CPS2002 Assignment – Part 1

17th March 2017

Instructions

- This a group (pairs) assignment. This assignment will be marked out of 100 and accounts for 40% of the final CPS2002 grade.
- Students will be marked individually based on their contribution to the assignment, as verified during the interview.
- The assignment is split into 3 parts, each with its own deadline as described below.
- You are to allocate approximately 26-32 hours of work to this assignment.
- A soft-copy of the report and all related files (including code) must be uploaded to the VLE by the indicated deadline. All files must be archived into a single .zip file. It is the student's responsibility to ensure that the uploaded zip file and all contents are valid. Since this is a group assignment, all members of the group should upload the assignment.
- Reports (and code) that are difficult to follow due to low quality in writing-style/organization/presentations will be penalized.

Additional Instructions

- Please organize yourself in pairs and send an e-mail to mark.micallef@um.edu.mt indicating the members of your group by Wednesday 22nd March 2017.
- You will be required to produce a report.

Overview

This assignment is designed to provide you with a practical experience in dealing with changing requirements, test-driven development, version control systems, continuous integration and the application of design patterns.

You will work in pairs, which you have yourselves composed and notified the lecturer about. The assignment consists of 3 parts as follows:

1. Initial setup of a continuous integration server. (15%)
2. Delivery of an initial system requested by a customer. This requires the demonstration of the use of test-driven development. (35%)
3. Modification of the system after feedback by the customer. This will involve continuing use of test-driven development and the application of design patterns. (35%)

Please note that 15% of your marks are reserved for the quality of your assignment report.

The assignment will be specified incrementally as follows:

Assignment Part	Specified	Deadline for Delivery
1	Friday 17th March 2017	Monday 3rd April 2017
2	Friday 17th March 2017	Monday 17th April 2017
3	Monday 17th April 2017	Wednesday 17th May 2017

Part 1: Initial Setup

Deadline: Monday 3rd April 2017

This part of the assignment involves you setting up your initial infrastructure in order to be able to carry out parts 2 and 3. This involves:

1. Setting up a Github repository
2. Setting up a project on the University's Jenkins server such that
    a. The project is linked to your Github repository
    b. Whenever a change is committed to Github, the source code is pulled, compiled and tested
    c. Code coverage is tracked in Jenkins
3. Set up some initial shell code with associated unit tests to demonstrate that the setup is working. The shell code should be changed three (3) times to demonstrate that the Jenkins project is picking up changes and triggering a build automatically.
4. Do not concern yourself with plagiarism at this stage of the project. Feel free to consult with friends about Jenkins settings and other relevant information. The important thing is to get set up and understand what's going on in your setup.

Method of delivery: Each team should send an e-mail to mark.micallef@um.edu.mt stating that their Jenkins project has been set up and provide a link to the project. This should be done **by noon on the day of the deadline**. Your e-mail will be acknowledged.
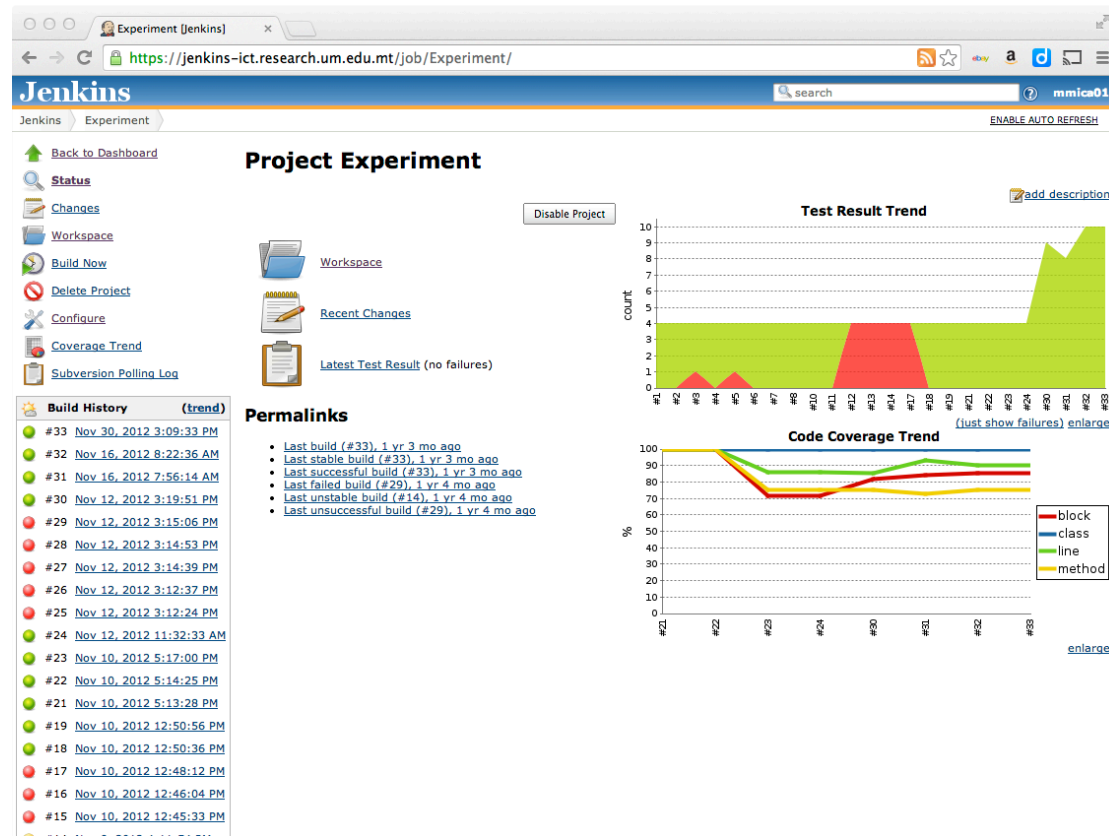

Figure 1 - An indication of what your Jenkins setup should look like