



Automation Testing Syllabus

Introduction to Automation Testing

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

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 using PyCharm
- 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
 - CSS



WebElement

- Search Web Elements on web pages
- Web Element Methods

Synchronizing Test with Wait

- Implicit Wait
- Explicit Wait

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
- 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
- Write excel sheet .xls & .xlsx format

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 in Selenium Web Driver



Selenium Grid

- Introduction of Selenium-Grid
- Configuration of Selenium
- Selenium Grid
- Writing a Sample Script using Selenium
- Some Practice and Sample Programming using Grid

PyAuto IT

- Introduction
- Download file using PyAuto IT in Selenium Web Driver with example

Python Database Connectivity (PDBC)

- Introduction
- Python Integration with MySQL database
- Fetching records from database and write on .xlsx or .xls file

PyTest

- What is PyTest?
- Advantages Of pytest
- Features Of pytest
- How to install PyTest
- First Basic PyTest
- Assertions in PyTest
- How PyTest Identifies the Test Files and Test Methods
- Run Multiple Tests From a Specific File and Multiple Files
- Run a subset of Entire Test with PyTest
- Run Tests in Parallel with Pytest
- Pytest Fixtures
- Pytest Parameterized Test
- Pytest Xfail / Skip Tests
- Results XML
- Pytest Framework Testing an API

Robot-Framework

- Introduction of Robot Framework
- Robot Framework Installation
- Create New Robot Framework Automation Project
- Key Sections of Robot Framework File
- Create First TestCase in Robot Framework



- Convert Manual Test into Automation Script
- Overview of Built in and Selenium Library
- Basics of Locating WebPage Elements
- How to Create User Defined Keywords
- Move User Defined Keywords to Resource File
- Robot Framework Test Setup and Teardown
- Page Object Model(POM) in Robot Framework
- Implement POM in Robot Framework
- Scalar Variable in Robot Framework
- List Variable in Robot Framework
- Dictionary Variable in Robot Framework
- Variable Scope in Robot Framework
- Arguments in Robot Framework
- Pass Variables from Command Line
- Refactor Selenium WebElement Locators
- How to Find WebElement by ID or Name
- How to Install Selenium and Chromedriver
- Click WebElement by LinkText or PartialLinkText
- How to Handle Browser Windows
- How to handle Tabbed Browser Windows
- Working with WebElements
- How to handle Radio Buttons
- Working with Checkboxes
- How to handle Frames in Robot Framework
- How to handle List in Robot Framework
- How to handle Alerts in Robot Framework
- How to handle Mouse Actions
- How to Set Selenium Timeout and Speed
- Implicit Wait vs Explicit Wait
- How to use Implicit Wait
- How to use Explicit Wait
- How to use IF ELSE in Robot Framework
- How to use FOR Loop in Robot Framework
- How to do Data Driven Testing
- How to do Data Driven Testing using CSV File
- How to do Data Driven Testing using Excel File

Log4j

- Introduction Log4j properties



- Use of log4j in Selenium framework

Framework Designing

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

Continuous Build Integration tools-Jenkins

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

Image Verification Tool

- Sikuli

Source Code Management Tool

- Github

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