

C2110 *UNIX and programming*

Lesson 5

PS / 2020 Distance form of teaching: Rev3

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Summary L1-L4

- Linux is a **multi-user operating system** which allows simultaneous work of several users who can be **logged in locally or remotely**
- **It supports work in both CLI and GUI.**
- Supports **Kerberos authentication.**
- Linux has native support for **remote launch of applications** with graphical output (GUI)*
- Linux has **support for running virtual machines**, it can therefore run instances of MS Windows operating system
- **The system is very well documented** (commands, etc.)
 - export of display using X11 forwarding (C2115)
 - or via VNC (preferred method)

Summary L1-L4

- Linux uses **hierarchical file system** which **is case sensitive** in names of files and directories. **Slash is used** to separate directories and files.
- Access to files and directories can be controlled with **access rights** at a relatively rough level. However, it is sufficient for normal work.*

* allocated to C2115

Summary L1-L4

- **Program** is a binary file executed directly by the processor.
- To run a program, simply specify its name if the program exists in the directory specified by PATH variable. Otherwise, the program name must be specified, including the path.
- **Process** is an instance of a running program. The operating system uses multitasking to run several processes simultaneously on several processors.
- Each process can use three streams to communicate with the environment. The user can manipulate these streams. **Streams** can be **redirected** or **connected**.

Continuous test I (L1-L3)

➤ Test via ROPOT in IS (Revision, Opinion Poll, Testing)

Student - ROPOT - C2110

- Test I (regular student)
- Test Is (students with special needs)

Only one set of questions can be compiled at a time

- from 11. 1. 0:00 to 12. 1. 23:59

Test contains 20 questions. Standard time to complete the test is 20 minutes. A question can have any number of correct answers. **Only answers are evaluated.** The correct answer is +1 point. The wrong choice is -0.25 points. The final score is a simple sum of all points.

It is allowed and recommended:

- Use terminals. **I recommend to open terminals before starting the test.**
- Some questions cannot be answered **correctly without online access to the WOLF cluster at the time of the test.**
- Search manual pages, your notes and presentations.
- Use the internet, search engines.

We expect you to fill the test separately.

Flowchart

You create a flowchart of the algorithm for one of the offered tasks in **January 24, 2021 11:59 PM**.

Details: L5.M2

Next Subject

- **Basics of programming**
- **Bash**

Content

➤ Programs vs Scripts

- compiled vs interpreted languages, examples

➤ Basics of programming

- algorithmization, algorithm, notation of algorithms, data structures, operations, input/output operations

➤ Bash

- interactive vs non-interactive mode, direct and indirect execution of scripts