

## Selenium @ EVS

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### Selenium IDE

- ❖ Installing Selenium IDE
- ❖ Recording Script
- ❖ Running, Pausing and debugging Script
- ❖ Running a script line by line
- ❖ Inserting commands in between script
- ❖ XPATHS and installing firebug to get XPATHS
- ❖ Wait Commands
- ❖ Verification and Assertions
- ❖ Should I use verify or assertion
- ❖ JavaScript
- ❖ User-extension.js in Selenium IDE
- ❖ Using if statements and loops in IDE.
- ❖ Echo, StoreEval and StoredVars Demystified
- ❖ Creating your own user extensions.
- ❖ Making a function in user extension to generate random email address.
- ❖ Extracting all values of dropdown.
- ❖ Reading XML from JavaScript using DOM.
- ❖ Building Salesforce.com Test Cases
- ❖ Parameterize your IDE test cases with customized use extension and XML.
- ❖ Regular Expressions in Selenium IDE.
- ❖ Handling JavaScript Alerts
- ❖ Capturing screenshots from Selenium IDE

## Java Introduction

- ❖ Selenium Overview
- ❖ Installing Java
- ❖ Installing Eclipse
- ❖ Features of Java
- ❖ Why Java for Selenium
- ❖ First Eclipse Project
- ❖ First Java program
- ❖ Concept of class file
- ❖ Platform independence
- ❖ Data types in Java
- ❖ String class
- ❖ If statements

## Loops, Arrays and Functions

- ❖ Conditional and concatenation operators
- ❖ While Loop
- ❖ For Loops
- ❖ Practical Examples with loops
- ❖ Usage of loops in Selenium
- ❖ Single Dimensional Arrays
- ❖ Two Dimensional arrays
- ❖ Practical usage of arrays in Selenium
- ❖ Drawbacks of arrays
- ❖ What are Functions?
- ❖ Function Input Parameters
- ❖ Function Return Types

## Object Oriented Programming- 1

- ❖ Local Variables
- ❖ Global Variables
- ❖ Static and Non-Static Variables
- ❖ Static and Non-Static Functions
- ❖ Creating Objects in Java
- ❖ Meaning of static
- ❖ Why is main method static?

- ❖ Object and Object References
- ❖ Call by reference and Value
- ❖ Constructors
- ❖ Usage of Objects in Selenium

## **Object Oriented Programming -2**

- ❖ Concept of Inheritance
- ❖ Interface
- ❖ Overloadings and Overriding Functions
- ❖ Example on inheritance
- ❖ Object Class
- ❖ Usage of Inheritance in Selenium

## **Packages, Access Modifiers/ Exception Handling**

- ❖ Relevance of Packages
- ❖ Creating Packages
- ❖ Accessing Classes Across Packages
- ❖ Good Features of eclipse
- ❖ Accessing modifiers - Public, Private, Default, Protected
- ❖ Exception handling with try catch block
- ❖ Importance of exception handling
- ❖ Exception and Error
- ❖ Throwable Class
- ❖ Final and Finally
- ❖ Throw and Throws
- ❖ Different Types of Exceptions
- ❖ Need of exception handling in Selenium framework

## **String, File Handling, Log4j, /Handling XLS files**

- ❖ String class and functions
- ❖ Reading/Writing Text Files
- ❖ Reading Properties File in Java
- ❖ Concept of jar file
- ❖ POI API in java
- ❖ Reading/Writing Microsoft XLS Files
- ❖ Log4j API for Logging
- ❖ Usage of Log4J in Selenium

## **Selenium WebDriver Section**

- ❖ Why WebDriver?
- ❖ Selenium RC and Webdriver
- ❖ Downloading and configuring webdriver in eclipse
- ❖ WebDriver Interface
- ❖ Drivers for Firefox, IE, chrome, Iphone, Android etc
- ❖ First Selenium WebDriver Code Expertview Solutions
- ❖ Opening multiple browsers at one time
- ❖ Close and Quit methods in Webdriver
- ❖ What is Firefox profile
- ❖ Creating own Firefox profile
- ❖ Magic of HtmlUnitDriver

