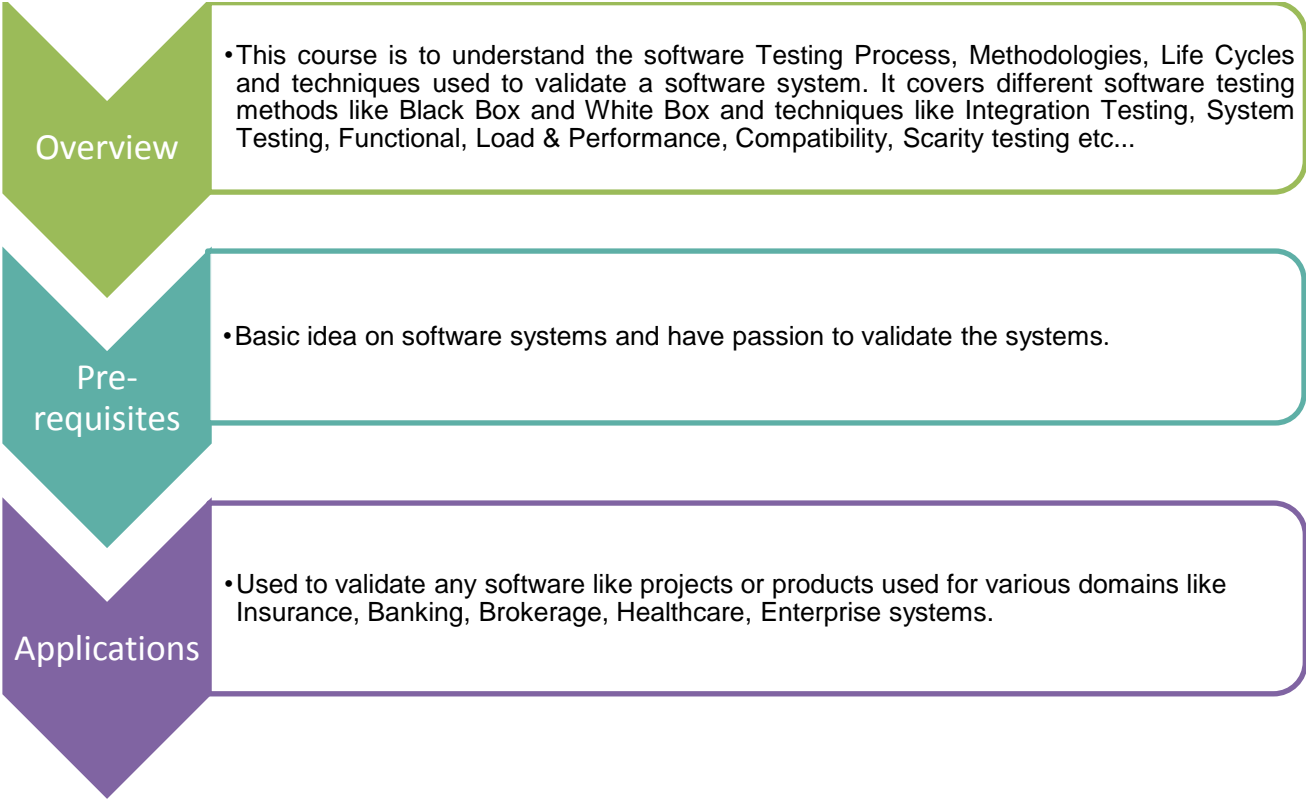




# Course Brochure

## TESTING TOOLS (Manual+Selenium)



## COURSE CONTENTS

### MANUAL TESTING

#### Software Testing

- ❖ Introduction to s/w Testing
- ❖ Software Development Process
- ❖ Project Vs Product
- ❖ S/W quality
- ❖ S/W Testing Methods
- ❖ Roles & Responsibilities of a TE
- ❖ Environments in Project
- ❖ Quality Management

#### Software Development Life Cycle (SDLC)

- ❖ SDLC Models
- ❖ Waterfall Model
- ❖ Prototype Model
- ❖ Spiral Model
- ❖ V Model
- ❖ Agile Model (Scrum)

#### Testing Methodologies

- ❖ White Box Testing
- ❖ Black Box Testing
- ❖ Gray Box Testing

#### Testing Levels in SDLC

- ❖ Review on Requirements
- ❖ Review on Design
- ❖ **Unit Testing**
  - Statements Coverage
  - Loops Coverage
  - Conditional Statements
  - Path or Branch Coverage
- ❖ **Integration Testing**
  - Big-bang Approach
  - Incremental Approach
    - Top Down Approach
    - Bottom Up Approach
    - Hybrid/Sandwich Approach

#### ❖ **System Testing**

- Functional Testing
  - Object properties coverage
  - Error handling coverage
  - Input-domain coverage
  - Calculation coverage
  - Data base coverage
  - Links coverage
- Non Functional Testing
  - GUI Testing
  - Usability Testing
  - Performance Testing
  - Recovery Testing
  - Security Testing
  - Compatibility Testing
  - Configuration Testing
  - Comparative Testing
  - Installation Testing
  - Sanitation Testing

