

Selenium Certification Training Course Content

Course Duration - 45-50 Hrs., 7-8 Weeks

Course Information

Batch Options

Weekday Batch
Mon - Fri - 1.5 Hr./Day

About the Trainer

Industry Expert Trainer with 15+ Years
Real Time Work Experience at Top US
Based Product and Consulting Firms

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Introduction To Selenium Certification Training

Selenium

Selenium automates browsers. That's it! What you do with that power is entirely up to you. Primarily it is for automating web applications for testing.

What you'll learn

- Master Selenium Suite (WebDriver, IDE and Grid)
- Learn Selenium WebDriver
- Learn Selenium Grid and IDE
- Master Automation Frameworks - TestNG and junit
- Third-Party Tools Integration with Selenium
- Understand 15+ Realtime Project Examples
- Certification, Resume & Interview Prep and Job Assistance

Course Content

Module 1: Introduction to Automation Testing and processes

- Test Automation Fundamentals
- Types of Applications (Desktop, Web, Mobile, and Hybrid)
- Software Testing Methods (Manual and Test Automation)
- Test Automation Types (Unit Testing, API Testing, and GUI Testing)
- Test Automation Frameworks
- Test Automation Tools - Licensed & Open Source
- Test Automation Process

Module 2: Introduction to Selenium Suite

- Introduction to Selenium Suite
- Quick Introduction about Selenium WebDriver?
- Selenium IDE and it's details
- Introduction to Selenium Grid
- Selenium vs. Other Testing Tools
- Features of Selenium
- Integration of Selenium with Other Tools

Module 3: Test Automation Fundamentals

- Automated Testing
- Benefits of Automation Testing
- Limitations of Automation Testing

Module 4: Locator Techniques & Tools used to identify Objects

- Introduction to element locators
- Types of Element Locators
- Writing Xpath Manually
- Types of Xpath
- findElement & FindElements
- Element locators on different browsers

Module 5: Eclipse IDE Installation and Java Introduction

- Installation of Java
- Installation of Eclipse IDE
- Creating Project in eclipse
- Writing & Executing programs in Eclipse IDE
- Eclipse and Selenium together
- Debugging using Eclipse
- Why Java?
- Platform Independence in Java
- Explain Java Program Structure and Naming Convention
- Java Data Types and Variables and Output Statement
- Basic Operators in Java
- Features of Java
- Keywords and Syntax

Module 6: Java Fundamentals

- Classes and Objects
- Conditional Statements - If Else, Nested If Else, Switch etc.
- Loops & Iterative Statements - While, Do While, For, Foreach loops etc.
- Comments in Java
- Access Specifiers
- Java Methods
- Constructors & Keywords - break or continue
- What is Object Oriented Programming?
- OOPS Concepts

Module 7: Arrays and Collections in Java

- What is Array
- Advantages of Array in Java
- Working with Array and ForEach loop
- Packages, Classes and Objects
- What are Packages
- Creating packages , Class & Objects
- Types of Methods
- Writing user defined methods
- Inheritance - Introduction, Advantage, Types & Examples of Inheritance
- Polymorphism - Intro, Method Overload, Method Override and examples
- Abstraction, Interface & Encapsulation

Module 8: Selenium Web Driver

- Introduction to selenium
- Advantages of web driver
- Web Driver v/s RC
- Architecture of Web Driver and RC
- Configure Selenium with Eclipse IDE(Adding Selenium jar files)
- Working with drivers Firefox, Chrome &IE, etc...
- Creating the generic scripts in Web Driver
- Navigate methods

Module 9: Handling Alerts and Modal Dialog Box in Selenium

- Handling alerts
- Alert interface methods
- Handling Frames/Iframes
- Locating Frames
- Switching between Frames
- Using window handler methods
- Switching between windows

Module 10: Drop down, Web Table, Page back commands

- Handling dropdown
- Select class methods
- Select Single value & multiple values
- Reading data from web table
- Page back commands

Module 11: Synchronization in Selenium with Wait

- Introduction of wait Methods
- Use of Wait methods in selenium
- Types of Wait Methods
- Difference between Thread.sleep, ImplicitWait & ExplicitWait
- Different Expected Conditions in Webdriver

