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Best place to get trained on Software automation testing tools by Industry experts

## **EXPERT LEVEL SELENIUM WITH CORE JAVA (BASICS TILL ADVANCE LEVEL)**

### **Course Duration :**

6 Weekends, 3 hour session each day Saturday & Sunday (1.5 hr Java & 1.5 hr Selenium)

(Courses are held during weekends since the lectures are provided by professionals who are already working with CMM Level MNCs on same domain & Courses content is designed based on the latest market requirements and will help a lot during interviews and building up automation frameworks in Java)

## **Java Course Content**

### **1. Introduction to java**

- What is java
- Programming language hierarchy
- Java files
- Camel casing
- Identifiers
- Java Components naming standards
- Java source file declaration rules
- First Java program

### **2. Classes and Objects**

- Introduction to Classes and objects
- Understanding Java Heap
- Creating first Class and Object

### **3. Variables and Operators**

- Introduction to Variables and their data types
- Primitive and Non-primitive variables
- Variable Casting
- Object references
- Java Operators

### **4. Java Methods and their communication**

- Introduction to methods
- Method arguments and return types
- Pass by Value
- Encapsulation
- Getters and Setters

### **5. Loops and Arrays**

- If-else statement
- While loop

- Do-while loop
- For loop
- Enhanced for loop
- Arrays – 1D and 2D
- Reference in an array

## **6. Understanding Java-API**

- Understanding API using ArrayList
- ArrayList fundamentals
- Using Java Library
- Using Packages
- Using HTML- API docs

## **7. Inheritance and Polymorphism**

- Understanding inheritance and inheritance tree
- Methods overriding and the rules
- IS-A and HAS-A relationship
- Super class Vs Subclass

- Method Overloading
- Access Modifiers

## **8. Abstract Classes and Interfaces**

- Abstract classes and methods
- Mother of all classes – “Object class”
- Polymorphic reference
- Object reference casting
- Deadly Diamond of Death
- Interfaces and its implementation

## **9. Garbage Collection and Constructors**

- Concept of Stack and Heap
- Methods and classes on Stack and Heap
- Constructors
- Constructor Overloading
- Constructor chaining and this() keyword
- Garbage collection eligibility

## **10. Statics and data formatting**

- Static methods, variables and constants
- Math class and methods
- Wrapper classes
- Auto boxing
- Data formatting and static imports

## **11. Exception handling**

- Risky java codes
- Introduction to Java Exceptions
- Catching exceptions using try/catch block
- The finally block
- Catching multiple exceptions
- Handle or Declare law of exceptions

## **12. Introduction to GUI**

- First GUI code
- Event handling

- Implementing listener interface
- Graphics on GUI
- Inner classes
- Using animation in GUI

### **13. Serialization and file I/O**

- Saving objects state
- Writing serialized object
- I/O streams
- Serializable interface
- Deserialization
- Java IO file
- Reading/Writing a text file

### **14. Threads and Networking**

- Network sockets and TCP ports
- Reading/writing from a socket
- Writing a simple server

- Introduction to Threads and it's states
- The runnable interface
- Handling Multiple threads
- Dead Lock and synchronized methods

## **15. Collections**

- Introduction to Java collections
- Concept of generics
- Lists
- Sets
- Map
- Hashmap

## **16. Apache – POI**

- Introduction to Apache-POI
- Reading data from MS Excel file using POI
- Creating MS Excel file using POI
- Manipulating Excel file data using POI



## **17. JDBC**

- JDBC concepts and terminology
- JDBC package
- Creating connection to a DataBase
- Accessing and manipulating tables using JDBC
- Sql statements

## **18. JUnit**

- Introduction to Java Framework
- Annotations
- Testing Java codes using JUnit
- Test Cases creation
- Creating Test Suite to test an application

## **19. Framework**

- Framework and their types
- Data driven framework
- Using framework to test a java application

## Selenium RC Course Content

### **1: Introduction to Selenium IDE & RC:**

- What is Selenium RC?
- How to download and configure RC
- Difference between IDE, RC and WebDriver
- Recording & Exporting script through IDE in different formats
- Exploring Selenium RC java doc
- Starting and stopping selenium server
- Download firebug and firepath
- Open Google home page through RC
- Change Facebook user image through RC
- How to download and configure Selenium RC?
- Creating your first RC test
- What is Xpath
- Tools available for finding Xpath

