



Training | Consulting | Development | Outsourcing



Selenium

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Selenium Testing with Java

Course Overview:

Selenium is an open-source Automation test framework for testing various functionalities of web-based applications. Selenium allows the usage of a variety of programming languages such as Java, Ruby, PHP, Python, C, Perl, etc to script automated testing on web-applications. Selenese comprises of a set of commands used in Selenium automation testing of web-based applications.

Selenium can be used to test web-based applications for a wide range of platforms such as Windows, Linux, and macOS. Selenium Automation Engineers are hired to perform automation testing in top Software Development Companies with a handsome salary package.

Candidates with expertise in Manual testing can easily learn the Selenium Framework and become a certified Selenium Automation Testing Professional through Selenium Training.

Course Outline:

Getting to know Automation Testing

- What is an Automation Testing
- Scope and Benefits of Automation Testing

Introduction to Selenium

- Prelude to Selenium
- Understanding Selenium
- Learning Selenium Frameworks
- Introduction of the Selenium components
- Different Versions of Selenium
- Selenium and Languages supported by Selenium– Java, PHP & Python

Core Java and OOPS Concepts

- Setup Java Environment
- Setting up eclipse and Downloading JDK
- Java Programming concepts
- Class, Variables, Object, Methods & Packages
- OOPs concepts – Abstraction, Inheritance, Encapsulation, and Polymorphism
- Conditions and Loops
- Access and Non-Access modifiers
- Interfaces, Constructors
- Collections – Set, List, Array and, HashSet, Hashtable, ArrayList, HashMap
- Keyword List
- String Handling
- Exception Handling
- Retrieving the data from Database

Installation and Setting up of Selenium

- Installing the Selenium IDE
- “Selenese” – Selenium Commands
- Creating a Script
- Recording the Script in Selenium
- Executing Scripts
- Debugging Scripts
- Developing Test Cases
- Test Suites with Selenium IDE

Understanding about Assert, Verify, and Locators

- Knowing Verify and Asserts
- Understanding how does Verify and Asserts Differs
- Scenarios for the usage of Verify Vs Asserts

- Understanding Actions
- Extraction of Values
- Using of Regular Expressions
- Understanding Locators
- Exploring Locator Types
- Advantages and Disadvantage of using Locators

Selenium WebDriver

- Understanding the Web Driver
- Architectural Distinction between RC and Web Driver
- Downloading and Configuration of Web Driver with Eclipse
- Cross Browser Testing – Chrome, Firefox, IE, HtmlUnitDriver
- Object locators
- Object Identification
- Understanding Get and Learning Navigate

Handling of Web Page Elements in the Web Driver

- Managing various Web Element using the Web Driver
- Handling Dropdown, Radio Buttons, Listbox, Multi-Select box, Date Picker and Widgets
- Knowing and using the Implicit and Explicit Wait
- Working with Different Browsers
- Recording Screenshots
- Handling Javascript Alerts
- Managing Javascript Prompts

Handling Input Table, Events, and Files in the Web Driver

- Handling Mouse movement
- Handling the Keyboard Events
- Handling Windows

- Managing Tabs and Frame
- Learning Web Tables
- Handling Dynamic and Static Tables
- Automating Real-time scenarios
- Handling Exceptions in the Selenium
- Understanding AutoIT with the File Upload example
- Handling AJAX call in a WebDriver

Headless Browser Testing

- What is a Headless Browser Testing
- Advantages and Disadvantages
- Testing Using HTMLUnitDriver, ChromeDriver, and PhantomJS

Flash Object Testing Using SIKULI

- What is a Flash Object Testing
- Handling Flash Objects using the Sikuli

TestNG Framework

- Introduction to Unit Testing and TestNG Framework
- Difference between Junit and TestNG
- TestNG Introduction
- Configuration with Eclipse
- TestNG Annotations
- Data Providers
- Creation of Test Suite and Executing with a TestNG
- Understanding the TestNG Listeners
- Executing Group Tests
- Parallel Execution in TestNG
- Managing Failed Test Cases
- Generating Reports in the TestNG

Test Automation Frameworks

- Understanding the need of Test Automation Frameworks
- Advantages of using Guidelines Linear Scripting/Test Automation Frameworks
- Table-Driven or Keyword -Driven Testing Framework
- Data-Driven Testing Framework
- Hybrid Test Automation Framework

Developing Hybrid Test Automation Framework

- Creation of Hybrid Test Automation Framework for the Web Application using the WebDriver/ TestNG
- Using external Data for Testing (XML files, Excel Sheet, and Property File)
- Reading and understanding the reports
- Screenshots of Failed Test Case

Design Patterns

- What is the Page Object Model (POM)?
- Knowing what is Page Factory
- How to Implement POM
- Test Case Execution using the POM

Introduction to Cucumber Framework

- Getting to know Behavior-Driven Development (BDD)
- Understanding BDD and Application
- Prelude to Cucumber Framework
- Gherkin
- Components of Gherkin
- Step Definition
- Setting up the Cucumber Project

Selenium Grid

- Prelude to Selenium Grid
- Configuration of Grid Setup
- Configuring Grid for Multi-browsers
- Remove Webdriver

Build Integration

- Integration with Maven

Continuous Integration

- Integration with Jenkins or Hudson

GITHUB – Source Code Management

- What is Version Control?
- What is GitHub?
- How to Download and Install Git
- Creation of a New Repository
- Push Changes to the Repository
- Sending a Pull request
- Merge Changes from the Pull Request

Reporting Tools

Prerequisites:

- Basic knowledge of Core Java. This course starts with a refresher on core Java where basic concepts are explained.

Who Can attend:

- Test Managers

- Test Engineers
- Test Lead
- Test Analyst
- QA Engineers
- Software Developers
- Engineers who want to learn Automation testing

 **Number of Hours: 40hrs**

 **Certification: Certified Selenium Automation Testing Professional**

 **Key Features:**

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification