

Selenium: S/W Testing Automation Tool

Duration: 8 Weeks(Weekdays Batch)/9 Weekend(Weekend Batch)

Prerequisites

- Knowledge of Manual Testing

Core Java

1. Overview of Java

- OOP's , Data Types and Variables
- Operators, Control Structures
- Strings, Arrays

2. Objects and Classes

- Object, Classes and Methods
- Method Overloading
- Constructors

3. Inheritance

- Types of Inheritance
- Method Overriding

4. Packages and Interfaces

- Defining Packages
- Extending Interfaces

5. Exception Handling

- Fundamentals of Exception Handling
- Exception types
- Try and Catch and finally
- Multiple Catch

6. Collections Framework •

- Collection Interfaces and Classes
- Iterator, other Classes

Basic Selenium

1. Introduction to Automation Testing

- What is Automation Testing?
- Which Test Cases to Automate?
- Different Automation tools
- Automation challenges & Mitigations

2. Introduction to selenium

- What is selenium?
- History and various versions of selenium
- Advantages of using Selenium over other tools.
- Selenium components

3. Selenium-IDE

- Introduction
- IDE Features
- Building & Running Test Cases
- Building and Running Test Suites

4. Selenium Web Driver 2.0

- Why Selenium Web Driver
- What is a Driver
- Automation Setup for Selenium Web Driver
- Configuration of Selenium Jar using Eclipse

5. Identification of Locators

- Tools to identify elements/objects
- Setup for Firebug, Firepath

- Different methods of finding element
 - By ID, By name, class
 - By Xpath, By Tag name
 - By Link text
 - By CSS
 - Using Effective X-path

6. Selenium Commands

- Various types of operation that can be performed on any elements and how to use them.
- Browser Commands, Navigation Commands
- Working with different browser
- Handling Checkbox, RadioButton
- Dropdown and Select Operations
- Capturing Screen shots
- Handling Keyboard Event and Mouse Event
- Multiple Window Handling
- Alert & Pop Up Handling.

7. Handling WebTables

- What is WebTables
- Extracting values from WebTables
- Static and Dynamic WebTables

8. Wait Commands in Selenium

- Implicit Wait
 - Explicit Waits,Expected Conditions
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Advanced Selenium

1. Framework Designing

- What is Framework
- What is a Framework?
- Different Types of Framework.
- How to Design a framework?
- Data Driven Framework using Excel
 - Downloading and configuration of Apache POI
 - Executing Testcases from Excel

2. TestNG Framework

- Test NG & TestNG features
- How to integrate TestNG with Eclipse
- Test NG Annotations
- TestNG Reporting

3. POM Framework

- Advantages of POM
- How to implement
- Using Page Object and Page Factory

4. Cucumber Framework

- What is BDD
- Cucumber implements BDD
- Preparing Features File having test scenario
- Writing a step definition
- Writing Runner Class
- Given, When, Then, And, But annotations and usage in features class
- Passing parameters in Step Functions
- Using regular expression in step implementation to parameterize
- Parameterize complete scenario using features class
- Datatable in Cucumber and its implementation
- Running Cucumber through ANT Pretty, Tags and Glue
- Junit Report Generation in Cucumber
- Cucumber HTML Reports Log4j Usage

- Using Assertions to report failure
- Running simple feature/Step scenario
- Introducing selenium layer - WebConnector
- Building custom functions in WebConnector
- Building a simple test case
- Implementing logging using Log4J
- Executing project from eclipse
- Executing project from ANT
- Generating Junit, Cucumber reports
- Background and Pending Exception
- Parameterizing/repeating test cases from feature classes
- Implementing/deciding Tags
- Running all/limited tests

5. Reporting

- Using Report NG for generating reports through TestNG
- Log4j -What is Log4j, how to use it, integration of Log4j with Eclipse

6. Build Tools -Maven

- How to create a maven project in Eclipse
- Maven Build Cycles.
- How to compile and Run tests using Maven

7. Continuous Build Integration tools- Jenkins

- What is Jenkins and how to use it
- How to integrate Jenkins with Eclipse

8. Selenium Grid

- Introduction & Architecture of Selenium Grid
- Configuration of Selenium Grid(Hub And Node)
- Writing a Sample Script using Selenium
- Some Practice and Sample Programming using Grid

Hands on Experience on Industry Project, Mock Tests & Interview Tips