Assignment 2
Black-box testing

Assignment Objectives:

- Generating test cases based on black box testing.
- Use JUnit for implementing the test cases.
- Testlink - test management tool.
- Use Jenkins for executing the test cases

Theoretical aspects

- Create test cases using Black-box testing: Equivalence partitioning, Boundary-value analysis
- References: [Myers]-chapter 4; [Naik]-chapter 6; [Patton]–chapter 4 and 5; [Frentiu]-chapter 3

[Myers] Glenford J. Myers, *The Art of Software Testing*, John Wiley & Sons, Inc., 2004
[Naik] K. Naik, P. Tripathy, Software testing and quality assurance. Theory and Practice, A John Wiley & Sons, Inc., 2008
[Patton] R. Patton, Software Testing, Sams Publishing, 2005
[Frentiu] M. Frentiu, Verificarea si validarea sistemelor soft, Presa Universitara Clujeana, 2010
[TestLink1]: http://www.softwaretestinghelp.com/testlink-tutorial-1/
[TestLink/Jenkins/Maven tutorials]: http://www.cs.ubbcluj.ro/~avescan/

Assignment

[Black-Box Testing]

Design and implement test cases based on specification, i.e. black-box testing. The test cases will be created **for project requirement a)** from the "Problem statement" in the first laboratory.

Test case design must use: a. Equivalence partitioning and b. Boundary value analysis.

Implement in JUnit the designed test cases and add them to Git.

[TestLink]

During Lab02-first hour (first 10 minutes), please make your account in Testlink such that the teacher will be able to assign the correct project to you. If not, you will not be able to do your assignment!

a) Define the designed test cases (the ones that could be implemented and executed) in Testlink.

[Jenkins]

The created Jobs in Jenkins for the execution of the implemented test cases.

In-class assignment (25 XP)

- Creating Maven project and git (github, public) project.
- EC table for one input variables
- Implementing 2 test cases in JUnit
- Creating in TestLink the 2 implemented test cases + Requirement specification **for project requirement a) from the Statement problem**
- Creating a job in Jenking for executing the 2 test cases. [See Jenkins tutorial]

Homework assignment (100 XP)

- All EC/BVA for the **for project requirement a) from the Statement problem**
- Testlink test cases
- Jenkins job for all test cases
- Modification of the source code (errors identified and corrected)

Turn in:

[Black-box testing]

1) The documentation (test design) will contain the report **Lab02_BBT_Form.xls**.
2) Source code:Implementation of the test cases.

[TestLink]

1) The Testlink - TestPlan/Test Cases must be presented/delivered in class.
2) The Testlink generated documentation. See the Testlink Tutorial.

[Jenkins]

The created Job in Jenkins for the created test cases.

Assignment and Delivery date:

1. Assignment date: laboratory 2
2. Delivery date for **in class assignment**: laboratory 2 (max 25 XP)
3. Delivery date (first) **for homework assignment**: laboratory 3 (max 100 XP)
4. Delivery date (last) **for homework assignment**: laboratory 4 (max 50 XP)