**Selenium WebDriver, IDE, and Grid Training**

**Course Duration:**

* Around 4 to 5 Weeks Regular/5-6 Weeks Weekend
* 20+ hours of Live training sessions + live project

#### ****Module 1: Selenium overview, environment setup, and first automation program****

* Overview of Selenium
* Selenium Components
* Introduction to IDE, RC WebDriver & Grid
* Selenium Environment Setup (JDK, Eclipse, Driver)
* How to run, stop, pause
* How to debug in Eclipse
* Understanding console output
* How to put a break point
* How to add Watch variables
* How to find errors from Problem window
* Usage of step into and Step over debug functionality
* Overview of Selenium Webdriver, pros and cons
* Understanding Object Identification
* WebDriver Interface, and Methods
* Working with Firefox, Chrome browsers
* Identifying Web-Elements using id, name, linkname, class, xpath, tagname

#### ****Module 2: Architecture of WebDriver, Commands, and HTML Elements****

* Architecture of WebDriver
* WebDriver Interface
* WebElement Interface

***Browser & Navigation Commands***

* Verify Page title
* Strategy to get the Page Source
* Difference between Close & Quit
* Ways to Navigate Back & Forward
* How to Refresh Page
* Another way of Navigating to specific Page

***WebElement Commands***

* Difference between FindElement & FindElements
* Enter & Clear text from Input field
* How Click action works differently on different elements
* Managing Input fields, Buttons & Links
* Finding all links on the Page
* Strategy to check dead links on the page
* Extracting More than one object from a page
* Extracting Objects from a specific area of a web page
* Check if element is Present, Displayed, Enabled or Selected

**Module 3: Locators, and HTML DOMs**

* What are locators
* HTML Basics
* HTML language tags and attributes
* ID, Name, Xpath, CSS etc
* Difference between Absolute & Complete Xpath
* Finding your first element
* WebElement Commands

***Element Identification***

* Element Inspector in Mozilla, Chrome and IE
* Element locator tool for FF
* FireBug & FirePath Add-Ons in Mozilla
* Various HTML locator strategies
* XPath Helper Plug-in for Chrome
* Selection of Effective XPath
* Handling Dynamic objects/ids on the page

***Tables, Checkboxes & Radio buttons***

* Identify table rows and columns
* Extracting values from a cell
* Dynamically Identify Tables Data
* Select class in Selenium
* Drop Down Handle
* Select multiple values from the list
* Select & Deselect operations by Index, Value & Visible Text

***Launching different browsers using WebDriver***

* Launching IE
* Challenges with IE Browser
* IE driver server and path settings
* Launching Chrome
* Chrome server and path settings

**Module 4: Selenium Waits, Alert & Switch Windows**

* Implicit and Explicit waits
* How to use Expected Conditions with Waits
* PageLoadTimeout & SetScriptTimeout property
* Simple use of Thread Sleep
* Concept of Fluent Wait in Selenium
* Strategy to poll for an object
* WebDriverWait and its uses
* Different WaitUntil Conditions
* Managing Ajax based components
* Ways to handle Simple, Confirmation & Prompt Alert
* Concepts of Set Interface in Java
* Difference between Window Handle & Handles
* Switching & Closing Windows, Tabs & PopUps
* Concept of window ID
* Extracting window IDs with Selenium Object reference

***Action Class***

* What is Action Class & What can we do with Action Class
* Mouse Hover & Mouse Movement with Action
* Finding Coordinates of a Web Object
* Drag and Drop Action

**Module 5: TestNG Framework**

* What is TestNG
* Benefits and Features of TestNG
* How to download TestNG
* Annotations in TestNg
* How to run Test Suite in TestNG
* Groups in TestNG
* Depend On in TestNG
* Test Case sequencing in TestNG
* TestNG Reporters
* TestNG Assets
* TestNG Parameters
* Multi Browser testing in TestNG
* Parallel testing in TestNG

**Module 6: Framework (Data Driven, and Key Driven)**

* What is Framework
* Features of Framework
* Benefits of using Framework
* Different types of Automation Framework
* What is Data Driven Framework
* What is Modular Driven Framework
* What is Keyword Driven Framework
* What is Hybrid Framework

**Module 7: Auto IT**

* What is AutoIT and its usage
* Downloading of AutoIT
* Usage of AutoIT in Selenium
* Upload, download files using AutoIt
* Handling http user authentication with AutoIT

**Module 8: Selenium Hybrid Framework (LIVE PROJECT)**

* Overview of Hybrid framework
* Introduction and Component of Frameworks
* Designing Test Data Provider (Excel)
* Designing Run Data Provider (Text/Property file)
* Setting up Maven Build Tool
* Factory Pattern Design
* Browser Factory Design
* Data Provider Factory Design
* Creating Page Objects & Object repository
* Writing Test Script and Fetching Test Data
* Designing Test Runner for Framework
* Enhancing Browser Factory
* Asserts, Test Fails & Error logging
* Creating a BAT file for project execution
* Reporters, TestNG Listeners and Log file Generation
* Generating the HTML reports