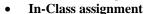**Assignment 3**
White-box testing

Assignment Objectives:
- Generating test cases based on white box testing.
- Use JUnit for implementing the test cases.
- Coverage analysis.
- Testlink - test management tool.
  Assignment = In-Class assignment + Take-Home assignment
  - **In-Class assignment**
    - First hour of the laboratory.
    - Maxim 25 XP
    - TO DO:
      1. **[White-Box Testing]** (10 XP)
         - Creating Maven project. [See Maven tutorial]
         - Condition coverage + Implementing 2 test cases in JUnit
           - The test cases will be created **addAssignment** feature.
         - Add the project to git (github, public) project.
      - **Docker-Jenkins+Testlink – install on your computer**
      - See tutorial document *2023_Info-Jenkins-Testlink.doc*
      - Install Docker, run the command for docker.
      1. **[TestLink]** (10 XP)
         - Creating in TestLink the 2 implemented test cases + Requirement specification.
         - [See **TestLink** tutorial]
      2. **[Jenkins]** (5 XP)
         - Creating a job in Jenkins for executing the 2 test cases. [See Jenkins tutorial]
  - **Take-Home assignment**
    - At home.
    - Maxim 75 XP
    - TO DO:
      1. All coverage criteria (all statements, decision/condition, paths, loops) for the **addAssignment** feature. (25 XP)
      2. Testlink test cases (add the new implemented test cases) (25 XP)
      3. Jenkins job for all test cases (no modification required, use from IC assignment) (15XP)
      4. Modification of the source code (errors identified and corrected) (10 XP)

Assignment and Delivery date:
1. Assignment date: laboratory 3
2. Delivery date for **In-Class assignment:** laboratory 3 (max 25 XP)
3. Delivery date (first) **for Take-Home assignment**: laboratory 4 (max 75 XP)
4. Delivery date (last) **for Take-Home assignment**: laboratory 5 (max 25XP)

Turn in:
Delivered and presented in class AND upload on canvas after Delivery in class the following archives (IC for In-Class delivery, TH for Take-Home delivery, 93X change with your group, Name01Name02 the name of the team)
   a. Lab3_IC_93X_Name01Name02.zip
      i. Source code: Implementation of the test cases.
      ii. Screen capture for Testlink with the Test execution information.
   b. Lab3_TH_93X_Name01Name02.zip
      i. Lab03_WBT_Form.xls
         1. CFG + CC + Paths using Lab03_WBT_Form.xls
         2. Test cases design for: all statements, decisions/conditions, paths, loops coverage criteria.
         3. Statistic of the executed test cases. (last worksheet in the xls file)**.**
         4. In the statistic table from the excel file, the coverage percentage of the tested method will be written.
      ii. Source code: Implementation of the test cases.

References
- See Lecture 3.
- See documents for Lab03Files.zip