

Selenium with Python

Duration: 40 Hours

Prerequisites

- There are no Pre-requisites for this course.
- A Basic Knowledge of Programming Language is Advantageous.

Python Programming

1. An Introduction to Python

- Why Python, its Unique Feature and where to use it?
- Python environment Setup
- Discuss about IDE's like IDLE, Pycharm and Enthought Canopy
- Start programming on interactive shell.
- Python Identifiers, Keywords
- Discussion about installed modules and packages
- Access Command line arguments within programs

2. Conditional Statement , Loops and File Handling

- Python Data Types and Variable
- Condition and Loops in Python
- Decorators
- Python Modules & Packages
- Python Files and Directories manipulations
- Use various files and directory functions for OS operations

3. Python Core Objects and Functions

- Built in modules (Library Functions)
- Numeric and Math's Module
- String/List/Dictionaries/Tuple
- Complex Data structures in Python
- Arbitrary data types and their Data Structure
- Python built in function
- Python user defined functions
- Python packages and functions
- The anonymous Functions - Lambda Functions

4. Object Oriented Python

- OOPs Concepts
- Object , Classes and Destroying Objects
- Accessing attributes,Built-In Class Attributes
- Inheritance and Polymorphism
- Overriding Methods,Data Hiding
- Overloading Operators

5. Exception Handling in Python

- Exceptions Handling
- Handling various exceptions using try....except...else
- Try-finally clause
- Argument of an Exception and create self exception class
- Python Standard Exceptions
- Raising an exceptions, User-Defined Exceptions

6. Debugging Python Programs

- Debug Python programs using pdb debugger
- Assert for debugging
- Testing with Python using unittest
- Iterable and generator in Python
- Yielding from the generators
- Standard project setup in Python

7. Regular Expression

- Regular Expressions
- What are regular expressions?
- The match and search Function
- Compile and matching
- Matching vs searching
- Search and Replace feature using RE
- Extended Regular Expressions
- Wildcard characters and work with them

Basic Selenium

1. Introduction to Selenium

- Introduction to Automation Testing
- Why Automation Testing
- Introduction to Selenium components
- History and various versions of selenium
- What is Selenium 3.0
- Advantages of using Selenium over other tools.

2. Installation and setting up environment

- Installation of Python
- Automation Setup for Selenium Web Driver
- Install and Configure PyDev in Eclipse

3. Selenium-IDE

- Introduction
- IDE Features
- Building & Running Test Cases
- Building and Running Test Suites

4. Selenium Web Driver 2.0

- Why Selenium Web Driver
- What is a Driver
- Download & configuring Web driver
- Architecture of selenium web driver
- Drivers for Firefox, IE, chrome

5. Identification of Locators

- Tools to identify elements/objects
- Different methods of finding element
 - By ID, By name, class
 - By Xpath, By Tag name
 - By Link text
 - By CSS
 - Using Effective X-path

6. Selenium Commands

- Various types of operation that can be performed on any elements and how to use them.
- Browser Commands, Navigation Commands
- Working with different browser
- Handling Checkbox, RadioButton
- Dropdown and Select Operations
- Capturing Screen shots
- Handling Keyboard Event and Mouse Event
- Multiple Window Handling
- Alert & Pop Up Handling.

7. Wait Commands in Selenium

- Implicit Wait
- Explicit Waits,Expected Conditions

Advanced Selenium

1. Framework Designing

- What is Framework
- Different Types of Framework.
- How to Design a framework?
- Data Driven Framework using Excel
 - Reading and writing data from Excel
 - Executing Testcases from Excel

2. Unit Test Framework PyUnit

- Basic of pyunit
- pyunit Installation
- pyunit annotation
- Test Case creation
- Test Case execution
- Assertions/Reporting Errors
- Suite execution
- pyunit Reports
- Using pyunit in Selenium

3. PyTest Framework

- Introduction to PyTest framework
- Installing PyTest
- PyTest Fixtures

- Parametrized Test Functions
- Running multiple tests using PyTest
- Generating Test report

4. POM Framework

- Advantages of POM
- How to implement
- Page Object Classes
- Page Element and Page Locators

5. Python ROBOT Framework - RIDE

- Introduction to Robot Framework
- How to setup and environment creation for Robot Framework
- How to create first Selenium Test with RIDE
- Writing and Executing Testcases
- RobotFramework-Selenium Library

6. Continuous Build Integration tools-Jenkins

- What is Jenkins and how to use it
- Installation and configuration of Jenkins

❖ Hands-on Experience on Industry Project, Resume Formation and Interview Tips