## **2: Selenium RC Features & Examples:**

- Partial & Full Xpaths
- Handling HTML Elements such as: Text box, Hyperlinks, Submit buttons,
- Radio buttons, Check boxes, Dropdown etc
- Handling Java script messages
- Finding Elements & text on a Webpage
- Printing all links and other values from a webpage and HTML Elements
- Setting execution speed of Selenium RC
- Capturing Screenshots
- How to capture a screenshot
- Capturing screenshots in case of an error
- Emailing test results
- Working with online captchas

### **3: Online webtables & Popup/tab browsing :**

- Web tables
- Dynamic webtables
- Finding row and columns count
- Extracting dynamic data from rows and columns
- Concept of window names
- How to handle pop up windows
- How to click on elements in new tab

### **4: Flash / Flex Testing with Selenium RC:**

- What is flash/flex testing
- Downloading and Installing flash jar file
- Automating flash player
- Using different call methods of YouTube flash player
- Difference in RC and WebDriver Flash testing
- Implementing flash testing with Selenium RC

## **Selenium WebDriver Course Content**

### **5: Introduction to Selenium WebDriver:**

- What is WebDriver
- Exploring Webdriver java docs
- Downloading Webdriver jar files
- Open Google home page through WebDriver
- Exploring more features of WebDriver
- WebDriver Features & Examples
- Handling HTML Elements such as: Text box, Hyperlinks, Submit buttons,
- Radio buttons, Check boxes, Dropdown etc
- Finding Elements & text on a Webpage
- Printing all links and other values from a webpage and HTML Elements
- Using By class to find elements using different methods
- Implement global wait
- Running test in multiple browsers
- Firefox profile
- Running test in multiple profiles

## 6: WebDriver & advance features

- Simulating keypress events such as buttons such as Enter, page up, pagedown, backspace etc.
- Handling java script messages
- Working with online captchas
- Running the test with HTMLUnit driver
- Online Webtables
- Downloading and configuring chrome driver
- How to find Xpaths through Chrome developer tool
- Generating your own Xpaths
- What if you don't have firebug or firepath
- Handling multiple pop ups/tabs in Chrome
- Handling Mouse over Menus and Iframes

## **7: Ajax & Listeners:**

- How to handle Ajax based applications
- Browser navigate methods
- Listeners
- Mouse movements
- Explore action class mouseover method
- Working with Javascriptexecutor
- Drag and Drop
- Resizable
- Handling Sliders

## **8: Flash Testing with Selenium WebDriver :**

- What is flash/flex testing
- Downloading and Installing flash jar file
- Automating flash player
- Using different call methods of YouTube flash player

## **JUNIT Course Content**

### **9: JUNIT JAVA FRAMEWORK, ANT & REPORTS Generation**

- About JUnit and TestNG
- What is a Java framework
- Test Annotations
- Executing the tests in sequence
- Assertions
- Error Collectors
- How to parameterized our test case
- Reading Excel files
- What is Ant
- Configuring Ant
- Running Selenium tests through Ant
- Creating batch scripts for Ant execution
- Report Generation



## TestNG Course Content

### **10: TestNG JAVA FRAMEWORK, ANT & REPORTS Generation**

- About JUnit and TestNG
- What is a Java framework
- Test Annotations
- Executing the tests in sequence
- Assertions
- Error Collectors
- How to parameterized our test case
- Reading Excel files
- Generating XSLT Reports
- What is Ant
- Configuring Ant
- Running Selenium tests through Ant
- Creating batch scripts for Ant execution

## **11: Automation Framework Implementation on a Live Project**

Covers end to end steps followed while creating the framework:

- Test data files
- TestCore class which loads Xls file, run selenium server through code
- and do other initialization
- Object.properties file to store Xpaths
- Configuration files
- Skipping test cases
- Screenshot capturing
- Emailing test results
- Generating Reports
- Generating Application and Selenium logs
- Running framework automation through ANT