

Selenium

Mode of Training: Online, Classroom, Corporate

Faculty: Mr. MADHU

Course Duration: 40 Days

Course Curriculum



Course Objectives:

This course is designed to train the beginners, intermediate and professional testers with the basics of testing web applications using Selenium. The focus is on the practical application of Selenium to resolve common web automated testing challenges. We introduce WebDriver and advanced topics for experienced delegates to take you to Selenium WebDriver superstar status. We explore Jenkins CI integration, Page Objects, Excel and WebDriver for data driven examples, Selenium Grid, Source Control SVN integration.

After completing this course, you will be able to:

- You will be shown practical installation and setup on your own laptop
- Selenium Web driver – usage, commands and techniques
- Eclipse IDE, Java, Test NG, JUnit
- View and analyze results
- Continuous Integration (CI) using Jenkins and integration with WebDriver
- Data Driven example using Excel Configure Web Driver in Eclipse
- SVN source control integration



Participants:

- Manual testers/ fresher's wanting to gain automation testing skills
- Testers with no java programming experience looking to gain WebDriver experience
- Agile Testers – gain Selenium and technical skills to improve their Agile skills

Introduction

- What is automation testing?
- When to start automation?
- When not to go for automation?
- What are the advantages of automation testing?

1. Introduction to Selenium

- What is selenium?
- What are the advantages of selenium?
- Differences between selenium and QTP

2. Selenium Components

- Selenium IDE
- Selenium Grid
- Web Driver

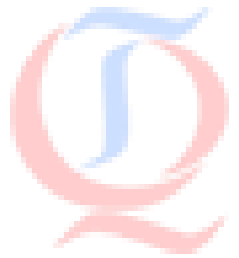


3. Selenium IDE Introduction

- IDE Features
- Installing IDE
- Selenium IDE Icons
- Building Test Cases
- Running Test Cases
- How to identify elements in webpage using Selenium IDE
- Limitations of Selenium IDE

4. Basic WebDriver

- Selenium Web Driver Overview
- Why Web Driver for Selenium
- Configuring Web Driver in eclipse
- Web Driver Drivers
- Identify Objects using Web Driver
- Handling Web elements
- Running test in multiple browsers
- Handling SSL Certificate errors
- Synchronization
- Handling AJAX applications
- Web Driver Pop up handling
- Handling Multiple windows
- Handling Multiple frames
- Capturing screenshots
- Simulating front and back button click on Browser using selenium



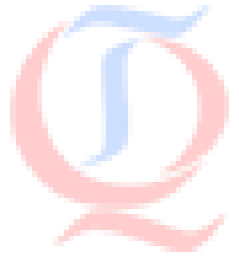
5. Advanced WebDriver

- Handling hover menus
- Drag and Drop
- How to take data from XL sheet
- How to export data to XL sheet
- Handling Web Tables
- Creating your own Firefox profile

- Printing all links from a webpage
- Firefox profiles
- Creating your own Firefox profile
- Handling Autosuggestions
- How to take data from MySQL
- How to export data to My SQL
- File upload and download

6. JUnit

- Installing JUnit in Eclipse
- Annotations used in JUnit
- Running test case
- Running test Suite
- Creating ANT Build file
- Generating Reports using ANT



7. Test NG

- How to Install Test NG plug-in in Eclipse
- Test NG sample script
- Writing Selenium testing script from scratch
- Test NG for parallel execution
- Creating Test suites using Test NG
- Reports generation using Test NG
- Running test suite on parameterized test cases

- Re-run failed test cases
- Running Test NG suites from command prompt

8. Framework

- What is frame work?
- Types of frame works
- What is Data driven frame work?
- Use of framework
- How to execute scripts from framework?
- Creating a BAT file for project execution

9. Object repository

- What is object repository?
- How to use object repository in framework?
- What is the use of maintaining object repository?
- Sample scripts using Object repository



10. Selenium GRID

- Selenium Grid Overview
- Selenium Grid Architecture
- What is Docker?
- Install Docker
- Configure Selenium GRID in Docker Containers
- Running tests parallel

11. Cucumber Framework

- What is BDD and Cucumber?
- Configuring Cucumber
- Working with Cucumber
 - What is Gherkin language and how it is used in BDD
 - Gherkin Keywords
 - Creating a Feature
 - Creating Step Definitions
 - Writing Runner Class
 - Cucumber options
 - Generating Cucumber Reports
- Cucumber Advanced Features
 - Page Object Model in Cucumber
 - Parameterizing Data Into Step Definitions
 - Tags, Background and Hooks examples in Cucumber
 - Cucumber Extent Report
 - Running Cucumber with Maven



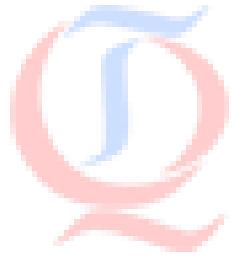
12. Project Details

- Application overview
 - Project Name
 - Project Description
 - Tools used in the project

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- Roles and Responsibilities
- Automation process
 - Automation life cycle
 - Identify test cases what to be automated
 - Authoring the scripts
 - Executing the scripts
 - Analyze the reports
- Continuous Integration (CI) using Jenkins and integration with Web driver
- SVN source control integration

13. Interview Questions



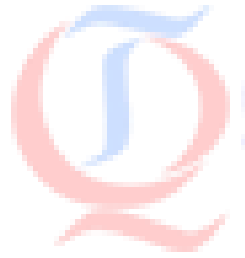
Core Java Content:

1. Basics of Java

- What is Java?
- Variable and Data type in Java
- Operators in java
- Control statements
- Strings and Arrays

2. OOPs Concepts

- Advantage of OOPs
- Classes and objects – concepts of classes, objects, Methods
- Constructors
- Package
- This keyword
- Static keyword
- Overloading methods and constructors
- Inheritance, Benefits of inheritance
- Types of Inheritance
- Method overriding, super uses
- Polymorphism
- Encapsulation
- Abstract class
- Interface
- Final Keyword
- Access Modifiers



3. Exception Handling

- Exception
- Types of Exception
- Use of try-catch block in Exception handling
- Multiple catch block
- finally block
- throw keyword

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- throws keyword

4. Java Collection Framework

- Hierarchy of Collection Framework
- Array List class
- Linked List class
- List Interface
- Hash Set class
- Hash Map class



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