

SOFTWARE TEST ENGINEERING

One-day workshop

Overview

Software testing is a serious business. Building excellent software and meeting customer expectations calls for more than just ad hoc testing.

Workshop Objective

This workshop will help you have an excellent understanding of test techniques, test process, levels and types of test and an overview of automation.

Topics of discussion

Fundamentals of testing

- Quick introduction to the V&V
- Objectives of software testing
- Psychology required for testing
- Levels of testing
- Objectives of unit, integration, system testing

Test design techniques

Black box test design techniques

- Equivalence partitioning
- Boundary value analysis
- Special value
- Cause effect, Decision table based
- State machine based
- White-box techniques*
- Coverage based testing
- Loop testing
- Resource leak testing

Unit testing

- Objective, purpose and methods
- How to know when you are done with unit tests

Integration testing

- Test strategies and techniques

System testing

- Validating functional requirements via specification-based testing
- Validation of non-functional requirements

Test process

- Planning for testing
- How to evolve a test strategy for effective testing
- Test documentation
- Defect rating and prioritization
- Defect analysis

Metrics and tools

- Test metrics - what to collect
- Analysis of test metrics for assessment of product quality, process capability and management tracking

Test automation

- Factors to consider for test automation
- Test automation tools
- Components of a test automation framework

Workshop benefits

Participants will be exposed to science and engineering of testing in the workshop. At the end of the workshop, the participants will have a strong grounding in test engineering.

Who should attend?

Software developers, software test engineers

Prerequisites

Participants are expected to have good knowledge of software engineering with preferably knowledge of good programming.

Delivery method

The workshop consists of classroom discussions and a problem solving/case-study session. It adopts our unique learning model. This enables participants listen to lecture on a topic, introspect using a structured questionnaire, explore the topic - hands-on session, discuss the learning after exploration and finally read the supplemental course notes.