

# Certified SDET Professional – Python

## Introduction

- History
- Features
- Setting up path
- Working with Python
- Basic Syntax
- Variable and Data Types
- Operator

## Conditional Statements

- If
- If- else
- Nested if-else

## Looping

- For
- While
- Nested loops

## Control Statements

- Break
- Continue
- Pass

## String Manipulation (Key for Interview)

- Accessing Strings
- Basic Operations
- String slices

- Function and Methods

## Lists and Sets

- Introduction
- Accessing list and sets
- Operations
- Working with lists and sets
- Function and Methods

## Tuple

- Introduction
- Accessing Tuples
- Operations
- Working
- Functions and Methods

## Dictionaries

- Introduction Accessing values in dictionaries
- Working with dictionaries
- Properties
- Functions

## Functions

- Defining a function
- Calling a function
- Types of functions
- Function Arguments
- Anonymous functions
- Global and local variables

## Modules

- Importing module
- Math module
- Random module
- Packages
- Composition

## Input-Output

- Printing on screen
- Reading data from keyboard
- Opening and closing file
- Reading and writing files
- Functions

## OOPs Concept Class and Object

- Attributes
- Inheritance
- Overloading
- Overriding
- Data hiding

## Exception Handling

- Exception
- Exception Handling
- Except clause
- Try ? finally clause
- User Defined Exceptions

## Install – Pycharm / pydev

- Install python
- Install selenium bindings

- Install pydev with eclipse
- Console on pydev
- Install python
- Install selenium bindings
- Install pydev with eclipse
- Console on pydev

## Browser Commands

- Open browser in selenium python
- Close and quit browsers
- Open webpage in selenium python
- Browser size in selenium python
- Webpage properties
- Navigation commands in selenium python

## Developer tools in firefox and chrome | selenium

- Developer tool in chrome
- Developer tool in firefox

## Elements

- Web element in python
- The priority of locators in selenium
- Find element by id
- Find element by name.
- Find element by tag name
- Find element by linked Text/Partial Linked text.
- Find element by classname.
- Find element by xpath.
- Find element by css selector.

- Find elements
- Find element and find elements.
- Excellent & reliable selenium python locator

## Waits

- Implicit wait
- Explicit wait

## WebElement Commands

- Web element operations in selenium python
- TextBox
- ListBox
- Links
- Check Box
- Radio Button
- HTML Tables
- Calendars

## Dropdowns

- Dropdowns in python selenium | select
- Dropdowns in python selenium | list

## Popups and Alerts

- Iframes
- Handling multiple windows
- Handling web tables
- Screenshots
- Mouse and keyboard Actions
- Exceptions
- Handling Files

- Java Script Executor

## Logging

- Logging with python selenium
- Logging in python
- Configuring logging
- Logging with selenium python
- Logging to console with python
- Print vs. Logging

## Excel

- Excel spreadsheets with python
- Openpyxl module with python selenium
- Read excel using openpyxl with python selenium
- Get all values of a specific column
- Write excel file using openpyxl in python selenium

## Read & write csv file

- Csv files in python
- Csv with python selenium
- Reading a csv file with header
- Read the urls from the csv file
- Writing a csv file in python selenium
- Writing to a file with dictwriter in python selenium
- Read & write csv files with custom del

## Unittest

- What is python unittest framework
- Things to remember while writing unit tests
- Tests in unittest python

- Setup, Teardown
- Setupclass, Teardownclass
- Setupmodule & teardownmodule
- Skipping tests and expected failures

## Assertions

- Assertions in unittest python with selenium

## Load Tests and Suits

- Loading tests to suite and running tests in python selenium
- Create test suite

## PyTest – TDD

- What is python Pytest framework
- Tests in Pytest python.
- Setup.
- Teardown.
- Skipping tests and expected failures

## Designing framework with Page Object Model

- What is Automation Framework?
- Why do we need Automation Framework?
- Types of Automation Frameworks
- Linear Scripting Framework
- Modular Testing Framework
- Data Driven Testing Framework
- Keyword Driven Testing Framework
- Hybrid Testing Framework
- Behaviour Driven Development Framework
- How to design Automation Framework

- Architecture of Automation Framework

## PyBehave (Similar to Cucumber)

- What is PyBehave framework
- Tests in Behave python
- What is Feature
- What is Step definition
- How to setup runner class

## Allure Reporting

- Configuring Allure Report
- Interview Questions

## GitHub/BitBucket

- Overview of GIT
- GIT Installation
- Create GIT Account
- GIT Lifecycle
- GIT Integration with Eclipse
- GIT Create
- GIT Clone
- GIT Commit
- GIT Push
- GIT Update
- GIT Delete
- GIT Stash

## Jenkins

- What is Jenkins?
- How to install Jenkins?

- Create your first job in Jenkins
- Create Pipeline using Jenkins
- How to integrate Smoke, System and Regression test in CI/CD pipeline?
- Integrating your project with Jenkins.

## Cucumber BDD framework Basics

- **What is BDD(behavior Driven Development)?**
- **What tools are required to implement BDD?**
- **Introduction to Cucumber**
- **How to download Cucumber?**
- **Install Cucumber Eclipse Plugin**
- **Configure Eclipse with Cucumber**
- **What are Feature Files?**
- **How to create Feature File?**
- **How to execute Feature Files?**
- **What is Gherkinization?**
- **What is Step Definition?**
- **How to generate Glue code/Step Definitions?**
- **Data Driven Testing in Cucumber**
- **What are Cucumber Tags?**
- **Background in Cucumber**
- **Data Tables in Cucumber**

## Rest API

- **Introduction to API Testing**
- **Why is API testing important?**
- **What are Web Services?**

- **Understanding the REST API architecture**
- **Understanding the GET, POST, PUT, and DELETE requests**