

Automation Testing Syllabus

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Introduction to Automation Testing

- What is Automation Testing?
- Which Test Cases to Automate?
- Different Automation tools
- Automation Challenges & Mitigations

Introduction to Selenium

- What is selenium?
- History and various versions of selenium
- Advantages of using Selenium over other tools
- Selenium components

Selenium Web Driver 3.0

- What is a driver?
- Why Selenium Web Driver?
- What is a Selenium Web Driver?

Automation Setup for Selenium Web Driver

- Configuration of Selenium Jar using Eclipse
- Setup for Firebug, Fire path for Mozilla Firefox browser
- Web Driver Interface Methods

HTML

- HTML basics

Locators

- Use of locators
- Different locators available in Selenium ID
- Name Link text
- Partial Link Text
- Class Name
- Tag Name
- Xpath
- Absolute Xpath
- Relative Xpath
- Dynamic Xpath

Web-element

- Search Web Elements on web pages
- Web Element Methods

Synchronizing Test with Wait

- Implicit Wait
- Explicit Wait
- Fluent Wait With examples

Action Interface and Action class

- Introduction
- Use of Action class
- Action class methods with description
- Building a series of multiple actions
- Miscellaneous Selenium scenarios
- Capturing Screen shots
- Alert and Pop up handling
- Calendar handling
- Frames handling
- Cookies
- Why we handle Cookie in Selenium?
- Cookies methods
- Multiple Window Handling
- Java Script injection
- Locate and handle web elements of Ajax framework
- Verifying statements

Handling Web Tables

- What is Web Tables?
- Extracting values from Web Tables
- Static and Dynamic Web Tables

Excel sheet Operations

- Introduction
- Read excel sheet with .xls & .xlsx format by using Apache
- POI jars Write excel sheet .xls & .xlsx format by using Apache POI jars

TestNG & TestNG features

- How to integrate TestNG with Eclipse
- TestNG Annotations
- Use of DataProvider Annotation

- POM file Parameterization by using Data Provider
- TestNG Assertions
- TestNG listeners
- TestNG Reporting

Build Tools-Maven

- How to create a maven project in Eclipse Maven Build Cycles
- How to compile and Run tests using Maven.
- Integration of Maven with TestNG by using Advanced Selenium

Framework Designing

- What is a Framework?
- Different Types of Framework
- How to Design a framework?
- Modular Testing Framework
- Data Driven Framework using Excel
- Downloading and configuration of Apache POI
- Executing Test cases from Excel
- Keyword Framework Hybrid Framework

Properties File

- Creation of Properties File
- Properties Class
- Read/Write properties file with example

Page Object Model

- Introduction
- Advantages of POM
- How to implement POM using Page Object and Page Factory by using
- Selenium Web Driver
- Log4j
- Introduction Log4j properties
- Integration of Log4j with Eclipse
- Use of log4j in Selenium framework

Continuous Build Integration tools-Jenkins

- What is Jenkins and how to use it?
- Integration of Maven/TestNG/Jenkins/Selenium

Introduction & Architecture of Selenium-Grid Configuration of Selenium

- Selenium Grid (Hub and Node)
- Writing a Sample Script using Selenium RC

Some Practice and Sample Programming using Grid

Auto IT

- Introduction
- Download file using Auto IT in Selenium Web Driver with example
- Java Database Connectivity (JDBC)
- Introduction
- Java Integration with database
- Fetching records from database and write on .xlsx or .xls file by using Apache POI jars

Behavior driven development (BDD) framework using Cucumber

- What is BDD?
- Use of Cucumber tool to implement BDD framework
- How to convert User Story into scenario's format
- Preparing Feature files having test scenarios
- Given, When, Then, And, But annotations and usage in features class
- Writing a step definition.
- Writing Runner Class

Passing parameters in Step Functions

- Using regular expression in step implementation to parameterize
- Parameterize complete scenario using features class
- Cucumber Annotations

Data table in Cucumber and its implementation

- Pretty, Tags and Glue
- Cucumber HTML Reports
- Log4j Usage Using Assertions to report failure Running simple feature/Step scenario
- Handling multiple feature files
- Use log4j for reporting Executing project from eclipse
- Executing project from Maven Generating Junit,
- Cucumber reports Background and Pending Exception
- Implementing/deciding Tags Running all/limited tests
- Image Verification Tool

Source Code Management Tool

- Github