SELENIUM

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Mode of Training: Online, Classroom, Corporate
Trainer: Mr. Reyaz

INTRODUCTION TO AUTOMATION Testing

- What is automation testing?
- Different types of Automation Tools
    1. Functional Testing Tools
- Advantages of automation testing?
- Disadvantages of automation testing?

INTRODUCTION TO SELENIUM

- What is selenium?
- History of selenium
- Advantages of Selenium
- Disadvantages of Selenium
- Difference between selenium and QTP

SELENIUM COMPONENTS

- Selenium IDE
- Selenium RC
- Selenium Web Driver
- Selenium Grid

SELENIUM IDE(Integrated Development Environment)

- Introduction to IDE
- Installation of IDE
- Selenium IDE Architecture
- Record and Playback user interactions in IDE
- Analysing results in IDE
- What is Element/Object
- Element locators in application
    1. ID
    2. Name
    3. Xpath

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        4. Linktext

        5. CSS

        6. DOM

- Identifying element locators using IDE
- What is Firebug
- Installation of Firebug
- Identifying locators of elements using firebug

Selenium IDE Commands/Selense Commands

- Actions
- Assertions(Verify, Assert and Waitfor)
- Accessors (Store Commands)
- Difference Between Verify, Assert and Waitfor
- Designing Selenium IDE Scripts Manually using commands
- Converting Selenium IDE Scripts into various formats (RC, Webdriver)
- Advantages of Selenium IDE
- Disadvantages of Selenium IDE

Introduction to JAVA

- Introduction to java
- History of Java
- Features of java
- Installation of JDK
- How java Works
- Set up path and class path
- Structure of java program
- Naming conventions in java
- Design, Compile and execute first java program through command prompt
- Analyzing the output in command prompt
- Data types in java
- Output statements in java
- Conditional statements in java

Introduction to Eclipse

- What is eclipse
- Different IDE's for java in market
- Downloading eclipse

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- Creating java project in eclipse
- What is workspace in eclipse
- Eclipse architecture
- Creating package, class in eclipse
- Designing and executing java program in eclipse

Java Concepts

- Looping statements in java
- Arrays in java
- Commenting in java
- String functions in java
- Variables in java
- Methods in java
- Static and Non static members
- Methods with Arguments
- Access Specifiers in java
- Constructors in java
- Exception handling in java
- Collections in java

OOPS Concepts

- Introduction to OOPS
- Class
- Object
- Interface
- Packages in Java
- Inheritance
- Polymorphism
- Encapsulation
- Abstraction in java

WEB DRIVER

- Introduction to Web Driver
- Advantages of Web Driver
- Configuration of Web Driver in Eclipse
- Handling different browsers in Web Driver
    1. Firefox
    2. Chrome

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        3. IE
- Browser commands in Web Driver
- Working with different browsers Add-ins
  1. Debug bar
  2. Firebug Lite
- How Web Driver Identify elements
- Business operation commands in Web Driver
- Accessing RC commands in Web Driver
- Validation commands in Web Driver
- Web Elements
- Handling Alert Messages in Web Driver
- Working with XPATH
- Handling Mouse movements, Key Board operations
- Reusable Methods for Validations
- Working with Similar elements (No of links, images, list boxes..)
- Data Driven Testing (Excel, Notepad, Console and Database)
- Working with Web Tables
- Handling File uploads and downloads using Robot Class / AutoIT
- Working with multiple windows
- Capturing Screenshots
- Synchronization Point
- Handling frames in Application

Frameworks

- What is Framework
- How it's important in Automation testing
- Different types of frameworks supporting by selenium
- Built in Frameworks
- User Defined Frameworks

JUNIT

- What is Junit Framework
- Why it's useful for selenium
- Configuring Junit.jar file with eclipse
- What is Annotation
- Different types of annotations in Junit
- Design basic Junit test

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- Ignore tests in Junit
- Design real time Junit tests

TestNG

- introduction to TestNG
- Advantages of TestNG
- installing TestNG in eclipse
- Difference between Junit and TestNG
- Different annotations in TestNG
- Different Assertions in TestNG
- Design basic TestNG test using all annotations
- Analyzing TestNG results in various formats like HTML, XML and Emailable.
- Prioritize the script execution in TestNG
- Design real time TestNG tests
- Execute individual TestNG tests
- Executing multiple TestNG tests as a suite through XML file

User Defined Frameworks

- What is User Defined Framework
- Different Types of Frameworks
- Factors to consider to decide framework
- Data Driven Framework
- Keyword/Modular Framework
- Hybrid Driven Framework
- Framework Folder structure
- Different folders in Hybrid Framework
- Diff Class files in Hybrid Framework
- Test Script design in Hybrid Framework
- Test script execution in Framework
- Analyzing results and reporting defects

MAVEN

- What is Maven and why Maven ?
- Installation of Maven with eclipse
- Setting up the maven project in eclipse
- What is Group ID and Artifact ID
- What is POM.xml file

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- Structure of POM.xml file
- What is dependency in POM.xml file
- How to add dependencies in POM.xml file
- How to configure build in Maven
- Introduction to Maven central Repository
- Designing Real time TestNG Tests using Maven

Selenium Grid

- Brief introduction about selenium grid 1 and grid 2
- Diff between Selenium Grid 1 vs Grid 2
- What is grid hub and node , Configuration
- RemoteWebDriver and DesiredCapabilities
- Running tests with FF, IE and Chrome browsers using grid
- Running Single, Multiple tests with Single node
- Running tests with Multiple nodes using testng xml
- Running tests Sequential and Parallel with Multiple nodes

Page Object Model

- Introduction about Page Object Model
- Why Page Object Model?
- Building pages using Page Object Model
- Running tests
- Page Factory class Building Page classes using Page Factory
- Running tests

Cucumber Framework

- What is BDD and Cucumber?
- Configuring Cucumber
- Working with Cucumber
- What is Gherkin language and how it is used in BDD
- Gherkin Keywords
- Creating a Feature
- Creating Step Definitions
- Writing Runner Class
- Cucumber options
- Generating Cucumber Reports
- Cucumber Advanced Features

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- Page Object Model in Cucumber
- Parameterzing Data Into Step Definitions
- Tags, Background and Hooks examples in cucumber
- Cucumber Extent Report
- Running Cucumber with Maven