

## Advance Selenium Lectureflow

<b>Module 1) Adv. Selenium - Tops Introduction</b>	<b>1</b>
<ul style="list-style-type: none"> <li>• Introduction to student</li> <li>• Career in Selenium</li> <li>• Understanding Student Login of TOPS ERP</li> <li>• Using Lab</li> <li>• Working on Project and Assignment</li> </ul>	
<b>Module 2) Adv. Selenium - Introduction to Automation</b>	<b>1</b>
<ul style="list-style-type: none"> <li>• What is the use of automation testing</li> <li>• What we need to Automate</li> <li>• What is Selenium</li> <li>• Advantages of Selenium</li> <li>• What is the difference between Selenium and QTP</li> </ul>	
<b>Module 3) Ad. Selenium - Java For Web Driver</b>	<b>13</b>
<ul style="list-style-type: none"> <li>• Introduction of Core Java</li> <li>• Eclipse IDE</li> <li>• JVM,JDK,JRE</li> <li>• Class, Object, Method</li> <li>• Constructor</li> <li>• Source File Layout</li> <li>• Package Management</li> <li>• Import Statement</li> <li>• Data types</li> <li>• Modifiers- Public, Private, Protected, Default</li> <li>• Conditional Statements and Looping Statements</li> <li>• Practical Example: 1 - W.J.P to Print Hello World 2 - W.J.P to Calculate Arithmetic Operation 3 - W.J.P to use All Data types related Examples 4 - W.J.P to Perform Casting of Implicit 5 - W.J.P to Perform Casting of Explicit 6 - W.J.P to Perform OddEven Number 7 - W.J.P to find Positive ,Negative and Zero using nested if 8 - W.J.P to find Maximum from 3 number using else if ladder 9 - W.J.P to use of switch case 10 - W.J.P to create Package 11 - W.J.P. to create a package with all access Specifie</li> <li>• Array Introduction</li> <li>• Types of Array</li> <li>• Encapsulations</li> <li>• Inheritance - Introduction</li> <li>• Types of Inheritance</li> <li>• Polymorphism</li> </ul>	

- Types of Polymorphism
- Practical Example: 1 - W.J.P to create an one dimensional array 2 - W.J.P to create an one dimensional array getting value from user using of Scanner class 3 - W.J.P to create an two or more dimensional array 4 - W.J.P to create an two or more dimensional array getting value from user using of Scanner class
- Practical Example: 5 - W.J.P to create an two or more dimensional array getting value from user using of Scanner class with matrix form. 6 - W.J.P to use of Encapsulation with your private data 7 - W.J.P. to use of Inheritance with the help of student super class to use on sport class in single inherance. 8 - W.J.P. to use of Inheritance with the help of student super class to use on sport class and also inherit to another class (Result class) in Multilevel inheritance.
- Keywords - This, Static, Final, Super
- Practical Examples: 9 - W.J.P. to use of Inheritance with the help of student super class to use on sport class and also student class inherit into result class in Hierarchical inheritance. 10 - W.J.P. to use of Method Overloading and Overriding 11 - W.J.P to use of simple interface and also implement with your class 12 - W.J.P. to use of interface through solved the problem of multiple inheritances.
- Abstract and Interface - Introduction and Difference
- Practical Example: 13 - W.J.P. to use of abstract class and method 14 - W.J.P. to use of static keyword with variable and method 15 - W.J.P. to use of This keyword 16 - W.J.P. to use of Final keyword with class, method and variable.
- Object Class(only Important Methods)
- String Class (Only Important Methods)
- String Buffer & String Builder
- Wrapper Classes
- Practical Example: 1 - W.J.P. to get the character at the given index within the String. Original String = Tops Technologies! 2 - W.J.P. to Swap the String 3 - W.J.P. to replace the string from the existing string 4 - W.j.p. to count the world from the string 5 - W.J.P. to count the vowel from the string 6 - W.J.P. to find length of the string
- Introduction to Exception
- Exceptions categories
- Standard Java Exception classes
- Using Try-catch and finally clause
- Practical Example: 1 - W.J.P. to use of Try and catch using with arithmetic exception 2 - W.j.p. to use of custome Exception 3 - W.J.P. to read and write the value from the byte stream 4 - W.J.P. to read and write the value into file using character stream 5 - W.j.P. to use the file with file operation
- File IO: I/O using Java
- Files (Create/Read/Write operations on files)
- Introduction to Thread
- Thread Creation
- Basic Methods
- Introduction to Collection
- List, Set, Map
- Practical Example: 1 - W.J.P. to use Sleep method in Thread 2 - W.J.P. use with ArrayList 3 - W.J.P. use with HashSet 4 - W.J.P. use with HashMap 5 - W.J.P. use with Generics 6 - W.J.P. use with Iterator

