



# Software Testing Training

RevealIT Pvt. Ltd.

Address : Noida Sector-15 Opposite Nirula's Hotel 201301

Phone : 0120-422-6850

Mobile : +91-9953857865, 9711774747

# SOFTWARE QUALITY TESTING CURRICULUM

## Software Quality Testing Practice Overview

### → Introduction

- History of software engineering
- Terms in Software Testing
- Defect, Error , Bug, Failure
- Software Development life cycle (SDLC)

### → Models of Software Engineering

- Waterfall Model
- Prototype Model
- Spiral Model
- V-Model
- Incremental Model
- Agile Model

### → Typical related to software and management

- Principal Of Software Testing

### Terms related to software Engineering and Testing

- Definition of quality
- Definition of Quality Assurance
- Definition of Quality Control
- Difference Between Quality Assurance and Quality Control
- What is verification?
- What is validation?
- Difference Between verification and validation

### → Static testing

- Walkthrough, reviews and inspection
- The review process
- Requirement design and code reviews

## → ISO, CMM and six sigma certification and its use in context to software Testing

## → Levels of Testing

- Unit Testing
- Integration Testing
- System testing
- UAT

## → Software Testing Methodology

- White Box
- Black Box
- Grey Box

## → Black Box Testing (Optimizing Techniques)

- Equivalence Class Partitioning
- Boundary value analysis
- Decision Table Use Case

## → An Overview of White Box Testing

### **Basis Path Testing**

- Flow Graph Notation
- Cyclomatic Complexity

### **Control Structure testing**

- Condition Testing
- Loop Testing

## → Types of Testing

→ **Acceptance Testing**

Alpha Testing  
Beta Testing

→ **Adhoc Testing**

→ **Exploratory Testing**

**Performance Testing**

Load Testing  
Stress Testing  
Volume Testing

→ **Random Testing**

→ **Re-Testing**

→ **Regression Testing**

→ **Sanity Testing**

→ **Smoke Testing**

→ **Security Testing**

→ **Usability Testin**

→ **Validation Testing etc...**

→ **Test Plan & Test Report**

Create Test Plan on a Project  
Test Deliverables (Test ware)  
Test Case Writing Techniques  
Bug Reporting  
Overview Of Traceability

## → Agile Methodology

- Introduction of Agile Model
- Process of Scrum
- Meeting & Artifact

## → Practical implementation of Agile Method

- How to create User Story
- How to Add Task
- How to Track Tasks
- Acceptance criteria of Task Order

## → Software Testing life Cycle

- Creation of Use Cases
- Creation Of Test Plan
- Creation Of Test Cases
- Implementation of testing optimization Techniques

## → Introduction of Web Testing

## → Real Time Implementation of Testing Project & Domain Knowledge session

### LIVE PROJECT

- Review Of Test Cases(Lab)
- Execution Of Test Cases(Lab)
- Bug life cycle
- Bug Reporting process
- Bug Reporting (On Live Projects/Lab)

## → Database Testing with SQL for Test Professionals Introduction

## → Introduction

- What is Database Application?
- Understanding data storage
- Back end & front end Testing
- General Database Basics
- Relational Database Concepts

## → Basic Sql

- Overview of DML , DDL, TCL
- DML : Insert , update , Delete , merge Restricting & Sorting Data
- sql functions
- single row functions
- character functions, number functions, round truncate , mod,mx,min,date general functions
- cont., avg, sum, now
- etc.. joining tables
- obtaining data from multiple tables
- types of join inner joins, left joins , right
- join operator (data using drop functions)
- Distinct, order by, group by, equal to etc.
- database object(constraints and views)
- not Null
- unique
- primary key
- foreign key

## → Operator:

- Arithmetic Operator
- Relation/ Logical
- Like Operator

## → Automated Testing Tool:

- HP interactive

## → Quick Test Professionals (qtp.11.0)

- Introduction
- Object Identification
- Object Spy

## → Types Of Recording

- Normal
- Analog
- Low Level

## → Types of Object Repository

- Local
- Merge

## → Check Point

- XML Check Point
- Standard Check Points
- Test Check Points
- Bitmap Check Points
- Text area Check Points
- Database Output Check Points
- Accessibility Check points

