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JUnit and Hybrid (Keyword+Data) Driven Framework

TestNg and Hybrid (Keyword+Data) Framework

Selenium IDE Section

- 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.
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 - Handling JavaScript Alerts ➤ Capturing screenshots from Selenium IDE

Java Section (From Scratch Designed for beginners)

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 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 ➔ Running Sample Selenium code using SeleniumTestCase 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

Selenium RC Pop Up and Tab handling

- ➔ Concept of window ID ➔ Extracting window IDs with Selenium Object reference ➔ Tabbed browsing and handling tabs with selenium RC ➔ Handling popups, performing actions in pop up window
- ➔ Closing pop up windows ➔ Live example on tabbed browsing and Pop up handling

Selenium RC WebTables

- ➔ What is a webtable? ➔ Finding number of rows in Webtable ➔ Finding number of columns in Webtable ➔ Extracting Cell value ➔ Xpaths and identifying the pattern in them
- ➔ Dynamic Webtables ➔ Live example on printing all the values in a dynamic webtable using Selenium RC ➔ GetTable function in Selenium RC ➔ Live example on printing all the values in a dynamic webtable using Selenium RC ➔ American golf Website exercise

DataDriven Framework with Junit and Selenium RC

- ➔ Overview of Data driven framework ➔ Building the Test Base Class ➔ Using Annotations of Junit
- ➔ Reading XPATHS, Configuration from properties file ➔ Initialize the RC ➔ Building the Test Base Class ➔ 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 Section With Ant

Junit 4 Framework / ANT

- ➔ What is JUNIT ➔ Configuring Junit 4 in Project/Eclipse ➔ Junit 4 annotation
 - ➔ Running Test in Junit ➔ Skipping Tests ➔ Parameterizing Tests
- ➔ Using Assertions ➔ Reporting Errors / ErrorCollector ➔ Batch Running - Custom Runners
 - ➔ What is Ant ➔ Downloading and configuring Ant ➔ Build.xml configuration
- ➔ HTML Report generation using Ant ➔ Building a BAT file to run tests using ANT

TestNg / ANT Section

TestNg Framework / ANT

- ➔ What is TestNg ➔ Installing TestNg in Eclipse ➔ TestNg annotations
- ➔ Understanding usage of annotations ➔ Running a Test in TestNg ➔ Batch Running of tests in TestNg
 - ➔ Skipping Tests ➔ parameterizing Tests – DataProvider ➔ Assertions/Reporting Errors
 - ➔ TestNg Reports ➔ Advantages over Junit ➔ Using TestNg in Selenium ➔ What is Ant
- ➔ Downloading and configuring Ant ➔ Build.xml configuration ➔ XSLT report generation generation using TestNg and Ant ➔ Building a BAT file to run tests using ANT

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 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 ➔ 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 Addons 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- - NEW

Selenium WebDriver – 4

- ➔ Pausing execution for sometime ➔ 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 Calender 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 ➔ 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

- ➔ 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