

Python Advance Topics – Course Content

- What is Encapsulation
- What is Abstraction
- What is Polymorphism
- Class and Object in Python
- Constructor in Python
- Instance Variable in Python
- Class Variable or Static Variable in Python
- Namespace in Python
- Instance Method in Python Accessor or Getter Method and Mutator or Setter Method in Python
- Class Method in Python
- Static Method in Python
- Passing Member of one Class to another Class in Python
- Nested Class in Python
- Inheritance in Python
- Why do we need Inheritance in Python
- Single Inheritance in Python
- Constructor in Inheritance in Python
- Constructor Overriding in Python
- Constructor with Super Method or Call Parent Class Constructor in Child Class in Python
- Multilevel Inheritance in Python
- Hierarchical Inheritance in Python
- Multiple Inheritance and Method Resolution Order in Python
- Polymorphism in Python
- Duck Typing in Python
- Strong Typing in Python
- Method Overloading in Python
- Method Overriding and Method with super in Python
- Operator Overloading in Python
- Module & Package in Python
- Abstract Class Abstract Method and Concrete Method in Python
- Interface in Python
- Difference between Abstract Class and Interface in Python
- time Module in Python
- datetime, date, time, timedelta Class in Python
- Multitasking in Python
- Thread and Multithreading in Python
- Main Thread in Python
- Creating a Thread without using a Class in Python
- Set and Get Thread Name in Python
- Creating a Thread by creating Child Class to Thread Class in Python
- Thread Child Class with Constructor in Python
- Creating a Thread without Creating Child Class to Thread Class in Python

- Single Tasking using a Thread in Python
- Multitasking using Multiple Thread in Python
- Thread Race Condition in Python
- Thread Synchronization Lock in Python
- Thread Synchronization RLock in Python
- Thread Synchronization Semaphore and BoundedSemaphore in Python
- Thread Communication Event in Python
- Thread Communication Condition in Python
- Thread Communication Queue in Python
- Daemon Thread in Python
- What is File and File Handling in Python
- Text Mode and Binary Mode in Python
- Opening , Closing a File in Python
- Text File Modes and Binary File Modes in Python
- File Object Variables in Python
- Reading , Writing Data to File using write Method in Python
- tell and seek Method in Python
- with Statement in Python
- How to Download and Install MySQL and Python Connector
- How to Create Check and Close Database Connection in Python
- How to Create and Show Database in Python
- How to make Connection to Database in Python
- How to Create and Show Database Tables in Python
- How to Insert Data in Table in Python
- How to Delete Data from Table in Python
- How to Update Data in Table in Python
- How to Fetch Data from Table using fetchone Method in Python
- How to fetch Data from Table using fetchall Method in Python
- How to Fetch Data from Table using fetchmany Method
- How to Fetch Data from Table with WHERE Clause in Python
- Parameterized Query in Python
- How to Insert Data into Table Parameterized Query Tuple in Python
- Insert Data into Table using executemany Parameterized Query Tuple in Python
- Input from user into Table Parameterized Query Tuple in Python
- How to Insert Data into Table Parameterized Query Dictionary in Python
- Insert Data into Table using executemany Parameterized Query Dictionary in Python
- How to Delete Data from Table Parameterized Query in Python
- How to Update Data in Table Parameterized Query in Python
- Retrieve Single Row with WHERE Clause Parameterized Query Tuple in Python
- Retrieve Multiple Row with WHERE Clause Parameterized Query Tuple in Python
- Retrieve Single Row with WHERE Clause Parameterized Query Dictionary in Python
- Retrieve Multiple Row with WHERE Clause Parameterized Query Dictionary in Python
- Retrieve Multiple Row with WHERE Clause Parameterized Query Dictionary in Python
- Prepared Statement in Python
- Exception Handling and Builtin Exception in Python
- Assert Statement in Python

- User Defined Exception in Python
- Difference between Error and Exception in Python
- Difference between Error and Warning in Python

PyTest Course Content

Introduction to Pytest

- What is Pytest used for?
- Types of Testing
- PyTest Inputs and Outputs
- Creating Simple Tests Files in PyTest
- Creating Tuples to Tests
- Using Tuples to Test Multiple Components
- Understanding PyTest Output description
- How to use PyTest Options

Writing Test Functions

- Writing Test Functions with PyTest
- Create Test Project
- Test Functions: Add Tests
- Test Functions: API Exceptions

Testing Test Functions

- Using the Assert Statement
- Exceptions
- Running Test Functions
- Skipping Tests
- Expected Fail Tests
- Running Subsets
- Parameterized Testing

PyTest Fixtures

- Introduction to Fixtures
- Using and Sharing Fixtures
- Tracing Fixture execution
- Using Fixture for test data
- Using Multiple Fixtures
- Specifying Fixture Scope

- Create Global Pytest fixture with Conftest.py
- Fixture Specialization and Autouse
- Renaming and Parameterizing Fixtures
- Introduction to Markers
- Run your Tests with Markers and in Parallel Mode

Built-In Fixtures

- PyTest Built-In Fixtures
- tmpdir and tmpdir-factory fixtures
- Using Pytest config Fixtures
- Using cache Fixture
- Using capsys Fixture
- Using recwarn Fixture
- Using monkeypatch Fixture
- Creating Custom Fixture and Fixture Factory

Plugins

- Plugins Finding
- Creating Plugins
- Testing Plugins
- Creating Distributions

PyTest Configuration

- PyTest Configuration
- Command Line and Markers
- Specifying Test Directory Locations
- Filename Collisions

Reporting

- PyTest HTML Report Generation using pytest-html module
- Custom Reporting in pytest