**Python with Selenium Training Course outline**

**Training Duration Total -5days**

**Python-** 1day

**Selenium web driver with Python**- 4days

**Training Time**- 9:30am to 5:30pm

**Instructor Name**- Kaushik Mukherjee

**Day- 1**

## 1) Methods - Working with Reusable Code

* Understanding Methods
* Working with Return Values
* Working with Positional / Optional Parameters
* Understanding Variable Scope
* More Built-In Functions

## 2) Classes - Object Oriented Programming

* Understanding Objects / Classes
* Create Your Own Object
* Create Your Own Methods
* Inheritance
* Method Overriding

## 3) Exception Handling

* Exception Handling Demo
* Finally, And Else Block

## 4) Modules

* Built-in Modules
* Create Your Own Modules

## 5) Working With Files and Excel

* How To Write Data To A File
* How To Read A File
* File Handling Using "With" And "As" Keywords
* Using OpenPyxl to read and write to Excel file

**Day- 2**

## 6) Selenium WebDriver -> Setup and Installation

* Selenium WebDriver Installation - Windows
* Selenium 3.x Update

## 7) Selenium WebDriver -> Running Tests on Various Browsers

* Selenium WebDriver 3.x Gecko Driver Setup - Windows
* Running Tests On Firefox
* Running Tests On Google Chrome - Windows
* Requirements To Run Tests On IE
* Running Tests On Internet Explorer

## 8) Selenium WebDriver -> Finding Elements

* Understanding Elements And DOM
* Find Element By Id And Name
* Understanding Dynamic Ids And Selenium Exception
* Find Element By XPath And CSS Selectors
* Find Element By Link Text
* Find Element By Class Name And Tag Name
* Understanding "By" Class
* How To Find List Of Elements

## 9) CSS Selectors - Advanced Locators

* Using Ids With CSS Selectors To Find Elements
* How To Use Multiple CSS Classes To Find Elements
* Using Wildcards With CSS Selectors
* How To Find Child Nodes Using CSS Selectors
* CSS Cheat Sheet

## 10) Xpath - Advanced Locators

* Difference Between Absolute And Relative Xpath
* How to Build An Effective Xpath
* Using Text To Build An Effective Xpath
* Build Xpath Using Contains Keyword
* Build Xpath Using Starts-With Keyword
* How To Find Parent and Sibling Nodes
* Practice Exercise With Solution + \*\*\* Interview Question \*\*\*
* Xpath Cheat Sheet

## Day-3

## 11) Selenium WebDriver -> Working With Web Elements

* Browser Interactions Introduction
* Browser Interaction \*\*\* Practical Implementation \*\*\*
* How To Click And Type On A Web Element
* How To Find The State Of A Web Element (Disabled And Enabled Elements)?
* Radio Buttons And Checkboxes
* Working With Elements List
* Understanding Dropdown Elements
* Working With A Dropdown Element \*\*\* Practical Example \*\*\*
* How To Work With Hidden Elements
* Working With Hidden Elements - Practical Example

## 12) Selenium WebDriver -> Useful Methods And Properties

* How To Get The Text On Element
* How To Get Value Of Element Attribute
* Generic Method To Find Elements
* How To Check If Element Is Present
* How To Build Dynamic XPath

## 13) Selenium WebDriver -> Wait Types

* Implicit Wait Vs Explicit Wait
* Implicit Wait \*\*\* Practical Example \*\*\*
* Explicit Wait \*\*\* Practical Example \*\*\*
* Generic Method To Work With Explicit Wait

## 14) Selenium WebDriver -> Advanced

* Calendar Selection Introduction
* Calendar Selection \*\*\* Practical Example \*\*\*
* Calendar Selection \*\*\* Real Time Example \*\*\*
* AutoComplete Introduction
* AutoComplete \*\*\* Practical Example \*\*\*
* How To Take Screenshots
* Generic Method To Take Screenshots
* Executing JavaScript Commands
* How To Find Size Of The Window
* How To Scroll Element Into View

## 15) Selenium WebDriver -> Switch Window And IFrames

* How To Switch Window Focus
* Switch To Window \*\*\* Practical Example \*\*\*
* How To Work With IFrames
* Switch To IFrame \*\*\* Practical Example \*\*\*
* Handling JavaScript Popup

**Day- 4**

## 16) Selenium WebDriver -> Working With Actions Class

* Mouse Hover Actions
* How To Drag And Drop Element On A Web Page
* Working With Sliders Actions

# Logging with Python

## 17) Logging Infrastructure

* Introduction To Logging Infrastructure
* Changing The Format Of Logs
* Logger - Console Example
* Logger - Configuration File Example
* How To Write A Generic Custom Logger Utility

# Unit Test Framework

## 18) Unit test Infrastructure

* Unit test Introduction
* Writing First Test Case
* How To Implement Class Level Setup And Teardown Methods
* How To Assert A Test Method?
* How To Run Code From Terminal?
* How To Create A Test Suite?

# PyTest Framework

## 19) PyTest -> Advanced Testing Framework

* PyTest Installation And First Script
* How To Work With PyTest Fixtures
* 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

**Day- 5**

**Automation Framework – Page Object Model**20) Automation Framework - Part 1  
• Automation Framework Introduction  
• Understanding Framework Structure  
• Test Scenario Without Framework  
• Important Note For Next Lectures - Windows  
• Convert Test Case To Page Object Model Framework  
• Refactor Your Page Object Class - Part 1  
• Build Your Custom Selenium Driver Class  
• Refactor Your Page Object Class - Part 2

**21) Automation Framework - Part 2**  
• Add Logging To Automation Framework  
• How To Verify Test Case Result  
• Complete Login Page Test Cases  
• Create Conftest To Implement Common Setup Methods  
• Refactor Conftest \*\*\* Make Framework More Readable \*\*\*

**22) Automation Framework - Part 3**  
• How To Assert Without Stopping Test Execution  
• How To Assert Without Stopping Test Execution

\*\*\* Practical Example \*\*\* Part - 1  
• How To Assert Without Stopping Test Execution

\*\*\* Practical Example \*\*\* Part - 2  
• Implement Screenshots In A Framework  
• Taking Screenshots On Test Failure  
• BasePage And Util Concept Introduction  
• Inheriting BasePage Class

**23) Automation Framework -> Practice Exercise**  
• CustomDriver -> Additional Methods Before Exercise  
• Practice Exercise Question  
• Find Element Locators -> Solution Part 1  
• Create Register Courses Page Class -> Solution Part 2  
• Create Register Courses Test Class -> Solution Part 3

**24) Data Driven Testing**  
• Setup And Configuration  
• Data Driven Testing \*\*\* Practical Implementation \*\*\*  
• Utility To Read CSV Data  
• Multiple Data Sets Test Case \*\*\* Practical Example \*\*\*

**25) Running Complete Test Suite**  
• How To Manage Navigation In Framework  
• Refactor Login Tests  
• How To Run A Test Suite  
• Running Test Suite On Chrome

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