Testing throughout the software life cycle

Software Testing: INF3121 / INF4121

Summary: Week 2

Software development models

Sequential / Iterative-Incremental / Testing within a life cycle

Test levels

Component (Unit) / Integration / System / Acceptance

Test types

Functional / Non-functional / Software structure / Related to changes

Maintenance testing

Part I: Close-ended questions

Question 1

Which are good practices for testing within the development life cycle?

a. Early test analysis and design
b. Different test levels are defined with specific objectives
c. Testers will start to get involved as soon as coding is done
d. A and B above

Question 2

Which option best describes objectives for test levels with a life cycle model?

a. Objectives should be generic for any test level
b. Objectives are the same for each test level
c. Objectives of a test level don’t need to be defined in advance
d. Each level has objectives specific to that level

Question 3

Which of the following is a non-functional quality characteristic?

a. Feasibility
b. Usability
c. Maintenance
d. Regression

Question 4

Which of these is a functional test?

a. Measuring response time on an on-line booking system
b. Checking the effect of high volumes of traffic in a call-centre system
c. Checking the on-line bookings screen information and the database contents against the information on the letter to the customers
d. Checking how easy the system is to use

Question 5

Which of the following is true regarding the process of fixing emergency changes?

a. There is no time to test the change before it goes live, only the best developers should do this work and should not involve testers as they slow down the process
b. Just run the retest of the defect actually fixed
c. Always run a full regression test of the whole system in case other parts of the system have been adversely affected
d. Retest the changed area and then use risk assessment to decide on a reasonable subset of the whole regression test to run in case other parts of the system have been adversely affected

Question 6

A regression test …

a. Is only run once
b. Will always be automated
c. Will check unchanged areas of the software to see if they have been affected
d. Will check changed areas of the software to see if they have been affected

Question 7

Non-functional testing includes:

a. Testing to see where the system does not function correctly
b. Testing the quality attributes of the system including reliability and usability
c. Gaining user approval for the system
d. Testing a system feature using only the software require for that function

Question 8

_____ testing is performed by customers at their own site

Question 9

Pair the following test levels with their description

1. Unit level	A. Tests the behavior of the whole system
2. Integration level	B. Performed by customers
3. System level	C. Tests any module or object separately testable
4. Acceptance level	D. Tests the interactions of the interfaces of the system

Question 10

Acceptance testing is not the responsibility of the development team. It is the responsibility of the customers, but the development team can assist in the process.

a. True
b. False

Part II: Exercises and Open-ended questions

Exercise: Different Types of Testing

Go to www.ikea.com/no/no/

Give examples of possible …

a. Unit tests
b. Integration tests
c. System tests

Open-Ended Questions

Why do you think we need to test at integration level top-down or bottom-up rather than big-bang?

Why is acceptance testing important?

Why do you think it is important to test on-site?

The End

Assignments

2-3 people in each group

Alt. I: Register as an individual. We form the groups

Alt. II: Register the entire group at once.

Next week:

Static test techniques

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