Selenium Automation Course

Structured Learning Path:

Introduction to Selenium

- What is Selenium?
- History and Evolution of Selenium
- Benefits of Selenium
- Limitations of Selenium
- Overview of Selenium Components:
- - Selenium IDE
- - Selenium WebDriver
- - Selenium Grid
- - Selenium RC (Legacy)

Selenium Architecture

- Selenium WebDriver Architecture
- How Selenium Interacts with Browsers
- Client-Server Architecture
- Supported Programming Languages

Setting Up the Selenium Environment

- Installing Java Development Kit (JDK)
- Installing Eclipse IDE
- Installing Selenium WebDriver
- Setting up Maven Project
- Integrating WebDriver with TestNG/JUnit
- Browser Drivers Setup

Locating Web Elements

- Introduction to Locators
- Types of Locators:
- - ID
- - Name

- - Class Name
- - Tag Name
- - Link Text
- - Partial Link Text
- - CSS Selector
- - XPath
- Best Practices for Locator Strategy

WebDriver Commands

- Browser Commands
- Navigation Commands
- WebElement Commands:
- - click()
- - sendKeys()
- - getText()
- - getAttribute()
- Handling Checkboxes and Radio Buttons
- Handling Dropdowns (Select Class)

Advanced WebDriver Concepts

- Handling Alerts and Pop-ups
- Handling Frames and iFrames
- Handling Multiple Windows
- Synchronization in Selenium
- - Implicit Wait
- - Explicit Wait
- - Fluent Wait

Working with Web Tables

- Locating Tables
- Extracting Data from Web Tables
- Dynamic Tables Handling

File Upload and Download

- Automating File Upload
- Automating File Download

Actions Class

- Mouse Hover
- Double Click
- Right Click (Context Click)
- Drag and Drop

JavaScript Executor

- Scrolling Operations
- Clicking Elements Using JS Executor

Data-Driven Testing

- Introduction to Data-Driven Approach
- Using Excel Files with Apache POI
- Reading and Writing Data in Excel

TestNG Framework

- Introduction to TestNG
- TestNG Annotations
- TestNG XML Configuration
- Assertions in TestNG
- Parallel Test Execution
- Generating Test Reports

Selenium Grid

- Introduction to Selenium Grid
- Hub and Node Concept
- Setting Up Selenium Grid
- Parallel Execution on Multiple Browsers

Page Object Model (POM)

- Introduction to POM
- Advantages of POM
- Creating Page Classes
- Test Implementation Using POM

Behavior-Driven Development (BDD) with Cucumber

- Introduction to BDD
- Writing Feature Files
- Step Definitions
- Running Cucumber Tests

Reporting

- Using Extent Reports
- Custom Test Reports
- Log4j Integration

GIT

- Writing Robust Test Scripts
- Reusability of Code
- Exception Handling
- Version Control with Git

Jenkins

- Getting started with Jenkins,
- Basic Configurations of Jenkins,
- Getting started with Jenkins jobs,
- Jenkins integration with Git,
- Email notification,
- Setting up delivery pipeline

Final Project

- Real-Time Automation Project Scenario
- End-to-End Automation
- Reporting and Documentation

Total Duration of the Course

- Total duration: 1 month(s)
- Days: Monday to Friday (1 hr daily)
- Mode: Online

Certificate

A course completion certificate will be awarded once you have successfully completed this course.

Wishing you a Smooth Coding ahead!

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