

# EECE 6032 – Software Testing and Quality Assurance

## Assignment 1

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### Objective:

The purpose of this assignment is: (1) to get your own testing and QA environment set-up and (2) to understand the concept of software testing through research and self-study.

**Deadline:** 11:59 pm, Friday, September 4, 2015

**Format:** This is an individual assignment

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### Part I: Version Control set-up

1. **[30 points]** Github is the preferred version control tool for this course. UC has an academic license for Github enterprise edition that is available for use by faculty and students. Complete the following steps to set up a repository for this course:
  - 1.1. Log in at <https://github.uc.edu/> using your UC central login service username and password (there is no need to create a new account).
  - 1.2. Create a repository with the name “yourlastname-eece6032”.
  - 1.3. Add your instructor (username: subbiavh) as a contributor to your repository.
  - 1.4. Download and install a [desktop](#) or [command line](#) (based on your preference and OS) Git client to work with your repositories.
  - 1.5. Create the following folders inside your repository:
    - assignments
    - in-class activities
    - research
    - misc (you can use this folder to manage other course-related content/activities as you see fit)

Note: There are several online resources and tutorials, if you need help with setting up. The following is an excellent GitHub resource created by a UC student team: [GitHub Resources](#) (UC login required). It is really comprehensive (lots of information! You don't need all of it for this assignment). Also, remember that there are different ways/clients to use Github. Pick one that you think is easy and fits your needs and system requirements.

## Part II: Demonstration of Test Planning and Management Tool

2. [30 points] [Tarantula](#) is the preferred test planning and management tool.
  - 2.1. Develop a set of requirements for a simple application/system (can be a general-purpose, web, or mobile application; or any hardware-software system). Include an overview of the application/system under 3.7 in Part III.

Note: Keep the application/system simple. This will be used in this assignment to practice Tarantula, and in the next assignment to practice few testing techniques.
  - 2.2. Record the requirements on Tarantula.

### Instructions for using Tarantula:

- Tarantula can be accessed through a web browser at this [address](#)
- The user name is your UC 6+2 and the password is *tester-eece6032* (please change your password immediately; Click *Edit Profile* on the top right corner → *Edit* → Change your password).
- Select *yourusername-assignment1* project from the top right corner (DO NOT work on the *Default Project*).
- You are now ready to enter your requirements (Click on the *Design* tab → *Requirements*).

### General notes on using Tarantula:

- The support site for the tool is [here](#). Unfortunately, there is no user manual for the tool. However, it is relatively easy and straightforward to use.
- If you are off-campus, you will need to a [VPN](#) connection to access the tool; Instructions for VPN access are [here](#)).

## Part III: Read & Report

3. [40 points] Read and report on the following article. An e-copy can be found on Blackboard along with this assignment.

Whittaker, James A. "What is software testing? And why is it so hard?." *Software, IEEE* 17.1 (2000): 70-79.

The report shall address the following aspects:

- 3.1. Write a summary of the article in your own words.
- 3.2. List and explain one (or more) concept(s) that you learned from the article.
- 3.3. Critique an argument or a result presented in the article.
- 3.4. Were there concepts, results, and/or arguments in the article that you could relate to something you already know (through this course or prior experience)? Elaborate.
- 3.5. Include questions that you might have on the article.

- 3.6. Please state your background/prior experience in software (or systems) engineering. This includes any experience with relevant tools, methods and practices (particularly those related to testing and quality assurance), software implementation/development etc.
- 3.7. Include of overview of the application/system in 2.1
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**Deliverables:**

- For Part I, I should be able to *pull* from and *push* in to your repository and verify that you have completed steps 1.1 to 1.5.
  - For Part II, record the requirements on Tarantula.
  - For Part III, check in (push) a single PDF file (with the name *yourlastname-assignment1*) into the assignments folder in your repository
  - You DO NOT have to submit anything to Blackboard. This assignment will be considered “turned in”, if all the required items are checked in to your respective repositories (and requirements are recorded on Tarantula) by 11.59 pm on September 4<sup>th</sup>, 2015.
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