

## Testing Fundamentals

- What is Automation testing?
- Benefits of Automation testing?
- What type of Test cases can automate?
- What type of test cases not to automate?
- Automation life cycle
- Different types of Automation tools
- Difference between QTP & Selenium

## Introduction to Selenium

- History of selenium
- What is selenium?
- Components of selenium



## Locator identification

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- What is element property?
- Different ways to recognize element properties
- What is firebug and firepath?
- How to recognize element in chrome & I.E Browsers?

## Webdriver Introduction

- Why webdriver?
- Architecture of Selenium webdriver
- Downloading Webdriver Jars and configuration in Eclipse
- First Program in Webdriver

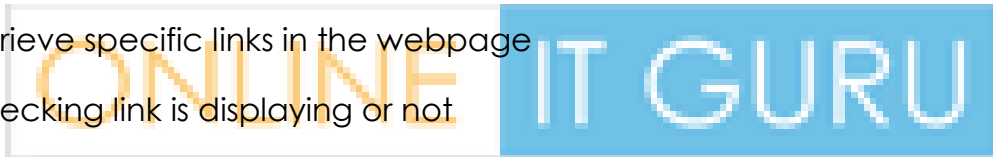
- Opening different browsers.

### Element Identification methods

- findElement()
- findElements()
- difference between findElement() & FindElements()

### Handling Links

- How to recognize link in the webpage?
- How to perform operation using links
- retrieve list of the links in the page
- retrieve specific links in the webpage
- checking link is displaying or not



### Handling checkBoxes/RadioButton

- How to check/uncheck checkBoxes/RadioButton
- Retrieve number of checkboxes/RadioButton in the webpage
- Retrieve specific checkboxes/RadioButton in the webpage.
- Verifying checkbox/Radio button is selected or Not?

### Handling dropdown list

- What is dropdown list?
- types of dropdown list
- About Select Class.
- select class Methods

- different ways to select/unselect a option in the dropdown list
- selecting a option Randomly in the dropdown list

## Handling Alerts

- What is Alert?
- about Alert interface
- different methods in Alerts a.alert ()
  - b.getText ()
  - c.sendKeys ()
  - d.accept ()
  - 4. dismiss()
- How to handle alerts in real time



**Handling Windows (Multiple WebPages)/popups**

- Methods to identify webpages
  - a) getWindowHandle()
  - b) getWindowHandles()

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- How to navigate from one Page to another Page.
- How to close multiple windows one after another.
- Difference between close () & quit ().

## Handling Frames

- what is Frame?
- How to Identify Frame in the webPage
- How to check element is Present in the Frame Or not
- How to move your focus from Page/Frame to Frame
- How to come back to the main state/page/frame.

## Handling WebTables

- What is webTable?
- How to Identify Table, rows, columns, cells
- finding no of rows in the Table
- Finding no of columns in the Table.
- retrieving records based on records
- Retrieving records based on cell by cell.
- retrieving specific records
- Retrieving records based on column.



- what is Action?
- when to use Action class?
- Operations performing using Action class
  - a)mouseOver
  - b)rightclick
  - c)drag & drop
  - d)Keyboard actions
  - e)move to Element

## Wait statements

- why we need to use Wait statements?
- different types of Wait statements
- what is Implicit wait

- what is Explicit wait statement.
- difference between Thread.sleep() & waitStatements.

### Special Scenarios

a. Capturing Screenshot

b. what is FirefoxProfile.

c. running Testcases in Headless Mode. d.Handling SSL Untrusted Cerificates. e.JavaScript Executor.

### Build Management and CI tools

a.ANT

b.Maven

c.Jenkins

### Framework

- What is Framework?
- Different types of Frameworks? A.data-driven B.Keyword-driven C.Modular driven C.Page Object Model

### POM with Pagefactory

1.What is POM?

2.What is Pagefactory?

3.How to implement page using pagectory.

4.Implimenting sample Testcases with POM with Pagefactory.

### TestNG Framework

- 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
- Using TestNg in Selenium
- Grouping test cases
- Setting priority of execution for test cases
- Putting Dataproviders for multiple tests in a single file
- Crossbrowser Testing.



### Handling Windows Component Using Sikuli:

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- What is sikuli?
- How to download sikuli.jar files
- How to use sikuli in our programs
- Examples using sikuli.

### Selenium IDE

- Configuring selenium IDE
- Record & Play sample testcase
- Selenese commands
- Difference between Verification & Assertion.
- Disadvantages of Selenium IDE

## Java Concepts

### Java Introduction

- Installing Java
- Installing Eclipse
- Features of Java
- Why Java for Selenium
- First Eclipse Project
- First Java program
- Concept of class file
- Platform independence
- Datatypes 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

## Collection API/Reflection API

- Introduction to Collections API



- ArrayList Class
- HashTable Class
- Using ArrayList and HashTable of Collection API in Selenium framework
- Reflection API usage and importance
- Using Reflection API to make keyword driven Selenium framework

### String,File Handling, Log4j, /Handling XLS,XML 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
  - Reading data from XML files using Java

### Course Completion:

#### After completing this course, students will be able to:

- Familiarity with Functional Test Automation.
- Java based test script development.
- Familiarity with Selenium Test Frameworks.
- Hands-on with Selenium WebDriver.

#### All students will receive:



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Selenium with java

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