

SELENIUM COURSE SYLLABUS

Selenium Introduction

- Selenium History
- Migrating to Webdriver latest Version
- Selenium 2.0 Webdriver Architecture

Installations and Configurations with Java basics

- Java Installation
- Eclipse Installation ,configuration
- Selenium Jars download/Configurtion
- Brush up basic java concepts

Java OOPS Basics for Selenium

- Java first program basics
- Java program principles
- Classes, objects in Java
- Strings in Java
- Coding Basics
- Inheritance Concepts
- Practical usage of Inheritance
- Interface Concepts
- Practical Usage of Interface
- Runtime Polymorphisim

Basic Concepts for first Webdriver program

- webdriver Interface explanation and Invoking Browser
- Basic Methods of Webdriver
- How to run tests in Google Chrome
- How to run tests in Internet Explorer
- How to run tests in Safari Browser

Locator Techniques& Tools used

- Preview Browser Addons overview to identify elements
- Preview Installing Firebug & Firepath Addons
- Locator Techniques : Xpath identification using Firepath, Name ,ID, ClassName, LinkText,- Handling links

ADVANCED WAYS-locating objects

- writing Customized xpath Using Attributes
- Writing customized xpath Using Tagnames Traversing
- Css Selectors locators

Techniques to automate Web UI

- Handle Dynamic dropdowns with Webdriver API
- Handling Static dropdowns with Select webdriver API
- Handling Checkboxes with webdriver API
- Handling Radiobuttons with Customized xpath
- Handling Radiobutton dynamically- real time examples
- Types of Alerts present and Methods to handle them
- Handling Java Alerts using Webdriver API
- Web Elements Validation
- End to End Practise Exercise

Techniques to automate ADVANCED Web UI

- Handling Ajax/Mouse Interactions
- Actions class-real time example
- Handling Multiple Windows
- Window Handle concepts-real time example
- Live Example on working with Child windows
- Handling ul li Tags in Selenium
- How to handle Frames?
- Frames Techniques-real time example

Real Time Exercises (end to end Programming)

- Test Cases- Practise Exercise
- Exercise 1.1-Limiting Webdriver scope
- Getting Count of links in the pages, sections
- Testcases-Practise Exercise-2
- Exercise 2.1-Dynamic data in Websites
- Exercise 2.2-Dynamic Links Handling
- Exercise 2.3-Validations & checkpoints

Practical problems and Methods to Handle them with Selenium

- How to handle table Grids in webpage
- Techniques used for table grid-Real time example
- How to overcome Synchronization problems

- Maximizing window and deleting cookies
- Handling HTTPS certifications
- How to troubleshoot if its not invoking in firefox
- Killing the Process and Cookies using Selenium
- How to take Screenshots in Selenium

Data driving from Excel for feeding data

- what is Apache POI API & Download Instructions
- Excel API Methods explanation
- Program for Retrieving data from excel
- Program for Updating data back to excel

Framework Part -1 - TestNG

- Why TestNG and Its Advantages
- TestNG Installation and Setup in Eclipse
- TestNG Annotations Part
- Prioritizing the tests using TestNG
- Disabling Enabling the Testcases and putting Timeout
- Importance of TestNG xml file
- Including and excluding the Testcases from Execution with TestNG xml file
- Importance of Groups in TestNG
- Data driving Testing with TestNG
- DataProvider Annotation -Parameterizing Testcases
- Parameterising from TestNG xml file

Framework Part -2 -Data driven Framework

- Why we should not hard code the data?
- How to write Global parameters with java code
- Data driving parametrization from Properties file
- How to deal with Reusable Components

Framework part 3 - ANT-Build Management Tool

- What is Build Management tool?
- Installing & configuring ANT
- Understanding Build.xml file
- Different ANT Commands to trigger framework

Framework Part -4 -Generating XSLT Reports

- What Execution reports we need to impress clients?
- Downloading and Configuring Xslt reports
- Generating Excellent HTML reports for Selenium Test Execution

Framework Part -5 -Jenkins- CI Tool

- Why Jenkins? and where it going to help us in Framework design?
- Installing & Configuring Jenkins with Java and ANT
- Creating Jenkins project and integrating Existing Framework
- Running the Framework and Scheduling it from Jenkins

Pageobject Pattern & page Factory

- What is Page object model?
- Creating Page object Constructor in classes
- Object repository Mechanism
- Practical Exercise explaining Pageobject Model
- Page object Factory and its advantages
- Page factory annotations FindBy
- Practical Example explaining Page Factory Model

Cross Browser Testing with Selenium Grid

- How to execute Selenium Tests Remotly
- Grid Concepts & Architecure
- Configuring Hub and Node
- Registering Nodes with Hub Server
- Desired Capabilities-Grid Program
- Execution Selenium scripts in Remote Machine
- Code and Commands

Performance Testing on Selenium Testcases

- How can we perform Load Testing on Selenium Webdriver Scripts
- Integrating Selenium Testcases with Performance Testing tool
- Running Selenium Testcases on Headless browser for optimal performance