Hi,

Here’s the midterm. Simply answer these questions.

Submit the results to me via email at [gdelozie@kent.edu](mailto:gdelozie@kent.edu) by midnight, Friday, Nov 3.

SUBMIT YOUR OWN WORK. I AM USING AUTOMATED PLAGIARISM DETECTION, AND I WILL GENERALLY TRUST ITS OPINION.

Sorry to yell, but you know how it is.

I know the question numbers are screwed up. Please fix them in your copy before turning them in.

Please answer these without writing novels!

Best wishes,

Dr. DeLozier

1. What is the purpose of testing? Discuss this definition in some detail, describing each of the components of the definition.

Ans: To get the evidence of value to someone(usually the client) that the software does something useful. We try our best to make the software bug free. Each line of code either makes the customer experience better or worse. Value implies potential benefit. It means that it does something beneficial or detrimental.

1. Describe the concept of test driven development. Why is it useful?

Ans: Test driven development (abbreviated as TDD) is a software programming to ensure the code quality. In this concept, it requires the programmers to develop short iterations and then test the code and clean up any new deficiencies in code quality as they arise. With each added iteration, the testing and clean-up is repeated as necessary. TDD helps keep our productivity by high narrowing our focus. We can keep our focus on one specific segment of code finding errors during each iteration.

1. What are the major components of behavior driven development, and why does it provide a better connection to customer requirements?

Ans: The behavior driven development team includes both the business and technical teams sitting together with the client to discuss about the project improving communication between them to create software with business value. Because that the teams sit together, the chance of miscommunication among them would be reduced to minimal levels and the chances of creation of the software what they exactly need would be increased. Some cases, the client explains some frequent real-time problems to the teams and they try to embed some suitable solutions for them within the software itself. It often includes testing the important parts of the application with Selenium or similar.

1. What is a testing partition? Why is this so important concept, and how does it relate to completeness of testing?

Ans: Testing partition is a blackbox testing technique that can be implemented on all levels of testing such as unit, integration system etc. Here we divide the input data into different equivalence data classes. This method is used to reduce the total number of test cases to a certain number of testable test cases still satisfying the maximum requirements. Testing partition relates to completeness of testing because we use one representative from every input class to design our test cases. Test case values are selected in such a way that highest number of attributes of equivalence can be exercised.

1. What is it meant to test a specific application layer? Which layers are commonly tested?

Ans: We will test the layers to check that the application works efficiently across all platforms and on all browsers. The primary purpose of testing is to ensure that the GUI works as it is expected to work. At each and every layer if testing is done then the chance of occurrence of a problem detection would be greatly reduced at the higher layer. GUI layer, function layer, database layer, environment layer are some of the layers that are tested.

1. Give examples of three commonly tested application layers, and describe the tools that might be used to test those layers.

Ans: GUI layer is one of the most commonly tested layer. Selenium automation testing could be used to test this layer. TestComplete and TestingWhiz are used as well using record testing and scripting.

Functional layer is tested using QTP(Quick Test Professional), Parasoft and TestingWHiz, these tools test the API layer and help in the creation of scripts.

Environmental layer is tested using play tool and Jenkins.

Database layer is tested using DataFactory and MockupData, these tools handle many complex

Queries and also has an interface.

1. Describe a testing scenario we are user interface testing is a good idea, and a scenario where user interface testing is a bad idea.

Ans: The user interface testing done in the perspective of product owners like stake holders, client/ customer is a good idea because he is the person who exactly knows what the final output is that he needs. The user interface testing in the perspective of a developer is not of that much importance because he is more concerned about the functionality of the product than the user interface. He concentrates on the logic than the appearance. (Ofcourse he works on appearance as well, but priorities matter)

1. Describe at least three purposes for using testing tools that are not directly related to seeing if a piece of software works correctly or not.

Ans:

Quality: After the completion of manual testing procedures,

1. Describe the difference between white box or clear box testing, and black box testing. Is it possible to verify that software has no bugs in black box testing? Why or why not?

Ans:

1. Why is acceptance testing different from other kinds of testing? What do these differences mean in terms of different kinds of activities used in those forms of testing?

Ans: The regular forms of testing usually look for the errors, quality code and all the factors. But the acceptance testing tries to test the customer experience. Acceptance testing is actually performed by the client/stake holders in some cases. Its not much of the technical testing, its more like a common man’s testing. You’re checking if the user is getting his final desired experience(May be we can say it’s some sort of Beta testing). For a bad example, if you just design a music software, the acceptance testing doesn’t care about any functionality or nothing. It just checks if the music is playing if we click play or not, if the next song in playlist plays when we click ‘next’ or not.