

Class:


- Blueprint or template for creating objects.
- Defines structure and behavior for objects of that class.
- Encapsulates data (attributes) and functions (methods) operating on that data.

Object:

- Specific instance of a class.
- Real-world manifestation of the class blueprint.
- Possesses unique data (attributes) and can execute defined actions (methods).

Example:

Let's say we have a class 'Animal':

```
Python   
  
# Define a class named Animal  
class Animal:  
    # Class attributes  
    type = "bird"  
    name = "parrot"  
  
    # Define a method named display_info  
    def display_info(self):  
        print("I'm a", self.type)  
        print("My name is", self.name)  
  
# Create an instance of the Animal class  
my_pet = Animal()
```

```
# Access class attributes and call the method through the object
print(my_pet.type)
my_pet.display_info()
```

In this code

1. Class Definition:

- `class Animal::` This line defines a class named `Animal`, which acts as a blueprint for creating objects.
- `type = "bird" and name = "parrot":` These are class attributes. They provide initial values that all instances of the class will have.
- `def display_info(self)::` This defines a method named `display_info`. Methods are functions defined inside a class. The `self` parameter refers to the instance of the class and is used to access its attributes and methods.

2. Object Instantiation:

- `my_pet = Animal():` This line creates an instance of the `Animal` class called `my_pet`. This instance will have its own set of attributes, separate from any other instances of the class.

3. Accessing Attributes and Calling Methods:

- `print(my_pet.type):` This line prints the value of the `type` attribute for the `my_pet` instance. It will output `"bird"`.
- `my_pet.display_info():` This line calls the `display_info` method on the `my_pet` instance. The method executes and prints `"I'm a bird"` and `"My name is parrot"`.

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