



## Selenium with Java

Thank you for contacting our **SQL School**, Training Institute. We assure you 100% Practical, Step by Step Trainings on **Selenium with Java** Training.

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## Detailed Course Curriculum

### Module 1: Automation Basics

- ✓ Fundamentals of Test Automation
- ✓ Difference in between Manual Testing and Automation
- ✓ What are the advantages of automation testing

### Module 2: Selenium Introduction

- ✓ Introduction to Selenium
- ✓ Comparison with other tools
- ✓ Components of Selenium
- ✓ What is Automation Testing
- ✓ Licensed v/s open-source Automation Tools
- ✓ Overview of selenium and other Tools
- ✓ What Selenium is and how it is used in real time
- ✓ Features of selenium

### Module 3: Selenium IDE

- ✓ What is Selenium IDE
- ✓ Installing IDE

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- ✓ Record and playback
- ✓ Converting selenium script into other languages
- ✓ Selenese Commands
- ✓ Limitations of IDE
- ✓ Debugging in IDE
- ✓ Batch testing in IDE
- ✓ Default Timeout
- ✓ User Extensions

#### **Module 4: Configuring Eclipse IDE**

- ✓ Installation of java
- ✓ Installation Eclipse IDE
- ✓ How to create new java project
- ✓ How to create a new java Class
- ✓ Compiling and Running java class
- ✓ Analyzing results of java program

#### **Module 5: Java**

- ✓ Introduction to Java
- ✓ Installing JDK
- ✓ Configuring Eclipse IDE
- ✓ Creating Java Project
- ✓ Sample Java Program
- ✓ Module 6: Data types and variables
- ✓ Introduction to java programming
- ✓ Primitive and Non-Primitive Data types
- ✓ Types of variables (Local, Instance and static variables)
- ✓ What is an Array?
- ✓ Types of Arrays
- ✓ Working with single Dimensional Arrays
- ✓ Working with Multi-Dimensional Arrays

#### **Module 7: Classes and Objects**

- ✓ How to create classes, objects and object References
- ✓ Working with constructors
- ✓ Working with Methods(instance, static)
- ✓ How to write user Defined Methods
- ✓ Methods Arguments call by value and call by reference
- ✓ Downloading Selenium server jar
- ✓ Configuring Selenium into the Java Project
- ✓ Conditional Statements in Java
- ✓ Loops in Java
- ✓ Arrays in Java
- ✓ Array List in Java

- ✓ Set in collection
- ✓ Methods in Java
- ✓ Method return types
- ✓ Utility Functions in Java
- ✓ Do while
- ✓ For Loop
- ✓ While Loop
- ✓ For Each Loop
- ✓ Examples for all the above Loops
- ✓ Module 8: Encapsulation
- ✓ Strings in java
- ✓ Constructors in java
- ✓ What is a package

### **Module 9: Polymorphism**

- ✓ What is polymorphism
- ✓ Compile time Polymorphism
- ✓ Method Overloading
- ✓ Constructor overloading
- ✓ Runtime polymorphism

### **Module 10: Inheritance in Java**

- ✓ What is Inheritance
- ✓ Why use Inheritance
- ✓ Single Level Inheritance
- ✓ Multilevel Inheritance
- ✓ Super keyword
- ✓ Use of inheritance
  
- ✓ Module 11: Interface & Abstract Class
- ✓ How to define Interface
- ✓ How to implement Interface
- ✓ Multiple Inheritances (Through Interface)
- ✓ How to define Abstract Class
- ✓ Implements vs. extends
- ✓ Interface vs. Abstract class vs. Concrete Class

### **Module 12: Exception handling**

- ✓ Agile & Scrum
- ✓ What are exceptions and errors?
- ✓ Checked Exception or Compile time Exception
- ✓ Unchecked Exception or Runtime Exception
- ✓ How to handle exceptions in the program?
- ✓ Using try, catch and finally blocks throws

- ✓ Differences b/w throw and throws

### **Module 13: Collections**

- ✓ Overview of Collections API
- ✓ Arrays v/s Collections
- ✓ List, Set, Map interfaces
- ✓ Array List, Linked List, Hash Map
- ✓ Working with elements of a collection

