Quality Thought®

Automation Testing - Selenium

Mode of Training: Online Training

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Course Curriculum

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Advanced Selenium WebDriver with Java

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Course Objectives:

This course is designed to train intermediate and professional testers to gain in-depth Selenium WebDriver knowledge.

After completing this course, you will be able to:

- You will be in a position to pick any website over internet and can automate it
- Implement page object design pattern, data-driven testing and Cucumber framework
- Learn to use Selenium Grid with TestNG for parallel execution
- Understand how to use Maven and Jenkins
- Running our automated tests inside a Docker container
- Execute a project from scratch by building an automation framework and automating a few test scenarios

Participants:

- Manual Testers
- Software developers

Prerequisites:

- Basic knowledge of Core Java.
- Basic knowledge of WebDriver

1) Automation Basics

- Fundamentals of Test Automation
- What are the advantages of automation testing?

2) Introduction to Selenium

- What Selenium is and How it is Used in Real time
- Features of Selenium

3) Selenium IDE

- Installing IDE
- Building Test Scripts
- Running Test Scripts
- Locating Elements on the web page
- Limitations of Selenium IDE

4) WebDriver Basics - I

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- Selenium Web Driver Overview
- Configuring WebDriver in eclipse
- WebDriver Architecture
- Web Driver Drivers
- Locating Elements in Web Driver
- Handling Web elements
- Running test in multiple browsers
- Synchronization
- Handling AJAX controls
- Handling JavaScript alerts, prompts and confirmations

5) WebDriver Basics - II

- Handling Multiple frames
- Handling Multiple windows
- Capturing screenshots
- Browser navigation
- Handling Keyboard and Mouse Events
- Handling Autosuggestions
- Handling Web Tables
- Finding Broken Links
- File upload and Download using AutoIt

6) TestNG

- How to Install TestNG plug-in in Eclipse
- Various Annotations
- Assertions
- Writing Selenium test script from scratch
- Reports using TestNG

8) Project Details

- Application overview

  - ✓ Bank project overview
  - ✓ Project Description
  - ✓ Tools used in the project (Jenkins, Maven, GitHub, Docker and AutoIt)
  - ✓ Roles and Responsibilities

- Automation process

  - ✓ Automation life cycle
  - ✓ Identify test cases what to be automated
  - ✓ Authoring the scripts
  - ✓ Executing the scripts
  - ✓ Analyze the reports

9) WebDriver - Framework

- Introduction to Various Frameworks

- Data-Driven Tests Using POI
- Reading, Writing data into Excel
- Database Connection (JDBC)
- Reading, Writing data into MySQL
- Page Object Model Framework (POM)
- Writing scripts Using page Object Model

10) TestNG
- Configuring Test Suites
- Passing Parameters to Tests
- Parallel Test Execution Capability
- Re-run failed test scripts
- Attributes of @Test
- Running TestNG suites from command prompt

11) Build Automation Tool (Maven)
- Creating Maven project
- Understanding of POM .xml
- Maven Integration with TestNG
- Executing Scripts Using Maven build tool

12) Cucumber Framework
- Overview of BDD, TDD
- Cucumber Project Setup
- Gherkin Keywords
- Working with simple scenario
- Cucumber options
- Generating Cucumber Reports
- Cucumber Advanced Features
  - ✓ Working with Data table
  - ✓ Page Object Model in Cucumber
  - ✓ Background and Hooks examples in Cucumber

13) Continuous Integration Tool (Jenkins)

- Configuring Jenkins
- Executing the windows commands in Jenkins Free Style project
- Creating Maven Job
- Manage Plug-ins
- Scheduling the Jobs

14) GitHub
- What is Version Control System
- What is GitHub
- Git commands
- Pushing Our Project Into GitHub
- Git vs. GitHub

15) Selenium GRID
- What is Selenium Grid?

- Setting up Grid - Hub and Nodes?
- Running Test Scripts on Selenium Grid

16) Docker

- Docker Basics & Installation
- Integrate Selenium Grid with Docker
- Running our automated tests inside a Docker container

17) Interview Questions and Sample Resumes