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

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

**ЗВІТ ПО ВИКОНАННЮ**

**ЛАБОРАТОРНОЇ РОБОТИ №7**

з дисципліни: «Операційні системи»

**Тема: “Створення скриптових сценаріїв та визначення апаратної**

**Конфігурації системи”**

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**Київ 2023**

**Мета роботи:**

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

**2. Знайомство знайомство з базовими діями при роботі зі скриптовими сценаріями.**

**Хід роботи**

**Виконав роботу Міньков Ілля**

**1.**In scripts, you can handle variables and create branching and looping scenarios in the Bash command-line shell as follows:

**Variables:** You can create and use variables in Bash using the syntax **variable\_name=value**. To retrieve the value of a variable, use **$variable\_name**. Variables can be used to control the execution of scripts.

**Branching:** To create branching scenarios, you can use conditional constructs like **if**, **elif**, and **else**. For example:

bash

if [ condition ]; then

# commands if the condition is true

else

# commands if the condition is false

fi

**Looping:** You can create loops using constructs like **for**, **while**, or **until**. For example:

bash

for item in list; do

# commands to be executed for each item in the list

done

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**2.arch** and **lscpu** are commands for obtaining information about system architecture and the CPU, but they serve different purposes:

**arch**: Displays the system's architecture (e.g., x86\_64, i686) and is used to determine the system's architecture.

**lscpu**: Provides detailed information about the CPU, including its model, the number of cores, clock frequency, and other information. It is used for in-depth analysis of the CPU.

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**3.**To obtain information about the usage of RAM by the current system, you can use the free command. It displays information about free, used, and total memory, as well as buffer and cache memory.

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**4.** To view the status of connected peripheral devices, you can use the following commands:

**lsusb**: Provides information about connected USB devices.

**lspci**: Offers information about PCI devices and their connections.

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**5.GParted** is a graphical tool for managing disk partitions. It allows you to create, resize, move, delete partitions on hard drives and flash drives. The application also enables operations like formatting, changing file system types, and other disk management tasks. GParted is a valuable tool for system administrators and users who need graphical disk management capabilities.

These commands and the GParted program help administrators and users effectively manage system resources and obtain information about their hardware.

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**In the course of this work**, we gained practical experience in using the Bash command-line shell and working with script scenarios. We learned how to work with variables, create conditional statements, loops, and other constructs for automating routine tasks.

We understood how to handle variables, use conditional statements (if-then-else) to create branching in scripts, and employ loops (e.g., for loops) to iterate through lists of items. We also learned how to capture the output of commands executed within scripts and use variables to process this output.

The knowledge and skills acquired during this work are essential for working with the Linux command-line shell and automating everyday tasks at the operating system level. They will help us interact more efficiently with the system and perform tasks in the terminal more quickly and effectively.