

Test Techniques for Developers

1 Day



Course Overview

The three basic activities in code development are design, code and test. With tight project timescales often being the norm, the testing activity is squeezed with the result that the quality of the deliverable from the developer is less than anticipated. This can lead to:

- time being wasted by other teams filling out incident reports, and all that entails, when the defect should be found and cleared in the development environment; and
- tests planned later in the development cycle are held back by the basic functions of the system failing.

This course identifies tests types and associated practical methods that can be used to improve the quality of the deliverable without imposing a huge overhead on developers or other development resource.

Course Objectives

- To provide an awareness of the benefits of using formal test techniques to design test cases
- to provide an awareness of both structural (white box) and specification-based (black box) test techniques;
- to provide an appreciation of how some of the techniques are used to create test cases and measure test coverage
- to provide an appreciation of how techniques are selected that are appropriate for the related risk

Who Should Attend?

The course is intended for developers, their managers, project managers and anyone who is, or will be, involved or interested in the testing of developed products at the point of code cutting.

Syllabus – Key points

- Basic terminology - basic test types – structural testing, functional testing, non-functional testing;
- Static analysis – options for measuring code – control flow graphing – cyclomatic complexity;
- Dynamic testing – expected outcome vs. actual outcome – advantages and disadvantages of formal test design — test case format;
- Statement and branch decision testing – calculating coverage – implications of partial coverage – subsumes relationships and risk;
- Condition testing – compound decisions – differences between BCC and MCD coverage;
- Verification and functional testing – benefits of specification-based tests;
- Equivalence partitioning and boundary value analysis;
- Classification tree method – comparison with equivalence partitioning;
- Pairwise Testing – orthogonal arrays – use of test tools;
- Other functional and structural test techniques;
- Test preparation and test design – where they fit in the test process.

Alternative Courses

- Practical Test Specification
- Fundamentals of Testing
- Fundamentals of Risk
- Fundamentals of Reviews