

Assignment: CS4004 Lab Log and Journal

Start: Week 5

Due: Friday Week 12

Marks for this assignment: 20% of the module

Aims: The lab component of CS4004 covers a variety of tools some of which are more challenging than others. It also involves some learning which is best done at your own pace. This assignment has two aims:

1. To **guide** you through the learning objectives of the lab sessions
2. To **assess** your learning – to what extent you have achieved these objectives

The assignment will be divided into a number of tasks (things to do) and these will be added to this document as the semester progresses.

For each task, you need to document it in three ways

- A. The log: what did you do and when?**
- B. The reflection*: e.g. what did you learn? What does it mean to you personally?**
- C. Things you submit (depending on the task) to demonstrate what you did and learned.**

* Reflection is considered an important skill to develop. It requires you to think about how you are personally relating to the material you are learning.

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Task #1: You are going to perform **exploratory testing** on a program or application of your choice. You may choose a familiar program that you know has bugs or pick something such as a free app that you might have been thinking of downloading. Just use your 'skill and judgement' to test the program, find out what works, what does not work, what could be better, and what else it could reasonably be expected to do.

You will then use the CSIS Bugzilla installation to log all the bugs you find. Any reasonable **enhancements** that you want to suggest, within the overall purpose of the program, should be logged in the Bugzilla database. A high standard of bug reporting is expected.

Bugzilla groups: For the purpose of this assignment task, you will need to create a **product** in the Bugzilla installation and one or more components. You should also create a product **group** that restricts access to your bug reports, either to yourself or preferably yourself and group of your friends.

Each group member may then contribute some bug reports, which you may **review** and **comment** on, and do the same for them.

Things you could submit: Sample bug reports; Bugzilla reports and/or charts.

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Task #2: You are going to do a little bit of **test-driven development** using JUnit. First you will need to install JUnit in an IDE. The main idea is to code the tests first and then run the tests, this causes the tests to fail, and only then do you write the program to make the tests pass.

The target program itself can be very simple, but credit will be given for the amount of tests you write, along with the various versions of your program that in each case are just enough code to pass a given test.

There are plenty of resources online that can help you understand test-driven development with Junit, but you also need to practise it. Suggestions for practice (target) programs will be given, or you can devise your own (for more credit).

Things you could submit: The code for your tests and the various versions of the program. Screen shots of failure and success.

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