**Module 4) Adv. selenium - Selenium IDE and scripts**
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- Selenium RC
- IDE
- Selenium Web Driver/Selenium 2.0
- Selenium-Grid
- Why Web Driver?
- Downloading web driver Jars configuring in eclipse
- Architecture of selenium web driver
- Drivers for Firefox, IE, Chrome, iPhone, Android etc
- What is the difference between Selenium RC and WD
- Practical Example : 1 - W.P to demonstrate Selenium configuration, and verify title of Facebook in different browser(Like IE, Chrome, FF)
- &quot;Tools to identify elements/objects Firebug&quot;
- IE Developer tools
- Google Chrome Developer tools
- Practical Example : 1 - W.p to demonstrate all Locators using Inspect Element or Firebug. 2 - W.p to find webelements using different Xpath
- Locating elements by ID
- Finding Elements by using className, Name, Link Text, Partial link Text, XPath, using CSS, Using TagName
- Installing Selenium IDE
- Selenium IDE icons
- Recording your first test with Selenium IDE
- Some Special IDE commands
- &quot;Write your own Selenium IDE script without record and playback&quot;
- Practical Example : 1 - Record Script for Login functionality of Tops Career center (<https://topsint.com/careercenter/index.php>) 2 - Write script for Facebook sign up Form and play (<https://www.facebook.com/>) 3 - verify Title of Tops Erp using verify title and assert title cmd (<http://www.topsint.com/topserp/index.php>) 4 - Handel alert box In Selenium IDE
- Handle Text Box, Hyperlink, Button and Checkbox, Radio Button and DropDown Controls
- Select value from DropDown
- Display all values
- Why Implicit wait and Implementation of Implicit wait
- Why Explicit wait and Implementation of Explicit wait
- Web Driver Fluent wait and Thread Sleep functionality
- Handling alerts box, Verifying the Alert Texts and verify pop ups
- Handling confirmation messages
- Practical Example : 1 - W.P to Demonstrate all webelements, Fill the form using automation (<https://demoqa.com/automation-practice-form/>) note : user different locator for every element 2 - W.P to find all links from webpage and write on consol. 3 - Add implicit wait in Selenium Practical 4 - W.P to demonstrate explicit wait and Fluent wait 5 - W.S.P. to find the elements of alert box,popup,multiple window handle 6 - W.S.P. to find the elements of file upload and download 7 - W.P to demonstrate Keyboard Action

- Keyboard actions / Screen Shot Actions
- Mouse actions
- Handling multiple tabs
- customized x-path [How to write x-path]
- Preparing web driver test cases using customized x-path
- Identifying controls using x-path predefined functions
- Web Tables
- What is Web Table
- Extracting data from web tables
- Examples on static and dynamic Web Tables
- Practical Example : 1 - W.S.P. to find the elements of webtable and dynamic table 2 - W.P to find Element from inner table
- Junit Framework
- Running Java Programs using junit
- Writing Selenium tests from scratch using Junit Framework
- JUNIT Annotations
- JUNIT Methods
- Frequently used Selenium commands
- Test Suites using JUNIT
- Practical Examples : 1 - W.S.P. to set up of JUnit. 2 - W.S.P. to use of Annotation 3 - W.S.P. to use of AssertClass 4 - W.S.P. to use of Junit Exception 5 - W.S.P. to use of Junit Parameter 6 - W.S.P. with use of Selenium Webdriver with junit framework 7 - W.S.P. to create the test suites
- parameterise Test in Junit
- TestNG FrameWork
- Environment of TestNG
- Writing WebDriver Test Cases using TestNG and execution
- Basic Annotations of TestNG
- Ignore Test
- Dependency Test
- Practical Example : 1 - W.S.P. to testNG Installation 2 - W.S.P. to testNG for annotation 3 - W.S.P. to testNG with all annotation with selenium 4 - W.S.P. to testNG with ignore the test 5 - W.S.P. to testNG for group test
- Parameterized Tests
- TestNG XML
- Report Generation
- Practical Example : 6 - W.S.P. to testNG for dependency test 7 - W.S.P. to testNG for parameterized test 8 - W.S.P. to testNG for data provider annotation 9 - W.S.P. to testNG with test suite 10 - W.S.P. to Demonstrate Listener , take screenshot when test is fail and print success message when test is pass.
- Executing Automation Test Cases in multiple browsers Sequentially
- Working with Chrome and IE browsers
- What is Firefox Profile And Implementation of Firefox Profile
- Practical Example : 1 - W.S.P. to create the cross browser testing 2 - W.S.P. to testNG through multiple browser working with same website

Module 5) Adv. Selenium - Web Driver Advance	7
<ul style="list-style-type: none"> <li>• What is WebDriver Desired Capabilities class</li> <li>• Validations and its usage in Automation test scripts</li> <li>• Implementing Logs using Apache Logj API</li> <li>• Reading data from Property files using java program</li> <li>• Reading and Writing data from/to Excel files using Apache POI API and JXL API</li> <li>• &amp;quot;How to develop Test automation frame work in live environment&amp;quot;</li> <li>• Practical Example : 1 - W.S.P. to testNG for log4j with create logs 2 - W.S.P. to testNGto get the data from the file</li> <li>• What is a frame work</li> <li>• Types of frame work</li> <li>• Data driven frame work</li> <li>• Modular driven frame work</li> <li>• Keyword driven frame work</li> <li>• Hybrid Framework</li> <li>• Practical Example : 1 - W.S.P. to testNG for use of Excel data to read and write into Excel file 2 - Used with Data Driven 3 - Used with Modular Driven 4 - Keyword Driven 5 - Hybrid Driven</li> <li>• Introduction about maven</li> <li>• High Level Overview</li> <li>• Ant v/s Maven</li> <li>• Installation of Maven</li> <li>• Demo using Sample Maven Project</li> <li>• Maven Structure</li> <li>• Maven Dependencies</li> <li>• Maven Repositories</li> <li>• Maven Eclipse Integration</li> <li>• Practical Example : 1 - W.J.P. to installation with Maven into your eclipse 2 - W.J.P. to use of Maven Dependancies in the project 3 - W.J.P. to create selenium program with maven 4 - W.J.P. to create junit program with maven 5 - W.J.P. to create TestNG program with Maven 6 - W.J.P. to create Excel based program using POI with Maven</li> </ul>	