

CSci 435: Homework 5

Testing

Due April 2nd by 11:00 AM

Summary

Working in groups of two, create a set of testing artifacts for the 3D version of the Billiards project: a use cases document, a unit testing plan, and a system/integration testing plan.

Use Cases

Enhance the use case document to provide a complete set of use cases for all user-level interactions with the software. Be sure to include multiple scenarios if appropriate, as well as error scenarios.

Unit Testing Plan

Create a test plan for the testing of the modules of the system. Given that we have been fairly good about testing the modules so far, it is sufficient to provide a general set of rules for testing modules, plus some specific tests which should be run.

For example, your test plan may state that every non-user interface module must use fully automated testing, and that every method must have a test case. Then, in a subsection for each module, you may include additional module-specific tests. Remember that your test plan is meant to ensure that the modules are “solid”.

System/Integration Testing Plan

We'll combine system and integration testing in the last document. Document a sufficiently complete set of test cases for the interactions between the modules of the system. In addition, describe a set of tests which can be done on the entire system.

You may want to research GUI testing tools. If you find a suitable one, you can define your test cases using the tool, but be sure to explain them so that I can grade you. If you intend for the system-level tests to be performed manually, you must describe each test case in enough detail so that a trained pigeon could execute the test and verify the results.

Grading

100 points total. Both students receive the same grade.

I expect there will be some concern over the level of detail that I will require. Your tests should use the requirements document as a starting point. Obviously some requirements can not be tested and must be verified manually. On the other hand, some testable requirements are missing. Your test plan should be detailed enough so that if the software passes the test plan, you can be sure that the customer will be happy.

If you have any questions, feel free to ask them in the discussion forum.