**"Kyiv Vocational College of Communication"**

**Cyclic Commission of Computer Engineering**

**EXECUTION REPORT**

**LABORATORY WORK No. 4**

from the discipline: "Operating systems"

**Topic: "Linux Commands for Process Management"**

**Performed by students of the group:**

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**Work of group students КСМ-13Б Team:** **PMC wolf group**

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**The goal of the work:**

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

2. Familiarity with basic commands for process management.

**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

**Tasks for preliminary preparation:  
The material was prepared by student Погребняк Ілля**

**2.1.** There are several commands for monitoring the status of processes in Linux:

ps - displays a list of processes launched by the user.

top - displays a list of processes running on the host machine in real time.

htop - graphical interface of the top command.

pgrep - displays the identifiers of processes that match the specified criteria.

pkill - stops processes that match the specified criteria.

You can use the following methods to view possible command parameters:

-h or --help is a command option that displays short help. man - the command to view the documentation for the command.

-l or --long is a command option that displays more detailed information.

**2.2.** Yes, the ps command can monitor the state of processes in real time. To do this, you need to use the -e or --forest option.

**2.3**In the top command, sorting of processes is possible according to the following parameters:

PID - process identifier.

USER - the user who started the process.

PR is the priority of the process.

NI is the non-self priority of the process.

VIRT - virtual memory used by the process.

RES - real memory used by the process. S

HR - shared memory used by the process.

S is the state of the process.

%CPU - the share of the processor used by the process.

%MEM - the share of memory used by the process.

TIME+ - the time the process is running.

You can use the F3 and F4 keys to switch between sorting options.

**2.4** There are several commands for terminating processes in Linux:

kill - sends a signal to the process, which will lead to its termination.

pkill - sends a signal to all processes that meet the specified criteria.

killall - sends a signal to all processes matching the given name.

kill -9 - sends a SIGKILL signal that cannot be intercepted and will cause the process to terminate immediately.

an error occurred.