**"Kyiv Vocational College of Communication"**

**Cyclic Commission of Computer Engineering**

**EXECUTION REPORT**

**LABORATORY WORK No. 9**

from the discipline: "Operating systems"

**Topic: "System and user protection in Linux. Creating users and groups"**

**Performed by students of the group:**

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**Checked by the teacher**

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**Work of group students КСМ-13Б Team:** **bed0lagi**

**The goal of the work:**

1. Getting practical skills for working with the Bash command shell.

2. Familiarity with basic file system navigation commands.

3. Familiarity with basic commands for managing files and directories.

**Material provision of classes**

1. IBM PC type computer.

2. OS family Windows (Windows 7).

3. Virtual machine - Virtual Box (Oracle).

4. GNU/Linux operating system - CentOS.

5. Cisco network academy site netacad.com and its online Linux courses

**This part was completed by Греков Данііл**

**4.1. Explain the concept of UPG, when it is appropriate to use them?**

On Linux systems, user and group profiles, or UPGs, are used to control who has access to what files and directories. User and group names, default groups, group IDs, and file and directory permissions are all contained in UPGs.

**\* UPG should be used in the following cases:**

- To centrally control the system's file and directory access permissions.

- To limit user access permissions to files and directories in order to maintain system security.

- To make system administration easier by minimizing the number of commands required to control permissions.

**4.2. What commands can be used to create user groups? Give examples**

- The following commands are used in Linux systems to create a user group:

\* groupadd <groupname>: this command establishes a group with the specified name.

\* groupadd -g <gid> - forms a group with the group ID <gid> and name <groupname>.   
**- For instance, you can use the following command to create a group called "developers" with the group ID of 1000:**

groupadd -g 1000 developers

**4.3. What commands can be used to change user group settings? Give examples**

- The following commands are used in Linux systems to modify user group settings:

The command \* groupmod -n <newname> <groupname> modifies the group name <groupname> to <newname>.

\* groupmod -g <gid> - modifies the group <groupname>'s ID to <gid>.

\* adds user <username> to group <groupname> using groupmod -a <username> <groupname>.

User <username> is removed from group <groupname> by using the \* groupmod -d <username> \groupname> command.   
**- For instance, you can use the following command to rename the group from "developers" to "dev":**

\* groupmod -n dev developers

**- Use the following command to set the "developers" group's ID to 2000:**

\* groupmod -g 2000 developers

**- Use the following command to add user "johndoe" to the "developers" group:**

\* gpasswd -a johndoe developers

**Тable**

|  |  |
| --- | --- |
| passwd | Аlters the current account's password. |
| 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 | Gives a user the ability to run commands with superuser rights.. |
| 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> | Modifies the file owner's group.. |
| chown <username> <filename> | Changes the owner of a file. |

**Control questions:**

**This part was completed by Богдан Раєв**