

INF3121/ INF4121

Manual testing and test automation

Assignment start date: 20th of April 2016, 00:00

Assignment due date: 3rd of May 2016, 23:59

Project format: PDF (4-10 pages)

Pass criteria: You have to score minimum 1 point to be able to attend the exam. You can score maximum 25 points.

Problem description:

In today's world, it is crucial that everyone involved in software development can test both manually and automatically. The purpose of the assignment is to exercise your skills in writing manual tests and automated tests.

You will have to write both manual and automated tests for the website presented below, testing the items described below. You will just have to follow the use case presented below. The use case is at system-level and is already given; therefore you will have to focus only on the testing the items composing the scenario (account, items, cart, etc).

You will to perform just functional testing, using only black-box / experience-based test design techniques. Exhaustive testing (all possible combinations of all inputs and pre-requisites) is not in the scope of this project assignment.

Pay attention to the fact that it will not be possible to automate all manual tests. This is normal. When this happens, you only have to provide an explanation: why do you consider that automation is not possible in that particular case.

You will automate tests using Selenium IDE – currently, the most used test automation tool in the world.

Pre-requisites:

For this project assignment, you can use any operating system. You will need to use Firefox web browser and install the "Selenium IDE" plugin: <https://addons.mozilla.org/en-US/firefox/addon/selenium-ide/>

*Note: if you prefer, for the automated tests you can deliver one test suite for each tested item: i.e. one for user account, one for login, one for shopping cart, etc. In this case, you have to provide screenshots with execution results for each of the test suites.

Your assignment:

Go to the following website: <http://demo.avactis.com/4.7.9/> (a demo e-commerce site) and for the following use case:

1. A user creates an account on this site, logs-in and resets its password.
2. The user proceeds to do online shopping: selects products(s) and places them in the cart.
3. After shopping the products, the user checks out the shopping cart.
4. The user changes the number of items for some products in the shopping cart (adds/removes).
5. The user places the order. The online store confirms and finalizes the order successfully.
6. The user logs out.

, test the following items (units):

- Sign-in: register new customer, login, password reset
- Select products
- Continue shopping
- Checkout
- Change number of items
- Finalize order successfully
- Log out

Requirement 1 – Manual tests, test design, bugs (10 points):

In your PDF delivery, design the manual tests you will perform by using one or more test design technique. You can choose different techniques for different items tested.

Write the list with manual test cases for the items specified above. The test cases have to contain the test title, objective (summary) of the test, pre-conditions (if relevant), list of steps, post-conditions (if relevant) and expected results.

Error finding and reporting

Find an error in the website (any error, not necessarily related to the scenario presented above) and fill-in an issue report. You can find a template in Lecture 05 (cf. IEEE-829).

Requirement 2 – Automated tests and grouping (10 points):

For the list with test cases you have obtained at the previous requirement, create the corresponding automated test with the Selenium IDE plugin. Group the automated tests into one automated test script * (this is called “test suite” in Selenium).

Explain the way you have ordered the tests in the automated tests script. Is the order important? Why?

Provide screenshot(s) with the execution result of your automated test suite.

Upload your automated tests to GitHub and provide the link.

*Note: if you prefer, for the automated tests you can deliver one test suite for each tested item: i.e. one for user account, one for login, one for shopping cart, etc. In this case, you have to provide screenshots with execution results for each of the test suites.

Requirement 3 – Transitioning manual to automated tests (5 points):

Write and comment the way your manual tests and automated tests interrelate (it can be in form of a table, traceability matrix, etc): are all manual tests covered by automated tests? Is the coverage partial or total?

For each manual test you could not automate, provide a brief explanation: why test automation was not possible in this particular case.

Tips and other resources:

1. How to write and execute an automated test scenario:

<https://www.youtube.com/watch?v=BBmA5Qp6Ghk>

2. How to use test design techniques and how to derive test cases from them: see the other PDF file uploaded in the project resources.

*Note: if you prefer, for the automated tests you can deliver one test suite for each tested item: i.e. one for user account, one for login, one for shopping cart, etc. In this case, you have to provide screenshots with execution results for each of the test suites.