Module 12: Selenium Grid and Robot Class

- Introduction to Selenium Grid
- Deploy a Grid
- Introduction to Robot Class
- Methods under Robot Class - Key Press, Key Release, Mouse Press, Release and Move
- Implementation of the Robot Class
- Advantages and Disadvantages of the Robot Class
- Selenium Robot Framework for Page Crawling and Data Extraction

Module 13: Selenium IDE and Page Object Model

- What is Selenium IDE?
- Features of Selenium IDE
- Selenium IDE Interface
- Selenese in Selenium IDE
- Why Page Object Model (POM)?
- What is Page Factory?
- Implementing POM Using Selenium WebDriver
- Implementing POM with Page Factory

Module 14: Automation Frameworks Basics

- Introduction to Selenium Frameworks
- Types of Selenium Frameworks
- Introduction to Data-Driven Test Framework
- Advantages and Disadvantages of Data-Driven Test Framework
- Best Practices of Data-Driven Testing
- Apache POI
- Data Providers

Module 15: TestNG and Junit in Selenium

- Introduction to TestNG
- Advantages of TestNG over Junit
- TestNG Features & Configure TestNG with Eclipse
- Writing Selenium testing script from scratch
- Running the Test
- Checking the reports generated by TestNG
- Annotations used in TestNG
- Prioritizing Tests
- TestNG with Excel data

Module 16: Advanced TestNG concepts

- Create Testng.xml
- Creating and running Test suites using TestNG & Skipping Tests
- Setting priority of execution for test cases
- Executing group of regression/sanity/smoke test cases using TestNG
- Printing the log statements in TestNG report
- Running Parallel and Distributed tests
- TestNG Results output folder walkthrough

***** Third Party Tools Integration with Selenium *****

Module 17: Log4j

- Log4j Introduction
- Usage of Logger
- Add Log4j Jars
- Integrate Log4j in Selenium
- How to Integrate Log4j in Framework

Module 18: Jenkins Integration

- Why Jenkins
- Installation of Jenkins
- Steps to integrate Jenkins
- Configure Email notification in Jenkins
- Scheduling Jenkins Jobs
- Integration with Selenium Scripts and Running Scripts
- Creating Batch file & Executing scripts using batch file

Module 19: Git Hub Integration

- What is Git Hub
- How to create Git Hub Account
- Setup of GitHub in Eclipse
- What is Commit and push
- Steps to perform Push and Commit
- Integrating with Framework

Module 20: Maven Integration

- What is Maven
- Using the pom.xml file
- Setting up the Maven project in eclipse editor
- Building and running the selenium Maven project
- Adding Dependencies to pom.xml
- Updating the selenium project dependencies by using Maven

Module 21: BDD Framework with Cucumber

- Agile Testing
- Behavior Driven Development (BDD)
- Advantages and Limitations of BDD
- Cucumber Fundamentals—About Cucumber
- Gherkin Syntax in Cucumber
- Step Definition for Cucumber Feature File
- Advantages of Cucumber
- Implementing BDD Framework Using Cucumber

Module 22: REST APIs in Java

- Introduction to Web Services
- Protocol used in web services
- Components of web services
- REST API response codes
- Commonly used REST API HTTP methods
- Sample program to run API

***** Selenium Real Time Project Examples *****

Module 23: Real Time Project Example 1, 2

- Introduction to Realtime Project Examples 1, 2
- Build Project Examples 1, 2 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 24: Real Time Project Example 3, 4

- Introduction to Realtime Project Examples 3, 4
- Build Project Examples 3, 4 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 25: Real Time Project Example 5, 6

- Introduction to Realtime Project Examples 5, 6
- Build Project Examples 5, 6 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 26: Real Time Project Example 7, 8

- Introduction to Realtime Project Examples 7, 8
- Build Project Examples 7, 8 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 27: Real Time Project Example 9, 10

- Introduction to Realtime Project Examples 9, 10
- Build Project Examples 9, 10 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 28: Real Time Project Example 11, 12

- Introduction to Realtime Project Examples 11, 12
- Build Project Examples 11, 12 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 29: Real Time Project Example 13, 14

- Introduction to Realtime Project Examples 13, 14
- Build Project Examples 13, 14 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 30: Real Time Project Example 15 + Course Revision

- Introduction to Realtime Project Example 15
- Build Report 15 for Realtime scenario
- Course Revision

Module 31: Resume Preparation, Interview and Job Assistance

- Prepare Crisp Resume as Selenium Test Engineer
- Discuss common interview questions in Selenium
- Explain students what jobs they should target and how