### **Module 14: WebDriver Introduction**

- ✓ Selenium WebDriver Overview
- ✓ Features and Limitations of Web driver
- ✓ Configuring Selenium WebDriver in Eclipse IDE (Adding Selenium Libraries)
- ✓ WebDriver Architecture
- ✓ WebDriver Drivers
- ✓ Browser Launching Automation
- ✓ Working on
  - ✓ Firefox
  - ✓ Safari
  - ✓ Chrome
  - ✓ Opera
  - ✓ IE
- ✓ Locating Elements in Web driver
- ✓ Handling Web Elements

### **Module 15: Add on and Methods**

- ✓ Firebug and Fire path
- ✓ Login functionality test
- ✓ Locators in Web driver
- ✓ Methods in Web driver

### **Module 16: Locators**

- ✓ Object Identification
- ✓ Find Element and Find Elements
- ✓ Different types of Locators
- ✓ Html Tags and DOM structure
- ✓ Identifying Objects using Xpath
- ✓ How to use Regular Expressions in Xpath and CSS Selectors

### **Module 17: Profiles**

- ✓ Firefox Profiles
- ✓ Making web driver launch a customized instance of Firefox
- ✓ Basic HTML notations

## Module 18: Automating Links

- ✓ Links Testing
- ✓ Clicking on a link and validating
- ✓ Capturing all links in a page
- ✓ Capturing links from a section of the page
- ✓ Capturing links from a section of the page and validating them.
- ✓ Links Testing
- ✓ Visible links and Hidden links
- ✓ Validating all the links based on href property
- ✓ Checking for broken links
  
- ✓ Module 19: Automating Dropdowns
- ✓ Types of SQL Statements:
- ✓ Dropdown Testing
- ✓ Selection an option from the dropdown
- ✓ Select class to automate dropdown
- ✓ Capturing all element in a dropdown
- ✓ Checking if all options in dropdown are working correctly
- ✓ Validating multiple dropdowns
- ✓ Take screen Handling dropdowns/list boxes

## Module 20: Automating Text Field, Checkbox, Radio Buttons, Buttons

- ✓ Web Elements Interface methods
- ✓ Handling Text Field and Text Area
- ✓ Textbox Interaction
- ✓ Checking Status of Radio Buttons
- ✓ Handling Radio Buttons Dynamically
- ✓ Get Names of Checkboxes
- ✓ Navigate Checkboxes Using Xpath
- ✓ How to Click a Button on Webpage

## Module 21: Headless Testing

- ✓ Firefox Profiles
- ✓ Making web driver launch a customized instance of Firefox
- ✓ Basic HTML notations

## Module 22: XPaths

- ✓ Types of XPath
- ✓ Relative and Absolute
- ✓ Creation of relative XPath
- ✓ Creation of Absolute XPath
- ✓ Customizing XPath
- ✓ Handling Xpaths
- ✓ Xpath Axes

### **Module 23: Using CSS Selectors**

- ✓ CSS Selectors
- ✓ Creation of CSS Selectors
- ✓ Comparison between Xpath and CSS Selectors
- ✓ Relative and Absolute CSS
- ✓ Handling Dynamic CSS Selectors

### **Module 24: TestNG**

- ✓ Introduction to TestNG
- ✓ Configuring TestNG into Eclipse
- ✓ Annotations in TestNG
- ✓ Prioritizing test cases
- ✓ Ignoring Test cases
- ✓ Advantages of TestNG.
- ✓ Using testing.xml
- ✓ Parameterization
- ✓ TestNG Listeners
- ✓ TestNG Reports
- ✓ TestNG groups
- ✓ TestNG Assertions
- ✓ TestNG Data Provider
- ✓ Different Testing Annotations
- ✓ Create Testing Reporting Results
- ✓ Assert methods

### **Module 25: Tab and Popup Automation**

- ✓ Automating Tabs
- ✓ Automating multiple windows
- ✓ Handling popup

### **Module 26: Using Java Script**

- ✓ Java Script Executor
- ✓ Generating Alerts
- ✓ Handling Alerts
- ✓ Handling hidden components directly using Java Script Executor