#### ❖ **User Acceptance Testing**

- Alpha Testing
- Beta Testing

#### Testing Terminology

- ❖ Smoke Testing
- ❖ Sanity Testing
- ❖ Re-Testing
- ❖ Regression Testing
- ❖ Ad-hoc Testing
- ❖ Exploratory Testing
- ❖ Jump/Monkey Testing
- ❖ L10N Testing (Localization testing)
- ❖ I18N Testing (Internationalization testing)
- ❖ Globalization testing
- ❖ Mutation Testing
- ❖ Defect seeding/be-bugging

## COURSE CONTENTS

### Software Testing Life Cycle (STLC)

- ❖ Test Strategy
- ❖ Test Planning
- ❖ **Test Case Design**
  - Fundamental of TC's
  - TC Design Technique (BBT)
  - Types of TC's
  - TC Template
  - TC Reviewing
- ❖ Test Execution
- ❖ **Defect Reporting & Tracking**
  - Defect Reporting
  - Defect Life Cycle (BLC)
  - Severity, Priority
- ❖ **Test Closure**
  - Criteria for Test Closure
  - Test Summary Reports
- ❖ **Additional**
  - Introduction to VSS
  - QA & QC
  - ISO & CMM Standards
  - Testing Certifications
  - Interview Questions
  - Resume Preparation

## **SELENIUM**

### Introduction

- ❖ What is automation testing
- ❖ When to use Automation
- ❖ Advantages of Automation
- ❖ Criteria for Automation

### Introduction of Selenium

- ❖ What is Selenium
- ❖ Use of Selenium
- ❖ When selenium can useful in testing
- ❖ Features of selenium
- ❖ Differences b/w selenium & QTP

### Selenium Components

- ❖ Selenium IDE
- ❖ Selenium RC
- ❖ Selenium WebDriver
- ❖ Selenium Grid
- ❖ SELENDROID

### Configuration of IDE & Dev Scripts

- ❖ Recording the script
- ❖ Running the script
- ❖ How to save recorded script
- ❖ Object identification
- ❖ Differences b/w testcase & Test suite
- ❖ Languages supported while recording
- ❖ Synchronization in Selenium IDE
- ❖ Testing Vs Selenium IDE
- ❖ When to use Selenium IDE
- ❖ Why companies are not using recording tools

### Creating the Environment for Selenium RC

- ❖ Creating generic scripts in selenium
- ❖ Creating scripts by using functions
- ❖ Running the scripts in Eclipse
- ❖ Inheritance
- ❖ Browser commands with examples
- ❖ Interactive commands with examples
- ❖ Validation commands with examples
- ❖ How to take data from excel sheets
- ❖ Export data to excel sheets
- ❖ How to export results after completion of test execution
- ❖ How to use Eclipse
- ❖ Debugging the script
- ❖ How to handle popups & alert messages
- ❖ Recognising similar Elements
- ❖ Connecting to Database

### Developing reusable scripts for any projects

- ❖ Validations
- ❖ What is validation
- ❖ What is the use of validation in Automation Testing

## COURSE CONTENTS

- ❖ When to use validations in Real time
- ❖ How to use validations

### Core Java Fundamentals Language Fundamentals

- ❖ Java Programming Language Keywords
- ❖ Class & Object
- ❖ Data Types
- ❖ Array Declaration

### Statements

- ❖ Writing code using Loops
- ❖ Handling Exceptions
- ❖ Working with the Assertion Mechanism

### Object Orientation, Overloading & Overriding, Constructors

- ❖ Benefits of Encapsulation
- ❖ Overriding & Overloading Methods

### JUnit Introduction

- ❖ Prone to work
- ❖ Starting from scratch
- ❖ Understanding unit testing frameworks
- ❖ Setting up Junit
- ❖ Testing with Junit

### Object Repository

- ❖ What is object repository
- ❖ How to use OR in framework
- ❖ What is the use of maintaining OR
- ❖ Types of creating OR

### Additional Concepts

- ❖ How to use Xpath
- ❖ How to use DOM
- ❖ How to use Key Commands

### Selenium2 / Web Driver

- ❖ Selenium2.0 Features
- ❖ The selenium server-When to use it
- ❖ Setting Up a selenium-Web Driver Project
- ❖ Migrating from selenium1
- ❖ Getting started with selenium-Web Driver
- ❖ Commands & Operation
- ❖ Web Driver-Backed Selenium-RC
- ❖ Programs on Web Driver
- ❖ Programs on Web Driver-Backed Selenium-RC

### TestNG Framework

- ❖ What is TestNG
- ❖ Create TestNG.xml file
- ❖ Integrate the selenium scripts & run from TestNG
- ❖ Reporting Results & Analyze
- ❖ Run Scripts from multiple Browsers

### Automation Life Cycle

- ❖ Frame work
- ❖ What is Frame work
- ❖ Types of Frameworks
- ❖ What is modular frame work
- ❖ What is DataDriven frames
- ❖ What is Keyword drioven framework
- ❖ What is hybrid framework
- ❖ Use of framework
- ❖ Explain about your framework
- ❖ How to develop a framework
- ❖ Integration of framework
- ❖ How to execute scripts from framework
- ❖ How to handle non GUI(Desktop) elements, Flex objects
- ❖ Introduction to Sikuli
- ❖ Integrating Sikuli with Selenium in eclipse
- ❖ Develop the code with sikuli and selenium
- ❖ Uploading file