

# Laboratory 11

## week 11 (9 December- 14 December 2024)

### TASKS:

- A. Please submit the assignment **A5**.
- B. Please continue to work on the assignment **A6**. **The deadline of the assignment A6 is week 12 (16 - 21 December 2024).**
- C. Please start to work on assignment **A7**. **The deadline of the assignment A7 is week 14 (13 - 17 January 2025).**

### Assignment 7

You must extend the JAVA project from the assignment **A6**. Please implement in JavaFX a GUI for your interpreter from the assignment **A6**. The GUI must support the following operations:

1. A window to select the program that will be executed. You can display the list of possible programs as a `ListView`. Each item of the `ListView` is the string representation of a possible program (`IStmt`).
2. The main window that displays the following information:
  - (a) the number of `PrgStates` as a `TextField`
  - (b) the `HeapTable` as a `TableView` with two columns: address and Value
  - (c) the `Out` as a `ListView`
  - (d) the `FileTable` as a `ListView`
  - (e) the list of `PrgState` identifiers as a `ListView`
  - (f) a `Table View` with two columns: variable name and Value, which displays the `SymTable` of the `PrgState` whose ID has been selected from the list described at (e)
  - (g) a `List View` which displays the `ExeStack` of the `PrgState` whose ID has been selected from the list described at (e). First element of the `ListView` is a string representation of the top of `ExeStack`, the second element of the `ListView` represents the second element from the `ExeStack` and so on.
  - (h) A button "Run one step" that runs `oneStepForAllPrg` (you have to design and implement the handler of this button based on the previous method `allStep`). After each run the displayed information is updated. You may want to write a service which wraps the repository and signals any change of the list of `PrgStates`.