

Q1. What is the purpose of Python's OOP?

Ans:-

It **allows us to develop applications using an Object-Oriented approach**. In Python, we can easily create and use classes and objects. An object-oriented paradigm is to design the program using classes and objects.

Q2. Where does an inheritance search look for an attribute?

Ans:-

An inheritance search looks for an attribute **first in the instance object, then in the class the instance was created from, then in all higher super classes, progressing from left to right (by default)**. The search stops at the first place the attribute is found.

Q3. How do you distinguish between a class object and an instance object?

Ans:-

Class objects represent the class itself, while instance objects represent individual instances of the class. Class objects can have class-level attributes and methods that are shared among all instances of the class, while instance objects have their own set of attributes and methods that are independent of other.

Q4. What makes the first argument in a class's method function special?

Ans:- The calling process is automatic while the receiving process is not (its explicit). This is the reason the first parameter of a function in class must be **the object itself**. Writing this parameter as self is merely a convention.

Q5. What is the purpose of the `__init__` method?

Ans:-

The `__init__` method **lets the class initialize the object's attributes and serves no other purpose**.

Q6. What is the process for creating a class instance?

Ans:-

To create instances of a class, **the class using class name and pass in whatever arguments its `__init__` method accepts.**

Q7. What is the process for creating a class?

Ans:-

The process of creating instances of a class is called **instantiation**.

Q8. How would you define the superclasses of a class?

Ans:-

A superclass is **the class from which many subclasses can be created**. The subclasses inherit the characteristics of a superclass. The superclass is also known as the parent class or base class. In the above example, Vehicle is the Superclass and its subclasses are Car, Truck and Motorcycle