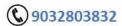
# TechyEdz Solutions

Training | Consulting | Developement | Outsourcing



Selenium









# **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