Software Testing Mentor

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ISTQB Foundation Level and Software Testing Training

Module 4
Test Design Techniques

Session 1 - The Test Development Process

Module 4 - Test Design Techniques

- The test development process
- Categories of test design techniques
- Specification Based or Black-box Techniques
- Structure-based or White-box Techniques
- Experienced Based Techniques
- Choosing the best technique

Introduction to Test Development Process

It is important to know what you are trying to test, inputs and expected outcome before you actually start test execution.

In this session we will learn about

- Test Conditions (Documented in test design specification)
- Test Cases (Documented in test case specification)
- Test Procedures (Documented in test procedure document)

Formality of test documentation

Testing can be performed with varied level of formality

It could be very informal with minimal documentation or very formal with extensive test documentation

Right level of formality depends on context of testing

- A commercial safety-critical application needs very formal approach as compared to a family website which will be used by only few people.

Level of formality is also influenced by the organization, its culture, maturity of development and testing process etc.

In this session we will cover the formal approach of test documentation

Test Development Process

The test development process consists of 3 main phases

- Test analysis
- Test design
- Test implementation

Test Analysis - Identifying Test Conditions

The process of looking at test basis to derive test information is known as Test analysis.

Test basis is anything like system requirement, SRS, design documents, code, business process etc.

In test analysis we find out what could be tested or test conditions, test condition is something which can be tested

The chosen test conditions depend on the test strategy or detailed test approach. For example, they might be based on risk, models of the system, likely failures, compliance requirements, expert advice

The test conditions are then converted into detailed test cases, test design techniques are used to figure out good set of tests

Test conditions should be able to be linked back to the source documentation to identify traceability and Requirements Coverage

Test Design – Specifying Test Cases

During Test design phase we create test cases

During test design you need to be very specific, you need exact and detailed input conditions, pre conditions and test outcomes

Your test cases should include

- Input values & Test Data
- Pre conditions
- Expected results

Expected result should be defined prior to execution

Test cases are prioritized to ensure that high priority test cases are executed first

Test cases need to be detailed

Test Implementation – Specifying test procedures or scripts

In test implementation the test cases are grouped into test suites and ordered into proper sequence

- Functional Test Suite
- Regression Test suite

During test implementation you also specify the test procedure – Test procedure is a document which specifies the steps to be taken in running a set of tests, it is also referred as test script.

Test procedures are then formed into test execution schedule or super script which specifies which procedures are to be run when and by whom.

Conclusion

To conclude in this session we learned about The test development process and understood 3 phases in test development process

- Test analysis
- Test design
- Test implementation

THANK YOU!!!