**HW 8 – CS 4321, Fall 2015**

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**Questions – Lesson 11: General Testing Concepts (22 minutes)**

Watch video, type answers (leave questions), print before class and turn-in in class.

1. Define the terms: failure, fault, error in the context of software testing.

* Failure is an observable incorrect behavior of the software.
* Fault (bug): Incorrect piece of code.
* Error: Cause of a fault. Usually a human error.

1. Many times we use the previous three terms interchangeably. Why do you think it could be important to differentiate these?

* In order to make the verifying and validating stage stay simple and not get confusing. You will be able to differentiate the complex issues versus the ones that are a little simpler to fix.

1. What is an advantage and a disadvantage to software testing?

* Pro: Does not generate false alarms or false positives.
* Con: It is highly incomplete.

1. What does it mean when a test suite does not produce any failures?

* A test is successful if the program fails.

1. List 7 levels of testing.

* Unit testing
* Integration testing (Big bang testing).
* System testing.
* Acceptance testing
* Regression testing.

1. Define regression testing.

* Testing that is done every time the developer changes the system and need to make sure that the changes perform as intended.

1. Which type of testing is the most expensive in the context of maintenance?

* Regression testing.

1. Define black-box testing.

* Kind of testing where you consider the software as a closed box. You will just look at the description of the software. Cover as much specified behavior as possible. It also cannot reveal errors due to implementation details.

1. Define white-box testing.

* Looks at the code and how it is written. Covers as much coded behavior as possible. It cannot reveal errors due to missing paths.