



## Selenium With Java

### Java Topics

#### ➤ Basic Java

- JDK installation
  - *Java Compiler and JRE(some supporting java file and JVM)*
- Java is Object Oriented
- Java is Platform Independent
  - *Why platform independent?*
- Class
- Object Class
  - *Its super class for all classes*
- Methods
- Object
  - *Object creation/instantiation*
- Constructor
  - *Type of constructor and constructor chaining*
- Data Types
  - *Primitive (Boolean, Integral(char, integer(byte, short, int long float, double))) , not primitive(class, array)*
- Memory Allocation in RAM by JVM
  - *Method area (Static member),Heap area, Stack area*
- Variable Types
  - *Local variables, Instance variables, Class/Static variables*
- Access Modifiers
  - *public, private, protected, default*
- Non access modifiers
  - *Static, final, abstract, synchronized and volatile*
- Operators
  - *+/-/\*/%/++/--*
- Loop Control



- *for, while, for each, do while*
- Decision Making
  - *if else, nested if else, switch case, continue and break*
- Strings
  - *String object creation n memory allocation*
- Arrays
  - *different type of arrays*
  
- **Object Oriented Concepts**
  - Inheritance
    - *IS-A and HAS-A relation*
  - Polymorphism
  - Overloading
    - *same class and child class*
  - Overriding
    - *same class*
  - Abstraction
  - Interfaces
  - Encapsulation
  
- **Java Collections**
  - List
  - Set
  - Map
  
- **Exceptions**
  - Checked Exception
    - *IOException, SQLException*
  - Unchecked Exception



- *ArithmeticException, NullPointerException, ArrayIndexOutOfBoundsException*
- Error
  - *OutOfMemoryError, VirtualMachineError, AssertionError*
- How to handle exceptions



## Java Programs

- A. Explain `System.out.println()`;
- B. Explain `driver.manage().window().maximize()`
- C. Write a program for number palindrome.
- D. Write a program for number swapping.
- E. Write a program for arithmetic operations(`int+String+int`)
- F. Write a program to print A to Z
- G. Write a program to print table from 2 to 10
- H. Write a program to print equilateral triangle
- I. Write a program to check perfect number
- J. Write a program to generate Random Number of 2 digit
- K. Write a program to reverse an array
- L. Write a program to find factorial of a Number
- M. Write a program to check a given number is palindrome or not
- N. Find the substring of string
- O. Reverse String "This is Ram" and output should be "sihT si maR"
- P. Character count in a String using Hash Map
- Q. Check Prime Number
- R. Calculate power of a number using while loop
- S. Print only those number which is not divisible by 3 using continue
- T. Write a program to generate Fibonacci series from 1 to 10



## **Module 1**

Very important session

1. Selenium Setup with Firebug, firepath and Selenium Jar files
2. Handling HTML element like: text box, radio button, hyperlink, submit button, check box, dropdown etc.
3. Find Element on web page using By class with diff method: locator
4. Find text on Web Page and validate it
5. Print all Links available on a page

## **Module 2**

1. How to capture screen shot
2. how to capture screen shot while error occurred
3. Concept of Window Name
4. How to handle pop up window
5. How to click on element in new Tab
6. Handling Java script messages
7. Simulating keyPress event such as buttons such as enter, page up and page down etc.



## Module 3

1. Online html WebTables
2. Implementation of Global wait and WebDriverWait
3. How to handle AJAX based application
4. Xpath Vs CSS
5. Handle DatePicker
6. Verify Checkbox is selected or Not

## Module 4

1. Find the Xpath in Chrome and IE
2. neavigationMethods
3. Listeners
4. Magic of Action Class
5. Mouse Hover Items
6. Handling JQuery Elements
7. Resizable
8. Slider
9. Frame
10. Right Click on Element

## Module 5

1. What is TestNG
2. Annotations
3. DataProvider
4. TestNG Reporting
5. Apache Poi jar file
6. Data Reading from Excel Sheet



7. Sending Email with attached Screenshot while failing Testscript

## **Module 6**

1. DD\_Framework
2. Complete Framework and Generating Logs
3. Log4J Jar file
4. Log4J.Properties
5. Reading Data from Properties file

## **Module 7**

1. DataDriven\_Framework
2. Page Object Model Framework using PageFactory
3. Jenkins
4. Maven
5. GITHUB