

**CSE 403  
Autumn 2013  
Test #1 (Phase 4c)**

**Quality Assurance Techniques for Maintainable Software**

**1) Management of Bugs and Issues**

***For Beta Release:***

Re-examine the bug prioritization strategies presented 10/28 (slides are attached to course calendar). Outline (or refine) your team's strategy for which bugs and issues need to be addressed and when. Additionally:

- If you have been using a strategy up to now, indicate the refinements you have made to it (if any) after reviewing the slides.
- If you haven't had a strategy until now, indicate how you think your new outlined strategy will affect your team's development process.

***By the beginning of "Version #1" development or sooner:***

Implement (or continue using) your (refined) prioritization strategy. Bugs should be thoroughly filled out with information such as:

- description,
- steps to reproduce the bug,
- priority/severity (as determined by the above strategy)
- who the bug is assigned to,
- its current status (open, resolved, won't fix, etc.)

**2) Testing**

Your "Beta" release code should be supported by:

***Unit Tests:***

Unit tests for at least one major existing class/component in your system. The Links page on the course website has links to many unit testing libraries and tools for different programming languages.

***System Tests:***

System tests for the functionality represented by at least one use case or major feature. Investigate testing frameworks that are available for your programming languages, and program or automate system tests if possible. Otherwise, provide a detailed script that a human tester can follow (for example, the steps used in your Beta Demo for showcasing various features).

***Test Process (automated if possible):***

Describe how you will incorporate testing into your development process by the beginning of "Version #1" development if you haven't already started systematic testing by then.

- What kind of tests will you perform?
- What parts of your software will you test?
- Will your tests be manual interactions with your software with human testers following a set of instructions, or be programmed? Which unit test tools, if any, will you use and why?
- Will you run programmed tests manually from the command line or in an automated fashion using scripts or a testing framework to execute a suite of tests? Which testing frameworks, if any, will you use and why?
- When/how often will you test, and how will you decide which tests to execute?
- Who will design tests? Run them? Interpret the results? Fix problems found?

**3) Code Review**

Identify the areas of your software you will perform code reviews on during "Version #1" development (or have already begun reviewing) and explain why those areas were chosen for further inspection.