### **Module 27: Synchronization**

- ✓ Introduction to Synchronization
- ✓ Thread sleep()
- ✓ Implicit wait
- ✓ wait for an element
- ✓ wait for the entire page to load

- ✓ Explicit Wait
- ✓ Web Driver Wait
- ✓ Fluent wait
- ✓ Visibility and Invisibility Conditions

#### **Module 28: Ajax Testing**

- ✓ What are Ajax Components
- ✓ Handling Ajax Autosuggestions
- ✓ Cookies Testing
- ✓ Capturing the cookies info
- ✓ Deleting all the cookies

#### **Module 29: Miscellaneous**

- ✓ Captcha Automation
- ✓ Radio Buttons Testing
- ✓ Check Boxes Testing
- ✓ Automating input fields

#### **Module 30: Action Class**

- ✓ Advanced user interactions
- ✓ Mouse Hovering
- ✓ Right Clicking
- ✓ Double Clicking
- ✓ Chain Actions
- ✓ Drag and drop and element
- ✓ Automating Slider bar

#### **Module 31: Automating Web table**

- ✓ Introduction to Web table Testing
- ✓ Handling static web table
- ✓ Handling dynamic web table
- ✓ Automating Datepicker(calendar)

#### **Module 32: Takes Screenshot**

- ✓ What is Use of Screenshot
- ✓ Capture Screenshot
- ✓ Capture Multiple Screenshots
- ✓ How to perform actions using Java

#### **Module 33: Automating Window Components**

- ✓ Auto IT, Robot, Sikuli
- ✓ Handling Window Components
- ✓ Installing Auto it
- ✓ Notepad Automation

- ✓ Integrating Auto IT and Selenium
- ✓ File download using Auto IT
- ✓ File upload using AutoIT
- ✓ Understanding Robot Class
- ✓ File download using Robot
- ✓ File upload using Robot
- ✓ Configuring Sikuli
- ✓ File download using Sikuli
- ✓ File upload using Sikuli

#### **Module 34: Excel Read/Write**

- ✓ Apache POI
- ✓ Configuring POI into the project
- ✓ Interacting with Excel
- ✓ Read operations on excel
- ✓ Write operations on excel
- ✓ Dropdown Testing and storing the results in Excel
- ✓ Web table testing and storing the results in excel

#### **Module 35: Automation Frameworks Development**

- ✓ Types of Frameworks
- ✓ How to implement Data Driven framework
- ✓ How to implement Page Object Model
- ✓ How to implement Hybrid framework
- ✓ How to implement Keyword driven ► Framework
- ✓ How to execute the scripts from frameworks ine IT
- ✓ Integration with Maven and Jenkins

#### **Module 36: Frameworks I**

- ✓ Creating the folder structure
- ✓ Definitions of Data driven, Keyword driven, Modular driven and Hybrid frameworks
- ✓ Creating Data Driven Framework
- ✓ Creating Test data excel files
- ✓ Using the test data to test the web application

#### **Module 37: Frameworks II**

- ✓ Creating a Data Engine to control the automation test suite
- ✓ Keyword Driven Testing
- ✓ Creation of Properties File
- ✓ Object Repository
- ✓ Creating Actions Keywords Excel file
- ✓ Reflections in Java to handle keywords

#### **Module 38: Frameworks III**

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- ✓ Creating Modular Driven Framework
- ✓ Creating reusable functions
- ✓ Hybrid Framework

### **Module 39: Cucumber**

- ✓ Introduction to BDD
- ✓ Installing Eclipse Cucumber plug-in
- ✓ Downloading Cucumber and configuring in Eclipse
- ✓ Feature File
- ✓ Gherkin keywords
- ✓ Cucumber Options
- ✓ Data driven Testing in Cucumber
- ✓ Examples Keyword
- ✓ Data tables in Cucumber
- ✓ End to End Testing using Cucumber
- ✓ Programs on multiple browsers and OS using Dockers

