantage of using the Command Line Interface (CLI) to manage users is efficiency, automation, and granular control, allowing for precise customization of user accounts and the ability to script and automate user management tasks.**

6. What does the /etc/passwd file contain ?

**The "/etc/passwd" file contains user account information, including usernames, user IDs, group IDs, home directories, and default shells, but not passwords (which are typically stored in "/etc/shadow" for security).**