

# Automation Testing Syllabus

## Automation Synopsis:

- + What is automation testing
- + When to go for automation
- + Different Automation Tools (vendor & open-source tools)
- + Advantages of Automation
- + Criteria for Automation
- + Difference between Manual Testing & Automation Testing process

## Introduction to selenium:

- + What is selenium tool and Use?
- + Features of selenium tool
- + Differences between selenium and other Tools

## Selenium Components:

- + Selenium IDE
- + Selenium Web Driver 3
- + Selenium Grid

## Configuring Eclipse IDE or IntelliJ for java Selenium:

- + How to create new java project
- + How to create a new Package
- + How to create a new java class
- + Running java class
- + Viewing the results of java program

## Learning java:

- + Introduction to java programming
- + Data Types in java

- + Primitive Data types
- + Declaring Variables
- + Writing java program and running
- + String Manipulation
- + Java Operators

### **Conditional Statements:**

- + If condition
- + If else condition
- + If else if condition (nested if)
- + Switch case statement
- + Examples for all the above conditions

### **Loop Statements:**

- + While loop
- + Do While
- + For loop
- + For each loop
- + Examples for all the above loops

### **Array:**

- + How to declare array
- + How to store and Reading values in array

### **Exception, error handling:**

- + What are exceptions, errors
- + How to handle exceptions in the program
- + Using try and catch blocks
- + Using multiple catch blocks
- + Types of Exceptions
- + Using of throws
- + Throw
- + Throw able

## Object Oriented programming Class:

- + What is **class**?
- + What are fields and method?
- + How to create **object** for the class
- + How to access fields and methods in the class
- + Constructors
- + What is abstract, final class

## Inheritance:

- + What is the inheritance
- + Why to do inheritance
- + How to reuse the fields and methods of parent class
- + Using **super** and **this** keywords

## Interfaces

- + What is interface
- + Why use Java interface?
- + Difference between class and interface
- + When to use interface

## Polymorphism:

- + What is polymorphism
- + Methods overloading
- + Methods Overriding
- + Calling methods in the class
- + Return values from method

## Encapsulation:

- + What is hiding data
- + Using access specifiers public ,private, Protected default
- + Accessing the public methods outside

- The class
- + Difference in accessing in same Package / different package

## Package

- + What is package?
- + How to create a package
- + How to import package into different class

## Collections

- + Use of collections
- + Advantage of collection using array
- + Using the collections like **List, Set, Array list, Hash Table/Hasmap**
- + How to add ,remove, and insert value /elements into collections

## Web Driver:

- + Introduction to Web Driver
- + Comparisons of selenium RC & WebDriver
- + Browser Commands
- + Web Driver Interaction Commands
- + Web Driver Supported Locator names:
- + Understanding and writing Xpath, types of Xpaths
- + Working with different Web Elements and Editboxes, checkbox, Radio buttons Buttons ,Links
- + Selecting values from a Dropdown list
- + Working with Web table elements
- + Reading Data from Web Table
- + Handling keyboard, mouse events
- + Synchronizations in selenium IDE(Wait commands)
  - Implicit Wait
  - Explicit Wait – Web DriverWait
  - Fluent Wait
  - Page Load Timeout Command
  - Sleep Command
- + How to put validations assert, verify

## **Debug Scripts in Eclipse:**

- vi. Understanding Debug
- vii. Using Breakpoints
- viii. Verify the values during debug
- ix. Using step over, step into

## **Handling Windows:**

- x. How to handle multiple browser
- xi. Handling alerts
- xii. Handling Frames

## **Upload the Documents:**

- i. How to upload the documents
- ii. Methods To Upload Files In Selenium

## **Recognizing elements in webpage Using xpath ,DOM, CSS**

- ✚ Running java scripts in webDriver
- ✚ How to recognize duplicate elements
- ✚ How to recognize dynamically changing elements
- ✚ Using Regular expressions

## **TestNG Framework:**

- ✚ What is TestNG
- ✚ Create TestNG.xml file
- ✚ Integrate the selenium scripts and run from TestNG
- ✚ Reporting Results & Analyze
- ✚ Run Scripts from Multi Browsers
- ✚ TestNG Annotations
- ✚ Tags in TestNG xml File Groups
- ✚ Reporting Results

## **Configuring other Browsers:**

- ✚ Configure Edge browser
- ✚ Configure Chrome browser
- ✚ Running scripts on different browsers

## **MAVEN:**

- ✚ Installing maven in Local Machine
- ✚ Creating Maven project
- ✚ Importing Maven project in Eclipse
- ✚ Understanding of POM .xml
- ✚ Maven Integration with TestNG
- ✚ Executing Scripts Using Maven build tool
- ✚ Advantages Maven Tool

## **Automation Life Cycle:**

- ✚ What is Frame work
- ✚ Types of Frame work
- ✚ Modular Framework
- ✚ Data Driven Framework
- ✚ Keyword Driven Framework
- ✚ Hybrid Framework
- ✚ Use of Framework
- ✚ How Develop The Framework
- ✚ Integration of the Frame work
- ✚ How execute the scripts from Frame work

## **Page Object Model Framework**

- ✚ Introduction to page object model
- ✚ Advantages of page object model
- ✚ Writing scripts Using page Object Model
- ✚ Creating Repository class, Using properties file
- ✚ Execution of scripts Using page Object Model

## **Data Driven Testing Framework:**

- iii. What is Data Driven Testing?
- iv. How to parameterize the data to the Script using excel

v. Reading ,Writing data into Excel

### **Cucumber Testing Framework**

- ✚ Introduction to Cucumber
- ✚ Advantages of Cucumber Testing Framework
- ✚ Writing scripts Using Cucumber (Gerkin language)
- ✚ Execution of scripts Using Runner class

### **JENKINS**

- ✚ Introduction to Jenkins
- ✚ Installing Jenkins with selenium
- ✚ Creating jobs in Jenkins tool
- ✚ Scheduling jobs for timely execution
- ✚ Integration with selenium scripts and running scripts
- ✚ Configure mail notification in Jenkins