

# Homework2

## Programming Software Systems 2

February 18, 2021

**Deadline is March 02, 2021, 23:59 (MSK)**

The task is to implement university access system.

### **Simplifications and assumptions:**

- We have next user types: students, professors, lab employees, director, admins.
- We have rooms: class room, lecture room, conference room, cabinet, director cabinet.
- We have next access level: green, yellow, red, no\_level
- By default user has his access level for rooms but admins can grant additional custom access to any room.

### **Requirements:**

- Use OOP.
- Generate some users (at least 1 director, 2 admins, 4 professors, 8 employees, 16 students should exist in the system).
- Show different examples of system usage in the main function. (For example: Professor Shilov trying to open director cabinet and got no access)
- Try to implement the system as real as you can. It means users has names, rooms has room numbers, professors have favorite joke. You can skip most unnecessary data (like photo), but add at least one to show that the system is real.
- There should be Readme.md file in the root folder with the project description, how to run the code, all dependencies installation and versions, maybe other instructions.

- Use C++
- Do not put all code in one file.
- The code should be readable, easily modifiable, easy extendable.
- If something was not mentioned - it means on your choice.

Some suggestions:

Ideally - all results should be in the PullRequest(PR) in a separate branch in the private repository on github. In such case put only the link to the repo in the moodle. ( Do not forget to add TA to the repo. Mike's login is **llva**, Shokhista's - **ergashevashokhista** )

Merge PR only after we approve it.

Or you can upload zip archive to moodle if you can't manage with git.

Do not leave the task for the last day. You can meet difficulties that you will not manage to solve in 30 minutes.