

The Big Project

Due: See Dates in Canvas

THIS IS A 3-PART PROJECT. NO PART MAY BE LATE!!!

Part 1 (including Test Plan)

You will be given a programming project. There are five different projects. You will be required to develop software according to the specifications, and test it using white box and black box testing methods.

Write the test plan and turn it in beforehand. This will give you an opportunity to improve it before the due date of Part 1, where you may turn it in again.

Turn in the following:

- Your source code (30)
- A working executable module. It must execute on other people's PCs.
- Your test plan. (80) (Scope 5, Strategy 50, Resource 5, timeline 10, risk 10)
- A list of the tests you wrote. Indicate which were executed. (20)
- Addenda to the test plan, if appropriate.
- Changes, additions, or clarifications to the specifications you made.
- Instructions for using your program. (20)

Prepare a package as described below to give to your tester. You have the responsibility to give it to your tester no later than one day after the due date.

Grading:

- The program has to work. After all, that is an indication of how good your testing was.
- Your test plan should use an approach that is appropriate for the problem. It should be well-thought-out and complete.
- Your test cases should be complete – I should not see any obvious areas you missed.

Part 2

You will now receive the specification and executable code from one of the other class members. You will be required to test it using black box testing methods.

You will receive the following:

- The program specification.
- The addendum to the specification as created by the developer.
- The executable program.

Turn in the following:

- Your test plan, (80) (Scope 5, Strategy 50, Resource 5, timeline 10, risk 10)
- Test cases (20)
- The results of your testing.
- The set of bug reports you wrote.(30)
- If you made multiple testing passes, briefly describe what and why.
- An assessment of the final quality of the program. Is it ready to ship to customers? (20)

Note that you will certainly have questions about requirements for the original developer. Ask. Of course, don't ask about implementation.

Special note:

If you are testing, and your testing is completely blocked by a bug, go to the developer and get a fix right away. As a developer, you have an obligation to fix that bug before you continue testing your own project. Note that this should be used only for bugs that completely block testing. If there is a question or disagreement, see me and I will be the final arbitrator.

Grading:

- You will not be graded on how many bugs you find, since that is in part a function of the quality of the program you received. However, you will be partly graded on bugs I find that you didn't.
- Your test plan and approach should be appropriate for the problem.
- Your test cases should be complete – I should have confidence about the quality of the program based on your results.
- Your test cases should not have a lot of redundancy.

Part 3

Write a paper on your experiences testing, both your program and the other student's program. Include the following information for each program you tested:

- What methods of testing you picked, and why. What other methods you considered, and why you did not use them.
- What testing you did in addition to your original test plan, and why you did it.
- Evaluate the effectiveness of the testing methods you used.
- Evaluate the effectiveness of your testing: Did you select appropriate approaches to testing?
- How did you decide to stop testing? What factors did you consider?

Give a short informal oral presentation to the class about your experiences testing. Oral presentations will be the next to last class period.

Length: I don't see how you can cover all this in less than two or three pages.

Grading:

This is where you show that you not only know how to test, but you understand the principles, the characteristics, and the tradeoffs of various approaches to testing. Show me that you understand testing, and you will get a good grade on part 3.