

MANUAL TESTING COURSE CONTENTS

- ❖ **MANUAL TESTING CONCEPTS:**
 - Introduction to Software Testing
- ❖ **SDLC PHASES:**
 - Requirements
 - Analysis
 - Design
 - coding
 - testing
 - delivery
- ❖ **SDLC MODELS:**
 - Waterfall model
 - Prototype model
 - V- model
 - Spiral model
 - RAD model
 - Fish model
 - Agile model
- ❖ **TESTING METHODS:**
 - Whitebox testing
 - Blackbox testing
 - Grey box testing
- ❖ **LEVELS OF TESTING:**
 - Unit testing
 - Integration testing
 - Module testing
 - System testing
 - Uat
- ❖ **TYPES OF TESTING:**
 - Special kinds of testing
 1. Monkey testing
 2. ad-hoc testing
- ❖ **SOFTWARE TESTING LIFE CYCLE (STLC):**
 - STLC PHASES:**
 - Test case preparation
 - Test case execution
 - Bug life cycle, bug reporting format
 - Data Base Testing
 - Software Configuration Management
 - CMM levels in testing
 - Testing principles

SELENIUM COURSE CONTENT

This course is designed using Selenium for test automation covering framework design with real time Industry oriented exercises and at the end of the course with project work. Core Java basics are also covered as part of the course.

COURSE OBJECTIVE:

After completion of the course, one will be able to automate any web based application.

❖ **INTRODUCTION TO AUTOMATION:**

- What is automation testing
- Advantages of Automation Testing
- How to learn any automation tool
- Types of Automation tools

❖ **INTRODUCTION TO SELENIUM:**

- What is Selenium
- Use of Selenium
- Features of selenium
- Difference between Selenium and QTP

❖ **SELENIUM COMPONENTS:**

- Selenium IDE
- Selenium Core
- Selenium RC
- Selenium Grid
- Selenium 2.0 - Web Driver

❖ **SELENIUM IDE:**

- Selenium Overview
- Selenium IDE Introduction
- Downloading and Installing Selenium IDE
- Recording and Running a Simple Test
- Selenium IDE - Features
- Installing Useful Tools for Writing Tests
- Selenium Concepts
- Selenium Commands
- Verifying Page Elements - Assertions and Verifications
- Wait Commands
- Object Identification
- Element Locators
- Regular Expression patterns
- Selenium Test Runner
- Using Regular Expressions in Selenium IDE
- Creating Selenium Test Suites
- How to run the recorded script against other browsers
- Why companies are not using recording tools
- Limitations of Selenium IDE

❖ **SELENIUM CORE:**

- Selenium Core Overview
- Installing Selenium Core
- Running Selenium Core Test Suites

❖ **JAVASCRIPT:**

- Introduction
- Statements
- Comments
- Variables
- Operators
- Comparisons
- If...Else
- Switch
- Functions
- For Loop
- While Loop
- Break Loops
- For...In
- Events
- Try...Catch

CORE JAVA FUNDAMENTALS:

❖ **LANGUAGE FUNDAMENTALS:**

- History of Java
- Features of java
- Java Programming Language Keywords
- Class and Object
- Data Types
- Array Declaration, Construction and Initialization
- Encapsulation
- Inheritance
- Polymorphism

❖ **FLOW CONTROL, EXCEPTIONS, AND ASSERTIONS:**

- Writing Code Using if and switch Statements
- Writing Code Using Loops
- Handling Exceptions
- Working with the Assertion Mechanism

❖ **USING THE JAVA.LANG.STRING CLASS:**

- Using the java.lang.Math Class
- Using Wrapper Classes
- Using the equals() Method with Strings and Wrappers and Objects

❖ **INNER CLASSES:**

- Method-Local Inner Classes
- Anonymous Inner Classes

- Static Nested Classes

❖ **DEFINING, INSTANTIATING, AND STARTING THREADS:**

- Preventing Thread Execution
- Synchronizing Code
- Thread Interaction

❖ **OBJECT ORIENTATION, OVERLOADING AND OVERRIDING, CONSTRUCTORS:**

- Benefits of Encapsulation
- Overridden and Overloaded Methods

❖ **ABOUT ECLIPSES:**

- Installing Eclipse
- Creating Simple Project in eclipse
- Eclipse and Selenium together
- Importing and Exporting
- Debugging using Eclipse
- Exploring Eclipse – Basic
- Exploring Eclipse – Advanced

❖ **FIRE BUG, XPATH AND CSS:**

- Introduction to Firebug
- Downloading and installing of Firebug
- Downloading and installing of xpath
- How to identify the xpath for an particular element
- Identifying objects using CSS

❖ **SELENIUM RC**

- Installing Selenium RC
- Selenium RC Overview
- Starting and Stopping Selenium Server
- Creating the generic scripts in selenium
- Creating the scripts by using functions
- Selenium Client Libraries
- Browser commands with examples
- Interactive commands with examples
- Information commands with examples
- Validation commands with examples
- How to take data from excel sheets
- Why should we use excel sheets
- How to take data from DB
- Debugging the scripts
- Maintaining the synchronization points
- How to handle Pop-up's and alert messages

❖ **HOW TO USE TESTNG AND JUNIT IN SELENIUM:**

- Introduction to TestNG
- Why TestNG
- Setting up TestNG
- Working with TestNG
- Advantages of TestNG over Junit

- Exploring TestNG Features
- How to Use TestNG Annotations
- Data Driven Testing TestNG
- TestNG Execution Report
- TestNG Results output folder walkthrough
- TestNG Reporting features

❖ **AUTO IT SCRIPT FOR HANDLING WINDOWS:**

- Installing Auto IT
- Auto IT Overview
- Why Auto IT?
- Auto IT Script Examples
- Compiling Auto IT scripts
- How To Use Auto IT scripts in Selenium RC

❖ **SELENIUM GRID:**

- Introduction Selenium Grid
- Advantages of Selenium Grid

❖ **ADVANCED SELENIUM 2.0 - WEB DRIVER:**

- Introduction to selenium 2.0
- Advantages of web driver
- Web Driver v/s RC
- Architecture of Web Driver and RC
- Web Driver IDE
- Installation / Configuring Eclipse for Web Driver
- Identifying the elements in Web Driver Using Id, Name, Xpath ,Dom and CSS
- Working with Different drivers like HtmlUnit driver, Firefox Driver etc...
- Creating the generic scripts in Web Driver
- Creating the scripts by using functions
- Web Driver Client Libraries
- Web Driver commands with examples
- Working with excel sheets using Web Driver
- Web Driver with TestNG / Junit

❖ **AUTOMATION FRAMEWORK:**

- What is Framework
- Types of Frameworks
- What is modular framework
- What is Data Driven framework
- What is Keyword driven framework
- What is Hybrid framework
- Use of Framework
- How to develop the framework
- Integration of the framework
- How to execute the scripts from framework