Introduction
- ✓ 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
- ✓ Use of selenium tool in automation
- ✓ Features of Selenium tool
- ✓ Differences between Selenium and other Tools

Selenium Components
- ✓ Selenium IDE
- ✓ Selenium WebDriver
- ✓ Selenium Grid
- ✓ Selendroid

Configuration of Selenium IDE & Dev. Scripts
- ✓ Recording the scripts in IDE
- ✓ Running the scripts
- ✓ Saving the scripts and using again
- ✓ Understanding of the objects identification (id, name)
- ✓ Difference between Test case and test suit
- ✓ Languages supported while recording
- ✓ Synchronization in Selenium IDE (wait commands)
- ✓ Testing Vs Selenium IDE
- ✓ When to use Selenium IDE
- ✓ Learning commands in IDE
- ✓ How to put validations (assert, verify)
- ✓ How to read text / values from webpage (store commands)
- ✓ How to handle mouse, keyboard events
- ✓ Running java script from IDE (user extensions)
- ✓ Limitations of IDE

Configuring Eclipse IDE for Java & Selenium
- ✓ How to Create new java project
- ✓ 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
- ✓ Wrapper Classes
- ✓ Declaring Variables
- ✓ Writing java program and running

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 values in array
- ✓ Reading values in array

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Exception, error handling
- ✓ What are exceptions, errors
- ✓ How to handle exceptions in the program
- ✓ Using try and catch blocks
- ✓ Types of Exceptions
- ✓ Using of throws
- ✓ Throw
- ✓ Throwable

Object Oriented Programming

Class
- ✓ What is class
- ✓ What are fields and methods
- ✓ How to create object for the class
- ✓ How to access fields and methods in the class
- ✓ Constructors
- ✓ What is abstract, final class
- ✓ Variable Types (instance, local, static)

Polymorphism
- ✓ What is polymorphism
- ✓ Method overloading
- ✓ Constructor overloading
- ✓ Passing arguments to methods
- ✓ Calling methods in the class
- ✓ Return values from method
- ✓ Return objects from method
- ✓ Method arguments callbyvalue,
- ✓ call by reference

Inheritance
- ✓ Why to do Inheritance
- ✓ How to reuse the fields and methods of parent class
- ✓ Overriding fields and methods of parent class
- ✓ Single Inheritance
- ✓ Multi level Inheritance
- ✓ Using super keyword
- ✓ Composition / Aggregation
- ✓ Difference between Inheritance and omposition

Inerfaces
- ✓ What is Interface
- ✓ Difference between class and interface
- ✓ When to use Interfaces
- ✓ Abstract class

Encapsulation and abstraction
- ✓ 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 a different class

Collections
- ✓ Use of collections
- ✓ Advantage of collection using Array
- ✓ How to add, remove, and insert value / elements into collections
- ✓ Using the collections like List, Set, ArrayList, HashTable
- ✓ Linked List

Database Connection(JDBC)
- ✓ SQL Server
- ✓ My SQL
- ✓ Oracle

Miscellenius
- ✓ Dynamic binding
- ✓ Upcasing, downcasting
- ✓ Autoboxing, unboxing

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Using String, Date, Math classes and Examples

Web Driver

- ✓ Introduction to Web Driver
- ✓ Configure Eclipse IDE (Adding selenium Libraries)
- ✓ Using FirefoxDriver API
- ✓ Working with Different Elements and programming
- ✓ Edit boxes
- ✓ Checkbox, Radio Buttons
- ✓ Buttons
- ✓ Links
- ✓ Selecting values from a Dropdown list
- ✓ Understanding xpath to locate elements in webpage
- ✓ Working with Table Elements
- ✓ Reading data from Table
- ✓ Using Actions class
- ✓ Handing keyboard, mouse events

Data Driven Testing

- ✓ What is Data Driven Testing
- ✓ How to parameterize the data to the script using Excel
- ✓ Reading, writing data into Excel
- ✓ How to parameterize data to the script using Flat files

Debug Scripts in Eclipse

- ✓ Understanding Debug
- ✓ Using Breakpoints
- ✓ Verify the values during debug
- ✓ Using step over, step into

Handling Windows

- ✓ How to handle multiple browser
- ✓ Handling alerts
- ✓ Handling windows alerts using (Auto it / sikuli)
- ✓ Handling Frames

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

Configuring other Browsers

- ✓ Configure IE browser
- ✓ Configure Chrome browser
- ✓ Running scripts on different browsers

Additional Configuration in Eclipse IDE for Selenium RC

- ✓ Configuring External tools
- ✓ Running selenium server
- ✓ Writing scripts in Selenium RC
- ✓ Execution of scripts on different browsers
- ✓ Comparision of Selenium RC &WebDriver

TestNG Framework

- ✓ What is TestNG
- ✓ Create TestNG.xml file
- ✓ Integrate the Selenium Scripts
- ✓ and Run from TestNG
- ✓ Reporting Results & Analyze
- ✓ Run Scripts from MultipleBrowsers
- ✓ TestNG Annotations
- ✓ Tags in TestNG xml file
- ✓ Groups
- ✓ Reporting Results

Selenium Grid

- ✓ Introduction
- ✓ RemoteWebDriver
- ✓ Congiguring hub
- ✓ Configuring node
- ✓ Running scripts on remote computer

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Automation Life Cycle

- ✓ What is a Framework
- ✓ Types of Frameworks
- ✓ Modular framework
- ✓ Data Driven framework
- ✓ Keyword driven framework
- ✓ Hybrid framework
- ✓ Use of Framework
- ✓ How develop the framework
- ✓ Integration of the framework
- ✓ How execute the scripts from framework

Page Object Model Framework

- ✓ Creating Repository class
- ✓ Using properties file
- ✓ Generating Log files (log4j)

ANT / MAVEN

- ✓ Creating Maven project
- ✓ Creating build file
- ✓ Running the build

SOAP UI

- ✓ What is webservice
- ✓ Webservice architecture
- ✓ What testing we have to do in webservice
- ✓ Introduction to SOAP UI
- ✓ Running project in SOAPUI and testing webservices
- ✓ Load Testing
- ✓ Data Driven for Services Testing

Running Web Driver Scripts on Mobile Devices (selendroid / Appium)

- ✓ Configure Android Device
- ✓ Running scripts on Android Device

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