

Selenium with Python Training Course Content

Section 1: Introduction

- What's python?
- Why do people use python?
- Some quotable quotes
- A python history lesson
- Advocacy news
- What's python good for?
- What's python not good for?
- The compulsory features list
- Python portability
- On apples and oranges
- Summary: why python?

Section 2: Using the Interpreter and Text Editor

- Introduction to Sublime & Pycharm
- Config Pycharm for Python Project
- How Python Runs Programs
- How You Run Programs
- Configuration Details
- Module Files: A First Look
- The Idle Interface
- Other Python Ides
- Time To Start Coding
- Lab Session 1

Section 3: Types and Operators

- A First Pass
- The 'Big Picture'
- Numbers
- Dynamic Typing Interlude
- Strings
- Lists
- Dictionaries
- Tuples
- General Object Properties
- Mutable vs Immutable
- Summary: Python's Type Hierarchies
- Built-In Type Gotchas
- Lab Session 2

Section 4: Basic Statements

- Introduction to Reserved Keywords
- General Syntax Concepts
- Expressions
- Print
- If Selections
- Python Syntax Rules
- Documentation Sources Interlude
- Truth Tests
- While Loops
- Break, Continue, Pass, And The Loop Else
- For Loops
- Comprehensions And Iterations
- Loop Coding Techniques
- Comprehensive Loop Examples
- Basic Coding Gotchas
- Preview: Program Unit Statements
- Lab Session 3

Section 5: Functions

- Function Basics
- Scope Rules In Functions
- More On “Global” (And “Nonlocal”)
- More On “Return”
- More On Argument Passing
- Special Argument Matching Modes
- Odds And Ends
- Generator Expressions And Functions
- Function Design Concepts
- Functions Are Objects: Indirect Calls
- Function Gotchas
- Optional Case Study: Set Functions
- Lab Session 4

Section 6: Modules

- Module Basics
- Module Files Are A Namespace
- Name Qualification
- Import Variants
- Reloading Modules
- Package Imports
- Odds And Ends
- Module Design Concepts
- Modules Are Objects: Metaprograms
- Module Gotchas
- Optional Case Study: A Shared Stack Module
- Lab Session 5

Section 7: Classes

- Oop: The Big Picture
- Class Basics
- A More Realistic Example
- Using The Class Statement
- Using Class Methods

- Customization Via Inheritance
- Specializing Inherited Methods
- Operator Overloading In Classes
- Namespace Rules: The Whole Story
- Oop Examples: Inheritance And Composition
- Classes And Methods Are Objects
- Odds And Ends
- New Style Classes
- Class Gotchas
- Optional Case Study: A Set Class
- Summary: Oop In Python
- Lab Session 6

Section 8: Exceptions

- Exception Basics
- First Examples
- Exception Idioms
- Exception Catching Modes
- Class Exceptions
- Exception Gotchas
- Lab Session 7

Section 9: Introduction to Selenium

- What is Selenium?
- Advantages of Selenium
- Dis-Advantages of Selenium
- History of Selenium

Section 10: Selenium Web Driver

- Selenium Internal Architecture
- Downloading web driver Jars configuring in eclipse
- Drivers for Firefox, Edge, Chrome, Opera, Safari and HTML Unit Driver.
- What is the difference between RC and WD?
- Installing and Configuring Eclipse for Web Driver

Section 11: Locators in Selenium

- ID
- Name
- Class Name
- Link Text
- CSS
- X-Path

Section 12: Working with WebElement

- Edit box
- Link
- Button
- Checkbox
- Radio Button
- Drop Down Box
- Select value
- Display all values
- Select values step by step
- Capture screenshots
- Synchronization Commands In Web Drive
- Implicit wait
- Explicit wait
- Web Driver wait
- File uploads and File downloads
- Handling alerts
- Handling confirmation messages
- Keyboard actions
- Mouse actions
- Handling popups
- HandlingWebTables

Section 13: Advanced WebElement

- Calendar Selection
- Taking the Screenshot
- Scroll Element to View

- Working with iFrame
- Working with Windows

Section 14: Logging in Selenium

- Introduction to Logging Infrastructure
- Changing the format of Log
- Logger – Console
- Logger – Configuration File
- Writing the customize logger utility

Section 15: Unit Test Infrastructure

- Unittest Introduction
- Writing First Test Case
- How To Implement Class Level SetUp And TearDown Methods
- How To Assert A Test Method
- How To Export PYTHONPATH
- How To Run Code From Terminal
- How To Create A Test Suite

Section 16: Pytest – Advance Testing Framework

- Pytest Naming Conventions
- How To Work With PyTest Fixtures
- Pytest Fixture Update
- Multiple Ways To Run Test Cases
- Important Note For Next Lecture
- Conftest - Common Fixtures To Multiple Modules
- How To Maintain Run Order Of Tests
- Running Tests Based On Command Line Arguments
- Structure Tests In A Test Class
- How To Return A Value From Fixtures
- Install PyTest HTML Plugin
- How To Generate HTML Test Report

Section 17: Page Object Model Design Pattern

- Why Page Object Model & When it will be effective

- POM Design Rules
- POM Implementation of Rules
- Implementation of testcases using POM framework

Section 18: Data Driven Framework

- Interacting with Database
- Interacting with JSON
- Interacting with CSV
- Interacting with Excel

Section 19: Running Complete Test Suite

- How To Manage Navigation In Framework
- Refactor Login Tests
- How To Run A Test Suite
- Running Test Suite On Chrome

Section 20: Git and Git Hub – Version Control System

- Git And GitHub Introduction
- Git Installation On Windows
- Git Installation On Mac
- Create Local Git Repository - Staging And Commit
- File Checkin - GitHub Remote Repository
- Advantages And Importance Of Git Branches
- File Checkin and Resolve Merge Conflicts - Real Time Example
- Course Code Files On GitHub
- GitHub Project Check-in And Git Clone

Section 21: Continuous Integration with Jenkins

- Jenkins Features And Advantages
- Jenkins Setup And Installation - Generic WAR File
- Jenkins Setup And Installation
- Securing Jenkins
- Jenkins Plugins Management
- Building A Freestyle Project Using Jenkins And GitHub