

# NEXT IT CAREER

## SELENIUM AUTOMATION



# SELENIUM AUTOMATION

## COURSE CONTENT

### SELENIUM & JAVA

<b>Automation Testing Overview</b>	<ul style="list-style-type: none"><li>• Introduction to Software Automation</li><li>• Why Automation is necessary</li><li>• What is Manual &amp; Automation Testing</li><li>• What is a Defect, Verification &amp; Validation</li><li>• Why software has defects</li><li>• Tester Roles</li></ul>
<b>Java Programming Basics</b>	<ul style="list-style-type: none"><li>• Installing Java</li><li>• Installing Eclipse</li><li>• First Eclipse Project</li><li>• First Java program</li><li>• Concept of class file</li><li>• Datatypes in Java</li><li>• String class and functions</li><li>• Conditional Statements</li><li>• Loops</li><li>• Arrays</li><li>• Single Dimensional Arrays</li><li>• Two Dimensional arrays</li><li>• Practical usage of arrays in Selenium</li><li>• Operators</li><li>• What are Functions?</li><li>• Function Input Parameters</li><li>• Function Return Types</li><li>• Object-Oriented Programming in Java</li><li>• Local Variables</li><li>• Global Variables</li><li>• Static and Non-Static Variables</li><li>• Static and Non-Static Functions</li><li>• Creating Objects in Java</li><li>• Meaning of static</li><li>• Why is main method static?</li><li>• Object and Object References</li><li>• Call by reference and Value</li></ul>

	<ul style="list-style-type: none"> <li>• Overloading and Overriding Functions</li> <li>• Access Modifiers – Public/Private/Default/Protected</li> <li>• Constructors</li> <li>• Interface</li> <li>• Usage of Objects in Selenium</li> <li>• Inheritance</li> <li>• Usage of Inheritance in Selenium</li> <li>• Creating Packages</li> <li>• Accessing Classes across Packages</li> </ul>
<b>Exception Handling</b>	<ul style="list-style-type: none"> <li>• Exception handling with try catch block</li> <li>• Importance of exception handling</li> <li>• Exception and Error</li> <li>• Throwable Class</li> <li>• Final and Finally</li> <li>• Throw and Throws</li> <li>• Different Types of Exceptions</li> <li>• Need of exception handling in Selenium framework</li> </ul>
<b>Automating Excel file Operations</b>	<ul style="list-style-type: none"> <li>• Creating/Opening XLS Files</li> <li>• Reading/Writing Microsoft XLS Files</li> <li>• Counting Rows and Columns</li> <li>• Filling BG/Font Colours</li> <li>• Practical Examples</li> </ul>
<b>Automating Text File Operations</b>	<ul style="list-style-type: none"> <li>• Practical Examples Creating/Opening Text Files</li> <li>• Reading/Writing Text Files</li> <li>• Practical Examples</li> </ul>
<b>Selenium Introduction</b>	<ul style="list-style-type: none"> <li>• What is Selenium?</li> <li>• Who developed Selenium?</li> <li>• Selenium Components</li> </ul>
<b>WebDriver Introduction</b>	<ul style="list-style-type: none"> <li>• Introduction to WebDriver &amp; Comparison with Selenium RC</li> <li>• Installing Selenium WebDriver</li> <li>• Architecture of selenium Webdriver</li> <li>• Creating your First Script in Webdriver</li> </ul>
<b>Launching AUT and Inspecting properties of Elements</b>	<ul style="list-style-type: none"> <li>• Launching AUT in FireFox</li> <li>• Launching AUT in InternetExplorer</li> <li>• Launching AUT in Chrome</li> <li>• Launching AUT in Safari</li> <li>• Inspecting properties of Elements on different Browsers</li> <li>• Installing Chropath</li> </ul>

<b>Automating Operations on various Elements</b>	<ul style="list-style-type: none"> <li>• Browser</li> <li>• TextBox</li> <li>• ListBox</li> <li>• Links</li> <li>• Check Box</li> <li>• Radio Button</li> <li>• HTML Tables</li> <li>• Calendars</li> </ul>
<b>Automating Keyboard and Mouse Events</b>	<ul style="list-style-type: none"> <li>• Action Class</li> <li>• KeyBoard Events</li> <li>• Drag &amp; Drop Actions</li> <li>• Mouse Hover Action</li> <li>• RightClick, Double Click &amp; Tool Tip</li> </ul>
<b>Handling multiple Windows</b>	<ul style="list-style-type: none"> <li>• getWindowHandle()</li> <li>• getWindowHandles()</li> <li>• Switching between windows</li> <li>• Handling elements present in different windows</li> </ul>
<b>Handling Alerts</b>	<ul style="list-style-type: none"> <li>• accept()</li> <li>• dismiss()</li> <li>• getText()</li> <li>• sendKeys()</li> </ul>
<b>Handling Frames</b>	<ul style="list-style-type: none"> <li>• What is iFrame?</li> <li>• Locating Frames</li> <li>• Switching between Frames</li> <li>• Handling Frames</li> </ul>
<b>Handling Ajax Components</b>	<ul style="list-style-type: none"> <li>• Handling Ajax Components</li> </ul>
<b>Creating Customize XPath/CSS Selectors</b>	<ul style="list-style-type: none"> <li>• What is XPath</li> <li>• When to Use XPath</li> <li>• Absolute XPath/Relative XPath</li> <li>• Specifying conditions with XPath</li> <li>• CSS Selectors</li> <li>• Customizing CSS Selector</li> </ul>
<b>Synchronization</b>	<ul style="list-style-type: none"> <li>• ImplicitWait</li> <li>• WebDriverWait</li> <li>• FluentWait</li> <li>• PageLoadTimeout</li> </ul>
	<ul style="list-style-type: none"> <li>• Advantages of TestNG over JUnit</li> </ul>