### **Selenium WebDriver – 2**

- ❖ Installing Firebug and FirePath Add-ons in Firefox
- ❖ Using Firebug and Firepath
- ❖ HTML language tags
- ❖ Handling Links with WebDriver
- ❖ Extracting Xpaths and relevance of Xpaths
- ❖ Identifying WebElements using id, name, linkname, class, xpath, tagname etc
- ❖ Handling Input Box/Buttons
- ❖ Handling WebList
- ❖ Handling Radio Buttons, CheckBoxes

### **Selenium Webdriver – 3**

- ❖ Dynamic objects
- ❖ Extracting links and other webelements
- ❖ Capturing screenshots with WebDriver
- ❖ Window handles
- ❖ Tabbed browsing with Selenium
- ❖ Example of Tabbed browsing
- ❖ Pop up handling in Selenium
- ❖ Example of Pop up handling
- ❖ Managing variable xpaths
- ❖ Certificate error handling using WebDriver

## Selenium WebDriver – 4

- ❖ Pausing execution for sometime Expertview Solutions
- ❖ Introducing wait for sometime
- ❖ WebDriverWait Class
- ❖ Handling JavaScript alert messages with Selenium
- ❖ Simulating the Keyboard Keypress event
- ❖ Simulating Pressing Enter Button of Keyboard

## Selenium 2.0 Features – 3

- ❖ Extracting Data From WebTable
- ❖ Dynamic WebTable Handling
- ❖ Attaching files with Selenium
- ❖ Changing your facebook profile picture by attaching new picture
- ❖ Mouse movement with Selenium- Mouse Interface
- ❖ Working with Caledor using Selenium
- ❖ Handling Ajax Autosuggests
- ❖ Handling Google Ajax Autosuggests
- ❖ Setting the page load timeout- WebDriver.Timeout Interface

## Working with ChromeDriver

- ❖ Help- My Chrome is not opening
- ❖ Help- My Chrome is opening but its not navigating
- ❖ Configuring chromedriver.exe
- ❖ Uploading files in Chrome
- ❖ Tabbed browsing and Popup handling in Chrome
- ❖ Certificate handling in Chrome
- ❖ Moving mouse in Chrome

## Selenium 2.0 Features – 5

- ❖ Simulating front and back button click on Browser using selenium
- ❖ Assigning Firefox profile parameters Expertview Solutions
- ❖ Downloading files using selenium
- ❖ Selenium Javadocs
- ❖ Listeners- Using WebDriverEventListener
- ❖ Practical usage of Listeners in Selenium
- ❖ Moving a mouse on a Object and right clicking on it
- ❖ Finding Coordinates of a Web Object
- ❖ Actions class in Webdriver

## **Selenium 2.0 – Exercises**

- ❖ Dynamic Objects Exercises
- ❖ Example 1 - Gmail.com: Print the gmail's increasing space
- ❖ Example 2 - Check Links on Quikr.com
- ❖ Example 3 - Scrolling the page side bar
- ❖ Example 4 - Print names of all facebook friends
- ❖ Example 5 - Count/Verify items in shopping cart

## **Automation Framework Section**

### **Junit and Data Driven Framework**

- ❖ Overview of Data driven framework
- ❖ Building the Test Base Class
- ❖ Using Annotations of Junit
- ❖ Reading XPATHS, Configuration from properties file
- ❖ Initialize the Webdriver
- ❖ Building the Test Base Class
- ❖ Implementing WebDriver Implicit Wait
- ❖ Implementing tests and batch running them
- ❖ Repeating a test with different Data
- ❖ Building utility functions
- ❖ Parameterizing tests using XL Files
- ❖ Controlling Execution order from XL Files
- ❖ Assertions and Reporting Errors / ErrorCollector
- ❖ Storing Screenshots of errors
- ❖ Running the framework through ANT
- ❖ Generating the HTML reports
- ❖ Emailing test reports
- ❖ Creating a BAT file for project execution

