1. In Python, object-oriented Programming (OOPs) is a programming paradigm that uses objects and classes in programming. It aims to implement real-world entities like inheritance, polymorphisms, encapsulation, etc. in the programming. The main concept of OOPs is to bind the data and the functions that work on that together as a single unit so that no other part of the code can access this data.
2. All of these objects are namespaces (packages of variables), and the inheritance search is simply a **search of the tree from bottom to top looking for the lowest occurrence of an attribute name**. Code implies the shape of such trees.
3. The class = **the blue print**. The Object is an actual thing that is built based on the 'blue print' (like the house). An instance is a virtual copy (but not a real copy) of the object.
4. The first argument of every class method, including init, is **always a reference to the current instance of the class**. By convention, this argument is always named self. In the init method, self refers to the newly created object; in other class methods, it refers to the instance whose method was called.
5. The \_\_init\_\_ function is called every time an object is created from a class. The \_\_init\_\_ method **lets the class initialize the object's attributes and serves no other purpose**. It is only used within classes.
6. When you create an object, you are creating an instance of a class, therefore "instantiating" a class. The new operator requires a single, postfix argument: a **call to a constructor**. The name of the constructor provides the name of the class to instantiate. The constructor initializes the new object.
7. Create a Class. To create a class, use the keyword class

Create Object. Now we can use the class named MyClass to create objects:

The self Parameter.

Modify Object Properties.

8) 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.