why we need classes

1. With the help of Classes we can easily represent complex data structures and they contain functions that then describe the behavior of our class .

2. A class is basically a blueprint of how something should be defined and the way we create class in python is with the keyword class and then followed by a name by convention we start the class name with a capital letter

In Python, and in object-oriented programming (OOP) in general, the terms "instance" and "object" are often used interchangeably, but they have slightly different meanings in the context of classes:

1. **Object**: An object is a general term that represents any entity in the programming environment. It could be a data structure, a variable, a function, or an instance of a class. Essentially, everything in Python is an object, including integers, strings, functions, and classes themselves.
2. **Instance**: An instance specifically refers to an individual realization of a class. When you create an object by calling a class, that object is an instance of the class. It's like a specific example of the broader template defined by the class. Each instance of a class has its own attributes and methods as defined by the class, but they can have different values for those attributes.

For example, consider a class Dog. Each Dog object (or instance) you create from the Dog class is an individual with its own characteristics, like name, age, or breed. However, all these instances share the common structure and behavior (methods) defined in the Dog class.

In summary:

* All instances are objects.
* Not all objects are instances (since objects can be other things like functions, integers, etc.).
* An instance is a specific realization of a class.

The distinction is subtle and mostly relevant in discussions about class design and object-oriented programming concepts. In practical terms, especially in Python, the terms are often used interchangeably when referring to objects created from classes.

# Now I know how to create a class (blueprint)

# How to create a instance (object)

# what is class vs instance

# instance attributes are defined in \_\_init\_\_(self)

# class attribute

#difference between instance attribute and class attribute.