

Lab 5: Software Testing

1. OBJECTIVE

- 1) Prepare Test Plan
- 2) Generate test cases
- 3) Formalize project management processes

2. LABORATORY

This lab will be conducted in the Software Lab 3 (N4-B1C-14) in SCSE.

3. EQUIPMENT

- PCs (Windows OS)
- IDE, Development Framework, Emulator
- Version Control System, e.g., Github

4. INTRODUCTION and SCOPE

In the last lab, your team has completed project planning by configuration management planning. In this lab, the scope is for you to further your quality management planning by creating a systematic mechanism on managing process quality. Not only this, you will also exercise quality control by creating and running test cases against your prototype. After that, we will also arrange your team to present your project to the class.

In this lab, the QA team will formulate the test cases based on the requirements specified for the project. Test then code and test automation should be practiced in this lab.

It's time to show your quality process and quality product in the presentation! Let us have a fruitful ending of the course labs.

5. EXPERIMENT

5.1 Hold the team meeting and complete the meeting minutes

In the meeting, the deliverables of this lab are discussed. Tasks and deadlines are identified and the tasks should be assigned. Because the lab session will hold the final presentation, this activity should be done as soon as possible so that you can start other activities. The meeting minutes should be submitted to the Wiki not later than the midnight of the Friday of the same week of this lab session. In the minutes, the functions to be tested before the final delivery and whether alpha and beta testing are performed for user acceptance need to be addressed.

5.2 Prepare Test Cases

Design test cases using Black Box techniques, specifying the test steps

- Input parameters
- Operations to perform
- Expected output (result).

5.3 Prepare Test Plan

Test plan including different tests (functional test, non-functional test, system test, user acceptance test, etc.) should be formalized and documented.

5.4 Peer Review (done individually)

Individual members should fill up the peer review form online to evaluate the contributions to the project and attendance for the project meetings and discussions of other team members. The content of the form is confidential so don't discuss it in the team.

6. DELIVERABLES

The following items should be delivered by the end of the in-class lab session:

1. Presentation: Project introduction and summary of work of each lab, achievements, issues, solutions, etc.
2. Meeting minutes of the "in-class" discussion (submitted by end of Friday of the same week)

Have the following ready (uploaded/emailed/compiled) for final grading by the Lab instructor:

3. Wiki: Presentation slides
4. Wiki: Test Plan
5. Wiki: Test Cases and Requirements Test Coverage report
6. Github (Version Control System): All documentation checked in
7. Wiki: Backlog
8. Wiki: Meeting minutes
9. NTU Learn: Submission of the peer review before the deadline