### **Module 40: Page Object Model**

- ✓ What is POM
- ✓ Why should we use POM?
- ✓ How to implement POM in selenium
- ✓ Advantages of POM
- ✓ Creating Page classes
- ✓ Defining element in page class
- ✓ Defining in Functions
- ✓ What is Page Factory?
- ✓ Creating POM using Page Factory
- ✓ Use of @FindBy
- ✓ Use of init Elements

### **Module 41: Version Controlling**

- ✓ SVN and GIT
- ✓ Version Controlling
- ✓ Creating a free SVN account
- ✓ Usage of TortoiseSVN
- ✓ Check in and Checkout in SVN
- ✓ Installing Git
- ✓ GIT bash and GIT HUB
- ✓ Creating a Git local repository
- ✓ Creating Git Hub account
- ✓ Uploading into Git hub(push)
- ✓ Downloading from Git Hub(pull)

### **Module 42: Maven**

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- ✓ Introduction to Maven
- ✓ Maven local and Global repositories
- ✓ Creating a maven artifact from command prompt
- ✓ Configuring maven project into Eclipse
- ✓ Creating a Maven local repository
- ✓ Adding Jars into Maven local repository
- ✓ Stages in Maven.
- ✓ Configuring Maven from Eclipse plug-in
- ✓ Maven as a build tool
- ✓ Maven Commands

#### **Module 43: Grid II**

- ✓ Selenium Grid
- ✓ What is Grid
- ✓ Configuring Hub and Nodes
- ✓ Serial and parallel testing
- ✓ Cross browser Testing Cross platform Testing
- ✓ Customizing the nodes
- ✓ Using JSON to configure Hub and Nodes
- ✓ End to End Testing in Grid

#### **Module 44: Database Connection (JDBC)**

- ✓ DB Testing
- ✓ Installing MySql Database
- ✓ How to configure with Eclipse
- ✓ Connection Interface Commands
- ✓ Statement Interface Commands
- ✓ Result Set Interface Command
- ✓ Creating sample tables
- ✓ Understanding JDBC
- ✓ Connecting Java code with DB
- ✓ Executing SQL queries
- ✓ Integrating JDBC with selenium

#### **Module 45: Continuous Integration(Jenkins)**

- ✓ Different tools for implementing CI
- ✓ Jenkins
- ✓ Continuous Integration
- ✓ Downloading Jenkins
- ✓ Dashboard of Jenkins
- ✓ Scheduling the automation build
- ✓ Sending automated mails when the build executes
- ✓ Integrating Jenkins with Git.

- ✓ Parallel testing of selenium programs on multiple browsers and OS using Jenkins

#### **Module 46: Web services Testing Postman Tool**

- ✓ API Introduction
- ✓ Introduction to Postman API Testing tool
- ✓ Client-server Architecture
- ✓ API Testing using Postman
- ✓ API Testing Terminology
- ✓ HTTP Structure
- ✓ Creating Request in postman
- ✓ Understanding variable and environment in postman
- ✓ Authorization in postman
- ✓ Assertion/Test Scripts in postman
- ✓ API testing Status code
- ✓ Scripts in API Testing
- ✓ API Chaining
- ✓ Advanced Topics
- ✓ Creation of Own Apis
- ✓ Real Time Scenarios

#### **Module 47: Docker**

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

#### **Module 48: Live Project Details**

- ✓ Application Overview
- ✓ Live Project overview
- ✓ Project Description
- ✓ Tools used in the Project (Jenkins, Maven, GitHub, Docker and AutoIT)
- ✓ Roles and Responsibilities

#### **Module 49: Tosca Basics**

- ✓ Introduction to Tosca
- ✓ Tosca Installation/Setup
- ✓ Tosca Commander
- ✓ Record/Playback
- ✓ Modules and Testcase Section
- ✓ Synchronization
- ✓ Test Case Design & Execution List
- ✓ Realtime Projects with End to End Implementation

**This Selenium with Java Course is 100% Practical, Step by Step. Reach us now!**

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**Trainer:** Mr. Ramesh

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- **+91 9666 44 0801**

🎧 **Address:** Sai Anu Avenue, Street #3, Patrika Nagar, Hitech City, Hyderabad, Telangana, 500081. India

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