Assignment 4
CSE 4313 3.0 Software Engineering Testing, Winter 2013

Due: Monday, March 18th, 2013, 2:30pm.
Format: Individual.

Testing GUI applications

For this assignment, you are required to apply any of the techniques we examined in the course to test a GUI application. Your task will be to create a test suite in JUnit, produce bug reports, and submit a hard copy report describing your testing. You also need to review the test cases that come with the BORG package.

To get started

- Create a development environment similar to the one for Assignment 2.

- Download and deploy `Abbot` Java GUI Test framework from the following link: `http://abbot.sourceforge.net/doc/overview.shtml`

- Download BlueJ from the following link: `http://www.bluej.org/download/download.html`

- Download and deploy `EclEmma` Java Code Coverage plugin for eclipse. The plugin is available at `http://www.eclemma.org`)

What to do

- Review the test cases created by the developer. You should identify the objective of each test case, the weaknesses of the existing test suite, and propose new test cases. If you think there are missing non-GUI test cases, you should add them.

  Measure code coverage using the `EclEmma` plugin.

- Assume you were hired to develop automatic test cases for customer acceptance testing. Due to time constraints, the customer asked you to select only several key features for the GUI testing.

  Develop at least 5 different GUI test cases for the BlueJ IDE or for BORG using the scripting capabilities of Abbot.

What to Submit

Before the deadline, submit electronically the test code created. To submit, navigate to the directory that contains the `working directory` (e.g. `winter2013`), and give a command like the following:

```
submit 4313 a4 winter2013
```

You also need to submit a written report. This report must include:

- A description of the testing strategies you applied, as well as the test cases you created. The marker will not read your code in order to see what you tested. You have to describe it.

- The bug reports you created.

- A description of the selected features and a justification for your choice.

- An evaluation of the developer's test cases and the test code coverage analysis before and after running your additional test cases.

Submit a hard copy of the written report to the 4313 drop box by the deadline. Attach the last page of this handout as the first page of the hard copy submission. Fill in your name and student number. Submit the same report electronically before the deadline as well (PDF format is preferrable, but other formats will also be accepted). To submit, give:

```
submit 4313 a4 a4.pdf
```

where `a3.pdf` is your report. The marker will mark the hard copy submission. Electronic submissions will be used for remarking purposes.

Grading

This assignment will be marked out of 100. The marks will be divided as follows:

- Review of developer's test cases: 30%

- Description of GUI testing: 30%

- Description of functionality testing: 30%

- Presentation/English: 10%

Presenting your thought processes in English is an important skill for a software professional. If you have trouble writing English, have somebody proof-read and correct your prose. You might find the services offered by The English as a Second Language Open Learning Centre useful: `http://www.yorku.ca/eslolc`

Assignment 4 Grade Sheet

CSE 4313 3.0 Software Engineering Testing, Winter 2013

Student Name:

Student Number:

Review of developer's test cases . . . . �

Description of GUI testing . . . . ⌐

Description of functionality testing . . . . ⌐

Presentation / English . . . . ⌐

Total . . . . ⌐

Letter grade . . . . ⌐