“Київський фаховий коледж зв’язку”

Циклова комісія комп’ютерної та програмної інженерії

**ЗВІТ ПО ВИКОНАННЮ**

**ЛАБОРАТОРНОЇ РОБОТИ №4**

з дисципліни: «Операційні системи»

**Тема: “Команди Linux для управління процесами”**

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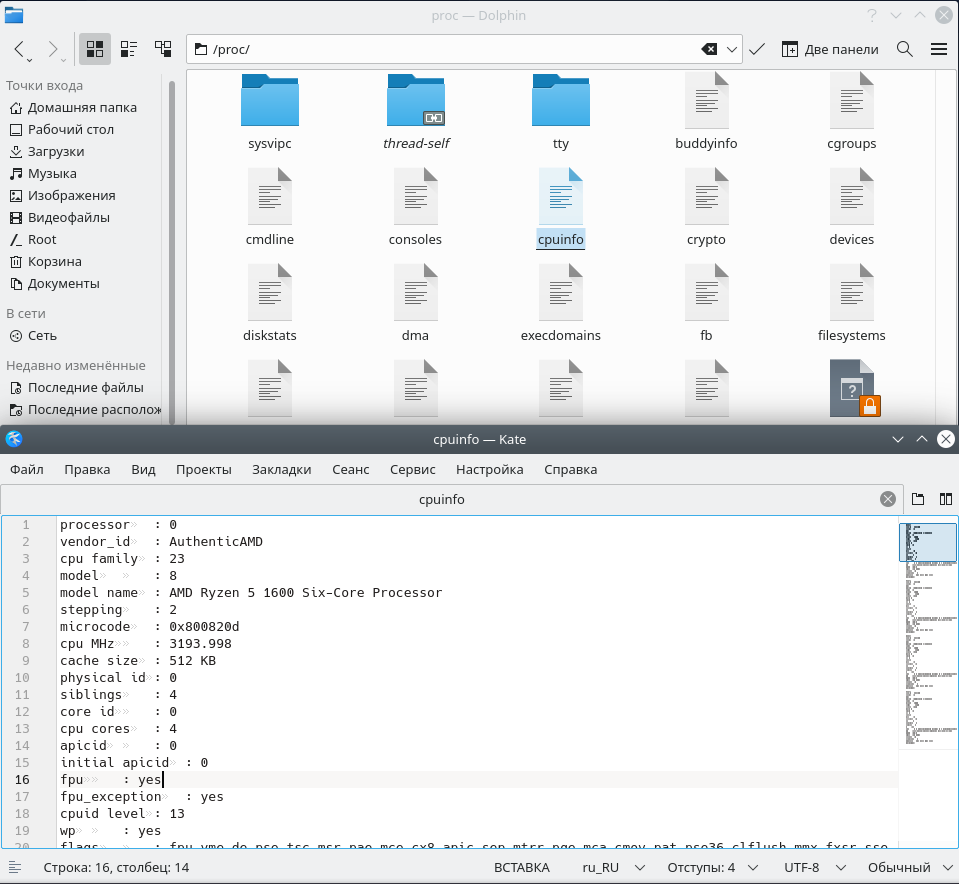
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**Control Questions:**

1. **What is the purpose of the /proc directory in Linux systems? What information does it store?**

The /proc directory is similar to the /dev directory because it contains not ordinary files but special files that provide information about running processes and the state of the kernel. The contents of the /proc directory are used by various utilities to obtain system information at runtime.

For example, if you want to check information about the processor in Linux, you can simply refer to the file `/proc/cpuinfo`. If you want to check the memory usage of your Linux system, look at the contents of the file `/proc/meminfo`.



2. **How can you dynamically determine which of any three processes is currently using the most memory? What percentage of memory does it consume from the total?**

To see which processes are currently running, use the `ps` command, but it only shows the launched processes. You can also use the `ps` command with `head` and `grep` to filter the processes you want to display.

For example: `ps -e | grep <program name>`

The `top` command will show the currently running processes dynamically, regularly updating the process data.

3. **How to get the hierarchy of parent processes in Linux systems? Describe its structure.**

You can view the hierarchy of parent processes using the `pstree` command. It works like this: one process starts another process; the first process is called the parent process, and the second process is called the child process.

4. **What is the difference between the top and ps commands?**

The `ps` command shows the currently running processes, while the `top` command shows dynamically running processes.

5. **What additional features does htop implement compared to top?**

The main difference between `htop` and `top` is that `htop` shows the same information as `top` but presents it in a more user-friendly interface, filtering them and providing more detailed information about the processes.

6. **Describe the components of your mobile OS for monitoring running processes in the system.**

Typically, in a mobile operating system, the following are used for monitoring running processes:

Task Manager: Displays all active applications and processes.

OS Kernel: Controls low-level process management, ensuring scheduling and resource management.

System Monitor: Tools that provide detailed information about resource usage, such as CPU, memory, and network connections.

7. **Does your mobile OS support terminal management of process operations? Describe how.**

Android supports terminal access through the ADB command interface, allowing users to view running processes, terminate them, or change their priorities. For example, the `ps` command can be used to view processes, or `kill` can be used to terminate them.

8. **Is it possible to install third-party software tools that allow you to manage and monitor the operation of processes on your mobile phone? Briefly describe them.**

Yes, it is possible on Android to install third-party applications for process monitoring, such as System Monitor, Termux, and Greenify.