SELENIUM AUTOMATION COURSE CONTENT

Core Java Basics

- Why Java for Selenium
- Installing Java
- Installing Eclipse
- Creating Java Project (With Maven)
- Data types in Java
- Variables in Java
- Operators
- Conditional Statements
- Class, Objects & Constructor in Java
- Access Modifiers
- Package, this & super keywords
- Static & Final keywords
- Method Overloading & Method Overriding
- Abstract & Interface
- Strings in java
- Exception Handling in java
- Collections in java
- OOPS Concepts
    - Encapsulation
    - Abstraction
    - Inheritance
    - Polymorphism

Automation Testing Introduction

- What is automation testing
- When to go for Automation
- Different Automation Tools (vendor & open source tools)
- Advantages of Automation
- Criteria for Automation
- Difference between Manual and Automation Testing Process

Selenium Introduction

- What is Selenium and advantages?
- Selenium Components and their architectures
- Difference between Selenium and other automation tools like QTP etc.

Selenium Web Driver

- Selenium Web Driver Architecture
- Configuring Web Driver in eclipse

Launch Application in different browsers

- Launch application in Chrome
- Launch application in Firefox
- Launch application in IE
- Chrome Options & Desired Capabilities

Objects identification using web driver

- ID, Name, CSS, Link Text, Partial Link Text and Class Name
- Absolute & Relative XPath

Xpath axes in Selenium

- Contains
- Using OR & AND
- Starts-with
- Text()
- Following
- Parent
- Child
- Ancestor
- Preceding
- Following-sibling
- Self
- Descendant

Handling Web Elements

- Text Box
- Drop down
- Multi Select drop down
- Links
- Check Box
- Radio Button
- HTML Tables
- Calendars
- Date Picker
- Button

Synchronization (Different type of waits in Selenium)

- Implicit Wait
- Explicit Wait
- Fluent Wait

Selenium Advanced:

- Handling Pop ups & alerts in web driver
- Handling multiple windows (Switch windows & Tabs)
- Handling frames
- Taking screenshot
- Browser navigable commands

Handling Mouse operations using Actions class

- How to move element through mouse
- How to drag and drop value
- How to double click on element
- How to right click on element

Handling Keyboard operations using Robot class

- How to perform keyboard operations
- How to upload a file from browse pop up window

TestNG Framework

- Advantages of TestNG over JUnit
- Why TestNG
- Installing TestNG in Eclipse
- Annotations in TestNG
  - Prioritize Tests
  - Enable & Disable Tests
  - Depends on Methods
  - Excepted Exceptions
  - Invocation Count
  -
- Assertions in TestNG
  - Hard Assert
  - Soft Assert
- Default reports generated by TestNG
- Create Multiple Tests
- Parametrize tests using @Parameters annotation

- Parametrize tests with multiple sets of data using @DataProvider annotation
- Create & Run Test suite with TestNG.xml
- Parallel Execution with TestNG
  - Tests
  - Classes
  - Methods

Apache POI

- Creating/Opening excel files
- Reading/Writing data from excel sheet
- Difference between XSSF & HSSF
- Count Number of Rows & Columns
- Configure Apache POI jar files & TestNG in eclipse
- Preparing Test Data in Excel
- How to Read data from excel sheet (Data Driven Framework)

Maven

- What is Maven & Why?
- Installing/Configuring Maven
- Creating Maven project
- Importing Maven project into Eclipse
- What is POM.xml
- Adding dependencies to POM.xml

Real-Time Project

- Explain/Create Selenium with Maven Framework

GITHUB

- Create account in GitHub
- How to upload code into GitHub
- How to create local repository and fetch code from GitHub
- Git Commands
- How to create a branch
- How to do daily checkins/checkouts