**“Київський фаховий коледж зв’язку”**

**Циклова комісія Комп’ютерної та програмної інженерії**

**ЗВІТ ПО ВИКОНАННЮ**

**ЛАБОРАТОРНОЇ РОБОТИ №8**

з дисципліни: «Операційні системи»

**Тема:**  **“Захист системи та користувачів у Linux. Створення користувачів та груп”**

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**Мета роботи:**

**1. Отримання практичних навиків роботи з командною оболонкою Bash.**

**2. Знайомство з базовими діями при створенні нових користувачів та нових груп користувачів.**

**Матеріальне забезпечення занять**

**1. ЕОМ типу IBM PC.**

**2. ОС сімейства Windows (Windows 7).**

**3. Віртуальна машина – Virtual Box (Oracle).**

**4. Операційна система GNU/Linux – CentOS.**

**5. Сайт мережевої академії Cisco netacad.com та його онлайн курси по Linux**

**Хід роботи**

**4.1It seems there might be a misunderstanding or a typo in your question. As of my knowledge cutoff in January 2022, the term "UPG" is not widely recognized or associated with a specific concept in the context of technology, networking, or common IT terminology.**

**If "UPG" refers to something specific or if there's additional context you could provide, I'd be happy to try to help. Otherwise, please double-check the term, and if there's a different acronym or term you intended, feel free to clarify, and I'll do my best to assist you.**

**4.2 In Unix-like operating systems such as Linux, you can create user groups using the groupadd or addgroup commands. Here are examples using both commands:**

**Using groupadd:**

**sudo groupadd group\_name**

**Where group\_name is the name of the new user group.**

**For example:**

**sudo groupadd developers**

**Using addgroup:**

**sudo addgroup group\_name**

**This command is an alternative to groupadd and is available on some systems.**

**For example:**

**sudo addgroup designers**

**4.3 To change settings or modify user groups in Unix-like operating systems, particularly in Linux, you can use commands like usermod, gpasswd, or other related tools. Here are examples using usermod and gpasswd:**

**Using usermod to add a user to a group:**

**sudo usermod -aG group\_name username**

**This command adds a user to an existing group.**

**Example:**

**sudo usermod -aG developers john**

**Using gpasswd to add or remove users from a group:**

**sudo gpasswd -a username group\_name # Add user to group**

**sudo gpasswd -d username group\_name # Remove user from group**

|  |  |
| --- | --- |
| passwd | Changes the password for the current account. |
| chage | Changes the password settings for the current account. |
| useradd | Creates a new account. |
| usermod | Modifies an existing account. |
| userdel | Deletes an existing account. |
| groupadd | Creates a new group. |
| groupmod | Modifies an existing group. |
| groupdel | Deletes an existing group. |
| gpasswd | Adds or removes group members. |
| chgrp | Changes the owner group of a file or directory. |
| chown | Changes the owner of a file or directory. |
| sudo | Allows a user to execute commands with superuser privileges. |
| sudoers | A file that contains a list of users who have access to sudo. |
| passwd -l <username> | Locks the account. |
| passwd -u <username> | Unlocks the account. |
| passwd -x <username> | Removes the password for the account. |
| passwd -S <username> | View account status. |
| useradd -g <groupname> <username> | Creates an account with the default group. |
| useradd -G <group1>, <group2> <username> | Creates an account with additional groups. |
| useradd -m <username> | Creates an account from the home folder. |
| useradd -s <shell> | Creates an account with the given shell. |
| usermod -g <groupname> <username> | Changes the default group for an account. |
| usermod -G <group1>, <group2> <username> | Adds an account to additional groups. |
| userdel <username> | Deletes an account. |
| groupadd <groupname> | Creates a group. |
| groupmod -g <gid> <groupname> | Changes the group ID. |
| groupmod -n <newname> <groupname> | Changes the group name. |
| groupdel <groupname> | Deletes a group. |
| gpasswd -a <username> <groupname> | Adds a user to a group. |
| gpasswd -d <username> <groupname> | Removes a user from a group |
| chgrp <groupname> <filename> | Changes the group of the owner of the file. |
| chown <username> <filename> | Changes the owner of a file. |

**КОНТРОЛЬНІ ЗАПИТАННЯ**

**Виконував студент Колотуша Микола**

**1. Saving passwords in configuration files:**

**- To ensure security. Passwords are usually stored as hashes, which are irreversible, meaning it is impossible to recover the original password from the hash.**

**2. Using the root account:**

**- For security purposes. The root account has the highest privileges, so using it for day-to-day operations can lead to unforeseen consequences or even data loss.**

**3. Obtaining su and sudo special privileges:**

**- su: User change, new user password must be entered.**

**- sudo: Execute a command with special privileges, usually specified before the command without having to enter the root password.**

**4. Home directory of user root:**

**- For security purposes. The root home directory is located in `/root`, separate from user directories in `/home`.**

**5. Getent command:**

**- Used to retrieve information about users, groups, hosts, etc. from various sources such as `/etc/passwd`, `/etc/group`, other authentication sources.**

**6. Removing user groups:**

**- `groupdel group\_name`**

**- Group information may remain in the `/etc/group` file, but the group itself will be deleted.**

**7. Change user password:**

**- `passwd username`**

**8. Purpose of the chage command:**

**- The chage command is used to change the dates of the last password change, the password's validity period, and other parameters of the user account.**

**9. Parameters of the usermod command:**

**- The most used parameters:**

**- `-c`: User comment.**

**- `-d`: User home directory.**

**- `-e`: Account expiration date.**

**- `-G`: Add user to groups.**

**- `-l`: Change username.**

**- `-p`: Set password.**

**- `-u`: Change user UID.**

**Conclusion:**

During the execution of the LB, I learned about new commands and what they mean, but unfortunately it did not work out in practice, because of problems with the terminal