Assignment 5
CSE 4313 3.0 Software Engineering Testing, Winter 2013, Section M

Due: Monday, 8 April, 2013, 2:30pm.
Format: Individual.

Discovering bugs

The purpose of this assignment is to give you experience discovering bugs and developing test cases. This task will give you practice thinking how to develop a test case from a requirements document, what a professional bug report should be, as well as analyzing bugs before reporting them.

To get started

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

What to do

You should select up to 5 different features of BORG calendar and review the requirements corresponding to the selected features (see Link 2 from Assignment 1 in course website) and then revise them based on your understanding of their purposes. For each selected feature, test cases must be designed. You may use any testing strategy you believe is appropriate including the ones discussed in class. You are free to create as many test cases as you like. You must achieve one of the following:

- Discover at least 5 non-trivial and inarguably different bugs in selected functionality and then submit all bug reports (See bug report guidelines in assignment 1.)

- Justify the sufficiency of your test cases for each selected feature. Your justification that the executed test cases have both high functional and code coverage should be based on collected evidence and theoretical methodology discussed in class. The measured coverage code report should be also attached to your submission.

Create a written report that includes the report IDs for the 5 reports, an explanation of all reports, steps that you used to discover bugs, follow-up tests. Also, explain what functionality you tested and include relevant screen shots. The report should include revised requirements, all designed test cases and their outcome. Your report should include justification for the test cases using functional, structure, model, integration and system testing methodology. Every test case should has a clear reference to a revised requirement or should have a clear justification. Since you will probably NOT have time or the resources to run many follow-up tests, describe other tests which you would like to run. You should provide justification of these follow-up tests and explain what would you hope to learn from them.

What to Submit

Submit a hard copy of your written report to the 4313 drop box by the deadline. Submit the same report electronically before the deadline as well (PDF format is preferable, but other formats will also be accepted). To submit, give:

```
submit 4313 a5 a5.pdf
```
where `a5.pdf` is your report.

The marker will mark the hard copy submission. Electronic submissions will be used for re-marking purposes.

Grading

This assignment will be marked out of 100, 20 points for the review of requirements, and 16 points per bug report or per justification of feature coverage. For each bug report, 8 marks will relate to the reported bug you added online, and 8 to the written report.

The content of your online bug report can vary depending on the problem. The key thing is that they are useful to the reader. Following is a list of things that can give you points:

- Reporting the configuration and build you used.

- Reporting a simpler set of replication steps.

- Reporting the results of a **good** follow-up test.

- Making a good argument regarding importance (pro or con).

For your written report, the marker will be looking for details that suggest you had insight into what makes a good test case scenario. How well you justify your testing methodology and testing coverage.