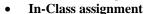
Assignment 3 White-box testing

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



- o First hour of the laboratory.
- o Maxim 25 XP
- o 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 2024_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

- o At home.
- o Maxim 75 XP
- o 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 documents for Lab03Files.zip

