Selenium with Python

(Python-Selenium-Pytest-Jenkins)

Duration: 68 Hours

Python

Python Basics:

1. Introduction to Python
2. Features and Installation of Python
3. Installation of Pycharm
4. Literals (Numbers and Strings)
5. Data Types variables and Identifiers
6. Input and output Statements
7. Keywords- Python programming
8. Operators part I (Arithmetic, Rational, Unary, Assignment)
9. Operators part II (Bitwise, Logical, Membership, Identity)
10. Basic String manipulation
11. Introduction to Lists and Creating List
12. Accessing and Updating Elements of a List
13. List methods
14. Implementation of lists (Create, Access, Update, Delete, Operations, Slicing)
15. Built in String Function
16. Python Tuples
17. Basic Operations on Tuples
18. Introduction to Functions

19. Global and Local Variable
20. Types of Arguments in Functions
21. Implementation of Arguments in Functions
22. How to Create Dictionaries at run time and add data into it
23. Built-in functions
24. User defined functions
25. Adding arguments to a function
26. Arguments (Default, Keyword, Infinite)
27. Return values from function
28. If, else if, else statements
29. For/while loop
30. Importing libraries into a script
31. Understand Object Oriented Principles of Python
32. OOPS Principles: Classes and objects in Python
33. What is Constructor and its role in Object oriented programming
34. Method Overloading
35. Constructor Overloading
36. Inheritance concepts with examples in Python
37. Multiple Inheritance
38. Multilevel Inheritance
39. Super function
40. Abstract methods,
41. Abstract Classes
42. Method Overriding

Python Exception Handling

1. Exception Handling Mechanism in Python
2. How to raise exception in Python
3. Try Catch Mechanism using Python
4. Usage of Finally Keyword with exceptions
5. Creating Custom Exceptions

Pytest (for Unit Testing and TDD)

1. Introduction of Pytest
2. Installation of Pytest
3. Understanding Testcase files
4. Understanding Testcase functions
5. Optimizing test code using Pytest fixtures
6. Data-driven testing using Pytest
7. Understanding sharing fixtures using conftest.py
8. Understanding Testcase grouping
9. Retunring data from fixtures
10. Iterating over data represented in tuples and dictionary

Selenium WebDriver

Selenium Overview

1. What is Selenium
2. History
3. Selenium Supporting Environments
4. Selenium Suite of Tools
5. Advantages

6. Disadvantages
7. Selenium Vs UFT
8. Python Programs using Selenium

Installation & setup for Selenium with Python

1. Why Python Testing and its Importance
2. Glance on Selenium Features
3. Complete Installation Guide for Python and Selenium Learning
4. What is PIP Client? -How to download Python Packages
5. Selenium Python package Setup with different browsers execution

Locator & WebDriver API

1. How to invoke Chrome browser
2. Basic WebDriver methods to get Title, url and close the session
3. How to run tests in Firefox and IE Browser
4. Different Types of Locators in WebDriver
5. Inspecting Source to identify attributes of element
6. Introduction to CSS Selector and name locators with example
7. Finding Elements with Xpath and Css Using Chropath Plugin
8. Extracting Text from webPage with Validation Assertions
9. Identifying Links with Text and building Smart CSS around it
10. Identifying Xpath and CSS Using Parent child traverse mechanism
11. Web applications to Practice Selenium Automation
12. Identifying Static dropdowns using Select class of selenium
13. Example in identifying Labels with the Css Parent child Tag mechanism
14. Introducing Validation assertions and running tests in different browsers

15. Handling AutoSuggestive Dynamic dropdowns using Selenium Webdriver

16. Len method and Sleep method

17. Handling Checkbox dynamically using Selenium Python programming

18. Understand radio button Automation methods with examples

19. Handling Java / JavaScript Alert popups using Selenium

Framework Development:

End-end Hybrid framework development using realtime application with the integration of Python, Selenium, Pytest, Git and Jenkins