## → Parameterization

- Data Table Parameterization
- Random Number
- Dynamic
- Environment

## → Output Value

- Standard Output Value
- Text Output Check Point
- Text area Output Check Points
- Database Output Check Points
- XML Output Check point

## → Using Regular Expression Recovery Scenario Manager

- Po PUP
- Object State
- Test Run Error
- Application Crash

## → Actions

- Call to New Action
- Call to existing Action
- Call to Copy Action
- Batch Execution
- Run Mode QTP

## → Winrunner (Wr)

- introduction to win
- runner testing process
- learning methods
- gui map recording
- methods check
- points compile
- module batch test

- exception handling
- virtual objects
- wizard breakpoints
- analyzing and reporting test
- results context sensitive
- analog
- gui checkpoints
- get text
- Introduction
- through dynamic input
- submission through flat file
- through data driver wizard



## → **LOAD RUNNER (LR)**

- Introduction
- Load runner testing process
- Vuser Scripts
- Working with Vuser
- Transactions
- Parametrization
- Check Points
- Rendezvous Points
- LR Controller

## → **QUALITY CENTER (QC)**

- Introduction
- Site Administration
- Test Planning
- Test Execution
- Filter Technique
- Sorting Technique
- Attachments Technique
- Defect Tracking
- Writing Test case Using QC
- Execution of Test cases in QC
- Overview of Defect Life cycle
- Logging defect in QC

## → **Selenium**

### → **Selenium IDE Basic**

- Selenium features and IDE overview
- Record and Run
- Understand IDE – Command, Target, Value
- Verifying Page Elements
- Assertion or Verification
- Matching Text Patterns
- Locating Elements
- Installing & using Firebug to inspect elements
- Understand ID, Name, XPath, CSS-Attribute, Text and Dynamic Object

## → WebDriver [PART – I]

- Setup Eclipse, Selenium Server & Batch file
- Create new Eclipse projects and Java Class
- Move IDE code to JUnit code in Eclipse
- Basics of JUnit & JUnit Annotations
- Setup Apache Ant and Build.xml
- Run JUnit Tests with Ant
- Understanding JUnit Results and Ant Results

## → WebDriver [PART – II]

- Parameterizing Selenium Tests in JUnit
- Understanding Selenese commands
- Java DataTypes, Conditions, Loops
- Java Methods, Classes and Global Variables
- Execute Selenium Test Cases and get Test results

## → Data-Driven Framework-1

- Create Manual Test Scenario & sample Test Data
- Write JUnit code for new Test Scenario
- Learn to Read Test Data from Excel
- Initialize Test Parameters and feed data to AUT
- Obtain Test Results from AUT
- Learn to Write Results into Excel
- Read/Write from Excel using Apache POI

## **Keyword-Driven Framework-1 [Using Selenium Server with JUnit & Web Driver and Java]**

- Create re-usable methods (Keywords) for various web commands. Write Test Cases and Test Steps with Keywords
- Build a Java Driver code to read Keywords from the Excel. Read/Write from Excel using Apache POI
- Powerful Script-Free Framework. Manual Test Scenario & sample Test Data

## → **Overview - Hybrid Framework**

Create Manual Test Scenario & sample  
Test Data Powerful Driver Script  
Read Test Cases, Test Steps and Test Data  
from Excel Export Test Results into an Excel

## → **Selenium Grid**

Installing Grid on your local machine.  
Configuring Grid Build.xml for your Tests  
Run Tests through Grid in sequence on local machine.  
Run Tests through Grid in parallel on local machine.

## → **Overview - TestNG Dataprovider**

Move IDE code to TestNG code in  
Eclipse Basics of TestNG & TestNG  
Annotations Run TestNG Tests with Ant  
A simple DataProvider through TestNG.  
Understanding TestNG Results and Ant Results

## → **SVN and Apache Maven**

Getting SVN and Maven Loaded  
Code Checkin-Checkout  
POM.xml, Archetypes, Repositories  
Running through Ant  
Version Management using SVN and Maven

## → **AJAX and dynamic web Apps**

Handling pop-ups, multi-browsers  
Handling AJAX Drop-Downs  
Handling Calendar pop-ups  
Customizing our XPath to recognize Dynamic Elements