SELENIUM COURSE CONTENT

- **INTRODUCTION**
- **HISTORY OF SELENIUM**
- **ADVANTAGES OF SELENIUM**
- **LIMITATION OF SELENIUM**
- **SELENIUM SUPPORTED ENVIRONMENTS**
- **SELENIUM SUPPORTED BROWSERS**
- **SELENIUM SUPPORTED SCRIPTING LANGUAGES**
- **DIFFERENT FLAVOURS OF SELENIUM:**
  - IDE
  - RC
  - Grid
  - Web Driver
  - Selenium Webdriver (Selenium 2.0)
- **BASICS OF JAVA:**
  - Eclipse IDE Introduction
  - Installation of Eclipse (for Selenium programming in Java)
  - Usage of Eclipse (configurations)
  - Creating a Java Project
  - Sample program to get hands on Eclipse
  - Running & Debugging java Programs
  - Java Basics specific to Selenium
  - Sample Exercises on Java
  - Object and Classes
  - Control Statements(if/else, while, Switch, for loops)
  - Arrays
  - Static Methods and Variables
  - Different Data Types in java
  - Interfaces
  - Exceptional Handling
- **JUNIT BASICS:**
  - Junit Configuration
  - About Junit and why it is used for
  - Junit Scope in Selenium context
  - Junit Fixtures (set up, teardown, setup Before Class, tear Down After Class)
  - Junit Test Case
  - Junit Test Class
  - Junit Execution Flow
  - Junit Test Suite
  - Running Junit Tests
  - Verifying Junit Tests

- Junit Exercises

❖ **IDE:**

- Selenium IDE Installation
- Selenium IDE Usage (Record and Playback)
- Selenium IDE debugging
- Exporting results in multi language(perl,java,python,ruby,groovy,c#)
- Selenium RC Installation

❖ **REMOTE CONTROL:**

- RC configuration with Eclipse
- Running Selenium Server
- Using Java Client Driver
- Remote Control Architecture
- Object Repository – GUI Locators(By ID, By Name, By Class)
- Hello world example with RC
- Introduction IDE Dev Tool bar for Internet Explorer
- Introduction to Firebug for Fire Fox
- X-Path Locators
- X-Path finder tools
- RC API Commands
- Handling Text boxes(get and set Value)
- Handling Buttons,HyperLinks
- Handling DropDownBoxes
- Handling Dynamic Dropdown Boxes
- Handling CheckBoxes,Radio Buttons
- Reading values from Static HTML Tables
- Reading Values from Dynamic HTML Tables
- Check for ElementVisibility
- Check for isElementPresent
- Handling Multiple Browser Windows
- Handling Java Script Pop ups
- Running Tests on Internet Explorer
- Running Tests on Firefox
- Running Tests on Chrome
- Running RC Tests in Single Window browser
- Controlling Execution Speed of Selenium RC
- Running RC Tests on Custom Ports
- Verifying Results
- Debugging selenium Tests
- Reading data from static Tables, Listbox, Dropdown,
- Reading data from Dynamic Tables
- Data Driven Testing from properties files
- RC with Ajax Applications

❖ **ADVANCE COURSE:**

AUTOMATION FRAMEWORK DEVELOPMENT & USAGE:

- Creation of Framework
- Usage of the Framework
- Sample Project Implementation using the Framework

- Framework Advantages (Maintainability, Reusability)

❖ **DATA DRIVEN TESTING:**
- Jexcel API Overview
- Data Driven Testing from excel sheets

❖ **HTTPS WEBSITE AUTOMATION:**
- Handling HTTPS websites Automation on Internet Explorer
- Handling HTTPS websites Automation on Firefox
- cyber villian certificate
- cyber villian certificate installation

❖ **MAVEN/ANT BUILD TOOL:**
- Introduction to Maven
- Sample Junit Test Case with Maven
- Building your Selenium Tests using Ant/Maven
- Generating HTML Test Result Reports using Ant/Maven

❖ **SELENIUM 2.0 (WEBDRIVER API):**
- Introduction to Selenium webdriver
- HTMLUnitDriver
- InternetExplorerDriver
- FireFoxDriver
- Creating Tests using Webdriver
- WebDriver API Commands
- Running Tests using Webdriver
- Selenium Backed Webdriver(switching between Selenium & WebDriver)

❖ **HEAD LESS AUTOMATION (AUTOMATING YOUR TESTS WITHOUT OPENING BROWSER):**
- Running Tests in Invisible Internet Explorer
- Running Tests in Invisible Firefox

❖ **SELENIUM GRID:**
- Selenium Grid Overview
- Selenium Grid Architecture
- configuring grid
- Test NG Over View(Selenium grid context)
- Running tests parallely on mutiple instances of Firefox and Internet explorer