

Syllabus for Advanced Selenium with Cucumber

Course Duration for Advanced Selenium training

- 6 weekends (Sat-Sun)

Objective for Advanced Selenium

- To become an expert in Advanced Selenium concepts and be able to implement them in the industry.
- To learn BDD testing using Cucumber

Eligibility for Advanced Selenium

- Knowledge of Software Testing principles
- Mandatory Knowledge of Java (Implementation of Classes, Objects, Inheritance, Polymorphism, Collections, Arrays etc.)



Advanced Selenium with Cucumber Syllabus

Introduction

- ✓ Overview of Selenium
- ✓ Advantages of Selenium
- ✓ The Selenium Suite
- ✓ Introduction to Selenium IDE
- ✓ Selenium Remote Control
- ✓ Selenium Grid
- ✓ Architecture of Selenium Grid
- ✓ The Hub & The Nodes
- ✓ Basics of Web Driver
- ✓ Setting up the environment
- ✓ Configure FireBug & FirePath
- ✓ Advanced Selenium WebDriver
- ✓ TestNG
- ✓ Automation Framework
- ✓ Advanced Automation Framework

Core Java Overview

- ✓ Why Java for Selenium
- ✓ First Java program
- ✓ Datatypes in Java
- ✓ Variables & Constants
- ✓ Control-flow statements
- ✓ Operators
- ✓ Arrays
- ✓ Loops
- ✓ Classes and Objects
- ✓ Class Constructors
- ✓ Class program in Java
- ✓ Inheritance & Polymorphism
- ✓ Introduction to Interface
- ✓ Collection hierarchy

Selenium IDE

- ✓ Introduction to Selenium IDE
- ✓ Features of Selenium IDE
- ✓ Installing Selenium IDE
- ✓ IDE Options
- ✓ Building test cases
- ✓ Running Test Cases
- ✓ IDE Script Debugging
- ✓ Writing a Test Suite
- ✓ Using Locators in Selenium
- ✓ Verification points in IDE
- ✓ Working with regular expressions
- ✓ User extensions
- ✓ Execute scripts across browsers

Selenium WebDriver

- ✓ Introduction
- ✓ How Selenium WebDriver Works
- ✓ Configuring Selenium WebDriver With Eclipse
- ✓ Selenium RC vs WebDriver
- ✓ Set Up WebDriver Client
- ✓ Programming your tests in WebDriver
- ✓ Debugging WebDriver test cases
- ✓ Troubleshooting
- ✓ Testing HTTPS and Security Pop-ups
- ✓ Running Test on GeckoDriver
- ✓ Executing and Debugging tests in browsers
 - IE
 - Chrome
 - Firefox
- ✓ Desired Capabilities in Selenium WebDriver
- ✓ Session Handling
- ✓ Handle Alerts and Multiple Windows using WebDriver
- ✓ Uploading & Downloading using WebDriver

Syllabus for Advanced Selenium with Cucumber

Accessing Forms & GUI Objects

- ✓ Text box interaction
- ✓ Radio button interaction
- ✓ Handling Checkboxes with WebDriver API
- ✓ Handling static dropdowns
- ✓ Handling dynamic dropdowns
- ✓ Drag & Drop
- ✓ Keyboard Interaction
- ✓ Mouse Interaction
- ✓ Multi select

Selenese Commands

- ✓ Actions
- ✓ Accessors
- ✓ Assertions
- ✓ Using Locators in Selenium
 - Locating by ID
 - Locating by Name & using filters
 - Locating by Link Text
 - Locating by CSS Selector
 - Locating by DOM

Synchronization in WebDriver

- ✓ What is implicit wait?
- ✓ What is explicit wait?
- ✓ AJAX Calls in Selenium
 - What is AJAX
 - Handling AJAX Calls
 - Challenges

Accessing Web Tables

- ✓ What is a Web Table?
 - Static Tables
 - Dynamic Tables
- ✓ Locating Web Table elements
- ✓ Fetching number of rows and columns
- ✓ Fetching cell value

Test Design Techniques

- ✓ Page Object Model
 - Why POM?
 - What is POM?
 - POM Benefits
- ✓ Parameterizing using Excel
- ✓ Log4j Logging
- ✓ Exception Handling
- ✓ Capture Screenshots

TestNG Framework

- ✓ Introduction
- ✓ TestNG Features
- ✓ Install and set up TestNG environment
- ✓ First Test Case with TestNG
- ✓ TestNG annotations
- ✓ Junit vs TestNG
- ✓ TestNG Test Suite
- ✓ Annotations, Groups & DependOn
- ✓ TestNG - Ignore Test
- ✓ Group Test in TestNG
 - Metagroups
 - Exclusion Groups
- ✓ Exception Test
- ✓ Dependency Test
- ✓ TestNG Parameters & Data Provider
- ✓ TestNG Reporters & Asserts
- ✓ Test Cases Prioritizing & Sequencing
- ✓ TestNG DataProvider with Excel
- ✓ Multi Browser & Parallel Testing

Cookie Handling in Selenium

- ✓ Why handle cookies
- ✓ Retrieving, adding and deleting cookies
- ✓ Storing a cookie
- ✓ Using stored cookie

Debugging

- ✓ What are Breakpoints
- ✓ Implementation of Breakpoints
- ✓ What is a Startpoint
- ✓ Implementation of Startpoints

Xpath Functions

- ✓ Contains
- ✓ Sibling
- ✓ Ancestor

Selenium Frameworks

- ✓ Data Driven Test Framework
- ✓ Keyword Driven Test Framework
- ✓ Hybrid Test Framework

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Cucumber (Behaviour-Driven Testing)

- ✓ Introduction to Cucumber
 - What is BDD?
 - BDD v/s TDD
 - What is Cucumber
 - Introduction to Gherkin
 - Selenium Integration with Cucumber BDD
 - Maven project setup for Cucumber with Selenium
- ✓ Writing Feature Files with Gherkin syntax
- ✓ Running Scenarios from Feature File
- ✓ Cucumber Annotations
- ✓ Working with Step Definitions
- ✓ Data Driven Testing in Cucumber
 - Parameterization of Test Cases
 - Passing Data Tables to Steps
- ✓ Integrating cucumber scenarios with Junit tests
- ✓ Adding Scenario tags
- ✓ Scenario Hooks in Cucumber
- ✓ Generating Reports

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