<p><b>What is TestNG?</b></p>	<ul style="list-style-type: none"> <li>• Why do we need TestNG in Selenium?</li> <li>• Installing TestNG in Eclipse</li> <li>• Creating a New TestNG Test File</li> <li>• Test annotation</li> <li>• Running the Test</li> <li>• Checking reports created by TestNG</li> <li>• Generating HTML Reports</li> <li>• Annotations used in TestNG</li> <li>• Validating Tests with Assertions</li> <li>• Creating multiple Tests</li> <li>• Prioritizing Tests</li> <li>• Parameterizing Tests with dataProvider</li> <li>• TestNG dataProvider with Excel</li> <li>• Creating and Running Test Suites with TestNG.xml</li> <li>• Parallel Test Execution with TestNG</li> <li>• Cross Browser Testing using TestNG</li> </ul>
<p><b>Automation Test Frameworks</b></p>	<ul style="list-style-type: none"> <li>• Keyword Driven Framework</li> <li>• Data Driven Framework</li> </ul>
<p><b>Page Object Model (POM) &amp; Page Factory in Selenium</b></p>	<ul style="list-style-type: none"> <li>• What is POM</li> <li>• Why POM?</li> <li>• Advantages of POM</li> <li>• Creating POM Tests</li> <li>• What is Page Factory?</li> <li>• Creating Tests with Page Factory</li> </ul>
<p><b>Database Testing using Selenium</b></p>	<ul style="list-style-type: none"> <li>• JDBC (Java Database Connectivity)</li> <li>• Driver Manager</li> <li>• Driver</li> <li>• Connection</li> <li>• Statement</li> <li>• ResultSet</li> <li>• SQLException</li> <li>• Connecting to DataBases</li> <li>• Sending SQL Queries to Database</li> <li>• Processing Results</li> <li>• Real-time examples of Database Testing with Selenium</li> </ul>
	<ul style="list-style-type: none"> <li>• Installing AutoIT</li> <li>• Components of AutoIT</li> <li>• Using FinderTool</li> </ul>



<b>AutoIT</b>	<ul style="list-style-type: none"> <li>• AutoIT commands</li> <li>• Creating Scripts in AutoIT</li> <li>• Creating executable files</li> <li>• Running AutoIT Scripts from Selenium</li> </ul>
<b>Selenium GRID</b>	<ul style="list-style-type: none"> <li>• What is Selenium Grid?</li> <li>• When to Use Selenium Grid?</li> <li>• What is a Hub and Node?</li> <li>• How to Install and Use Grid 2.0?</li> <li>• Designing Test Scripts That Can Run on the Grid</li> <li>• Using the DesiredCapabilities Object</li> <li>• Using the RemoteWebDriver Object</li> <li>• Running a Sample Test Case on the Grid</li> <li>• Sequential and Parallel Test Execution</li> <li>• Running Tests on different Operating Systems</li> <li>• Running Tests on different Browsers</li> </ul>
<b>Maven</b>	<ul style="list-style-type: none"> <li>• What is Maven and Why Maven?</li> <li>• Installing/Configuring Maven</li> <li>• Creating Maven Project</li> <li>• Importing Maven Project into Eclipse</li> <li>• What is POM.xml?</li> <li>• Adding Dependencies to POM.xml</li> </ul>
<b>JENKINS</b>	<ul style="list-style-type: none"> <li>• Installing/Configuring Jenkins</li> <li>• Scheduling Test Execution in Jenkins</li> <li>• Auto mail configuration in Jenkins</li> <li>• What is continues integration?</li> <li>• Continues integration with JENKINS</li> </ul>
<b>GIT</b>	<ul style="list-style-type: none"> <li>• Downloading and Installing GIT</li> <li>• Installing GIT and GITHUB plug-ins for JENKINS</li> <li>• Configuring SSH host keys for GIT and JENKINS</li> <li>• GIT Bash commands</li> <li>• Uploading project to GIT</li> </ul>

## **INTERVIEW QUESTIONS AND ANSWERS**

**Duration** : 60 days

**Location** : Hyderabad, KPHB

### **Project Orientation Program**

## **100% JOB ASSISTANCE PROGRAM**

**Contact: 7013123485**

**NEXT IT CAREER**