SELENIUM WITH PYTHON

Module-1: Overview on Automation & Selenium

- What is Software Testing? Types of Software Testing?
- Challenges in Manual testing
- How Automation Overcome challenges in Manual testing?
- How Automation tools work?
- Importance of Programming in Automation
- What is Selenium? What are the components of Selenium?
- What are the Advantages & Disadvantages of Selenium WebDriver?

Module-2: Python Essentials for Selenium

- Introduction to Python
- Installing Python3
- Different ways to Run Python code
- Comments & Keywords
- Variables & Datatype
- Re-declaring variables
- Delete variables
- Concatenation
- Formatting output
- How to take input from user & Type conversion
- Formatting output
- Control statements

- Numbers
- Strings
- Collections - List, Tuple, Dictionary & Set
- Functions
- Global & Local Variables
- Positional & Keyword arguments to the function

Module-3: Python OOPS Concepts

- Classes and Objects
- Methods
- Constructors
- Inheritance
- Types of Inheritance
- Overriding
- Polymorphism - Overloading
- Python Modules
- Packages
- Exception handling
- Working with Text Files
- Working with Database

Module-4: Selenium WebDriver

- Introduction to WebDriver and Architecture
- Environment Setup & WebDriver Configuration
- How to Create Automated test case in WebDriver?
- Execute test case on multiple browsers.
- Basic Locators – Name, ID, LinkText, PartialLinkText
- Advanced Locators – CSS, XPath
- Working with Selectors Hub
- WebDriver Commands
  - Get Commands
  - Conditional Commands
  - Navigation Commands
  - Waits – Implicit and Explicit Waits
  - Browser Commands
- Working with Web Elements
  - Input box, Checkbox & Radio buttons
  - Dropdowns – Select Class, JQuery & Boostrap Drop Downs

- Links & Broken Links
- Alerts/Popups
- Iframes
- Working with Browser Windows
- How to Handle Date Picker
- How to Handle Web Tables
- How to Handle Mouse Actions
- How to Handle Keyboard Actions
- How to Handle Upload & Download Files
- How to Scroll Web page
- How to Capture Screenshots
- How to work with Cookies
- Headless Browser Testing
- Data Driven Testing using MS-Excel

Module-5: PyTest

- Introduction to PyTest
- PyTest Installation
- PyTest Naming Conventions
- PyTest Test case
- PyTest Fixtures
- How to use common Fixtures in Multiple Modules
- Run All the Modules in Package
- Run Specific Module from a Package
- Run Specific Test Method from a Module
- Grouping Tests
- Skipping Tests
- Ordering Tests
- Parallel Testing using pyTest xdist-plugin
- Parameterization
- Command Line Arguments
- Structure Tests in a Test Class
- Return A value from Fixture
- pyTest HTML Report generation

Module-6: Logs & Page Object Model

- Generating logs
- Page Object Model Pattern – Page Factory

Module-7: Hybrid Framework with POM – Live Project (E-Commerce Domain)

- Understanding what is is Automation Framework & Types of Frameworks
- Phases in Designing Framework
- How To choose Test cases for automation
- Step by Step Implementation of Hybrid Driven Framework
- Creating Project and install required plugins
- Creating page objects and Object repository
- Creating utilities
- Setting up configuration files
- Creating automation test cases
- Creating data driven test cases
- Creating database test cases
- Generating PyTest HTML reports
- Generating logs
- Execute test scripts
- Emailing test reports
- Execute test scripts through Command Line
- Execute test scripts using bat file

Module-8: CI – Continuous Integration (Git, Github & Jenkins)

- What is Continuous Integration?
- Workflow of Git & Github
- Git commands
    - init
    - clone
    - add
    - commit
    - push
    - pull
    - branch
    - merge
    - status
- Jenkins Overview
- Maven integration with Jenkins
- Run selenium test scripts through Jenkins

Module-9 : Interview Preparation

- Interview Questions & Answers
- Resume Preparation & Mock Interviews