



Python Training Module followed by A4Q Selenium Tester Foundation

Total timing: 14 lessons x 3 hours

Module 1: PYTHON

Chapter 1 - Intro:

1. What is Python?
2. Why Python?
3. Install and Setup
4. Write your first program

Chapter 2 - Logical Structures

1. Problem Solving?
2. Algorithms
3. Pseudo-code
4. Flowcharts

Chapter 3 - Variables:

1. What is a variable and why we need them?
2. Variable types
3. Operators
4. Comment lines in Python

Chapter 4 - Control Flows:

1. if/elif/else statements
2. while loop
3. for loop

Chapter 5 - Functions:

1. What is a function and how we define it?
2. Function comments - docstring
3. Arguments

Chapter 6 - Variables scope:

1. Why we need a scope?
2. Variable scope types



Chapter 7- Functions - Default / Variable arguments:

1. Why we need a default argument for a function?
2. When to use an arbitrary number of arguments?

Chapter 8 - Object Oriented Programming (OOP) - General Information

1. OOP concept
2. What is an Object

Chapter 9- OOP - Methods and Constructors:

1. Methods
2. The difference between Methods and Functions
3. Constructor types and usage

Chapter 10 - OOP Principles

1. Inheritance
2. Polymorphism
3. Abstraction
4. Encapsulation
 - Access modifiers

Chapter 11 - Debugging:

1. Types of errors
2. How to detect errors in code.

Module 2: SELENIUM

Chapter 1 - Test Automation Basics

- 1.1 Test Automation Overview
- 1.2 Manual vs. Automated Tests
- 1.3 Success Factors
- 1.4 Risks and Benefits of Selenium WebDriver
- 1.5 Selenium WebDriver in Test Automation Architecture
- 1.6 Purpose for Metrics Collection in Automation
- 1.7 The Selenium Toolset

Chapter 2 - Internet Technologies for Test Automation of Web Applications

2.1 Understanding HTML and XML

- 2.1.1 Understanding HTML
- 2.1.2 Understanding XML

2.2 XPath and Searching HTML Documents

2.3 CSS Locators



Chapter 3 - Using Selenium WebDriver

3.1 Logging and Reporting Mechanisms

3.2 Navigate to Different URLs

3.2.1 Starting a test automation session

3.2.2 Navigating and refreshing pages

3.2.3 Closing the browser

3.3 Change the Window Context

3.4 Capture Screenshots of Web Pages

3.5 Locate GUI Elements

3.5.1 Introduction

3.5.2 HTML Methods

3.5.3 XPath Methods

3.5.4 CSS Selector Methods

3.5.5 Locating Via Expected Conditions

3.6 Get the state of GUI elements

3.7 Interact with UI elements using WebDriver commands

3.7.1 Introduction

3.7.2 Manipulating Text Fields

3.7.3 Clicking on WebElements

3.7.4 Manipulating Checkboxes

3.7.5 Manipulating Dropdown Controls

3.7.6 Working with Modal Dialogs

3.8 Interact with user prompts in web browsers using WebDriver commands

Chapter 4 - Preparing Maintainable Test Scripts

4.1 Maintainability of Test Scripts

4.2 Wait Mechanisms

4.3 Page Objects

4.4 Keyword Driven Testing