

LAB 11 – week 12 (19.12.2016 – 23.12.2016)

DEADLINE of LAB 11: LAB 14 – week 14 (16.01.2017– 20.01.2017)

WEIGHT of LAB11 : 5% of the final mark

Please implement in JavaFX a GUI for your interpreter from the Lab8. 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 TableView with two columns: identifier and file name
 - (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 calls the method allStepGUI which replaces the method allStep. After each call 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 (please see the lectures examples). Method allStepGUI can look as follows:

```
void allStepGUI() {  
    executor = Executors.newFixedThreadPool(2);  
    //remove the completed programs  
    List<PrgState> prgList=removeCompletedPrg(repo.getPrgList());  
    if prgList.size() ==0 then {  
        //display a window message saying that the execution terminates  
        executor.shutdownNow();  
    }  
    else {oneStepForAllPrg(prgList);  
        executor.shutdownNow();  
    }  
}
```

} //if you like you can also move the operations which create and destroy the executors outside of this method