## **Junit and Hybrid (Keyword+Data) Driven Framework Expertview Solutions**

- ❖ Overview of Hybrid(Keyword+Data Driven) Framework
- ❖ Building XLS File Having Test Cases and Keywords
- ❖ Building XLS File Having Test Data
- ❖ Building Base class
- ❖ Reading XPATHS, Configuration from properties file
- ❖ Implementing ImplicitWait
- ❖ Implementing the keywords using the reflection API
- ❖ Implementing tests
- ❖ Assertions and Reporting Errors
- ❖ Parameterizing tests using DataProvider and XL Files
- ❖ Repeating a test with different Data
- ❖ Running the framework through ANT
- ❖ Generating the reports
- ❖ Emailing test reports
- ❖ Creating a BAT file for project execution

## **TestNg and Hybrid (Keyword+Data) Framework**

- ❖ Overview of Hybrid Framework
- ❖ Building XLS File Having Test Cases and Keywords
- ❖ Building XLS File Having Test Data
- ❖ Building Base class
- ❖ Reading XPATHS, Configuration from properties file
- ❖ Implementing WebdriverWait
- ❖ Implementing the keywords using the reflection API
- ❖ Implementing tests
- ❖ Assertions and Reporting Errors
- ❖ Parameterizing tests using DataProvider and XL Files
- ❖ Repeating a test with different Data
- ❖ Running the framework through ANT
- ❖ Generating the reports
- ❖ Emailing test reports
- ❖ Creating a BAT file for project execution
- ❖ Database Testing

## Java DataBase Connetivity JDBC

- ❖ Installing MySQL Database and making some tables in it
- ❖ java.sql package
- ❖ JDBC Drivers
- ❖ Connection Interface
- ❖ Statement and PreparedStatement Interfaces
- ❖ ResultSet Interface
- ❖ Firing select, insert, update and delete queries with database using Java JDBC
- ❖ Looping the ResultSet
- ❖ Using Annotations of Junit/TestNg to establish connection with database when
- ❖ Using Selenium
- ❖ DataBase Testing of Sample Web CRM Application
- ❖ Installing tomcat
- ❖ Creating Database of CRM application
- ❖ Downloading and Deploying the CRM web application on Tomcat with ant
- ❖ Running the webapp on Tomcat
- ❖ Using Prepared statement to fire conditional select query
- ❖ Validating login of customer with the database
- ❖ Validating values present in a droplist with ones present in DB
- ❖ Validating whether values filled by user are getting stored in the database or not
- ❖ Using assertions for validations

## Selenium RC Section

### Introduction to selenium RC

- ❖ What is Selenium RC?
- ❖ Difference between Selenium IDE and Selenium RC
- ❖ Difference between Webdriver(2.x) and Selenium RC(1.x)
- ❖ Configuring Selenium RC in Eclipse
- ❖ Javadocs for Selenium RC
- ❖ Selenium Interface
- ❖ Starting and Stopping Selenium Server Expertview Solutions
- ❖ Running Sample Selenium code using SeleneseTestCase class
- ❖ Running Sample Selenium code using DefaultSelenium class
- ❖ Browsers supported by RC
- ❖ FireBug and Firepath
- ❖ XPATHS and their usage with Selenium RC
- ❖ Full and partial Xpaths



## **Selenium RC Features**

- ❖ Handling HTML components like Links, Buttons, Input box, Radio buttons, Checkbox
- ❖ Handling a dropdown list
- ❖ Reading title of page using Selenium RC
- ❖ Closing browsers and killing sessions
- ❖ Slowing down the script execution speed
- ❖ Capturing Screenshots with Selenium RC
- ❖ Extracting Data from Webtable cells
- ❖ Checking if an element/object is present on the page or not
- ❖ Checking if text is present in the application
- ❖ Handling javascript alert message boxes
- ❖ Full and partial Xpaths
- ❖ Handling Buttons, Edit boxes, Radio buttons, Checkboxes and other Page objects