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OOP

OBJECT ORIENTED PROGRAMMING

Object-oriented programming aims to implement real-world entities like inheritance, hiding, polymorphism etc in programming. The main aim of OOP is to bind together the data and the functions that operate on them so that no other part of the code can access this data except that function.

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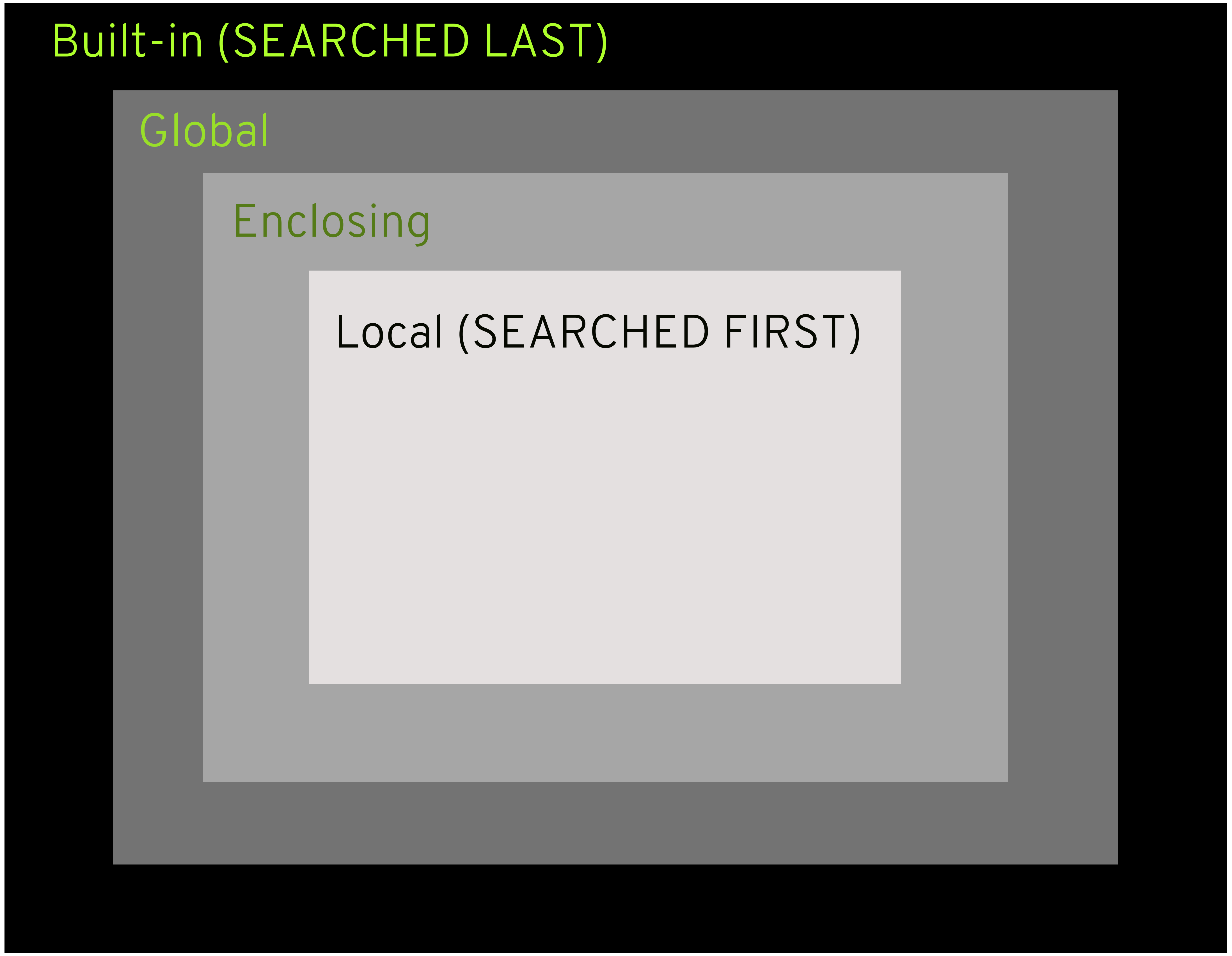

PYTHON SCOPES

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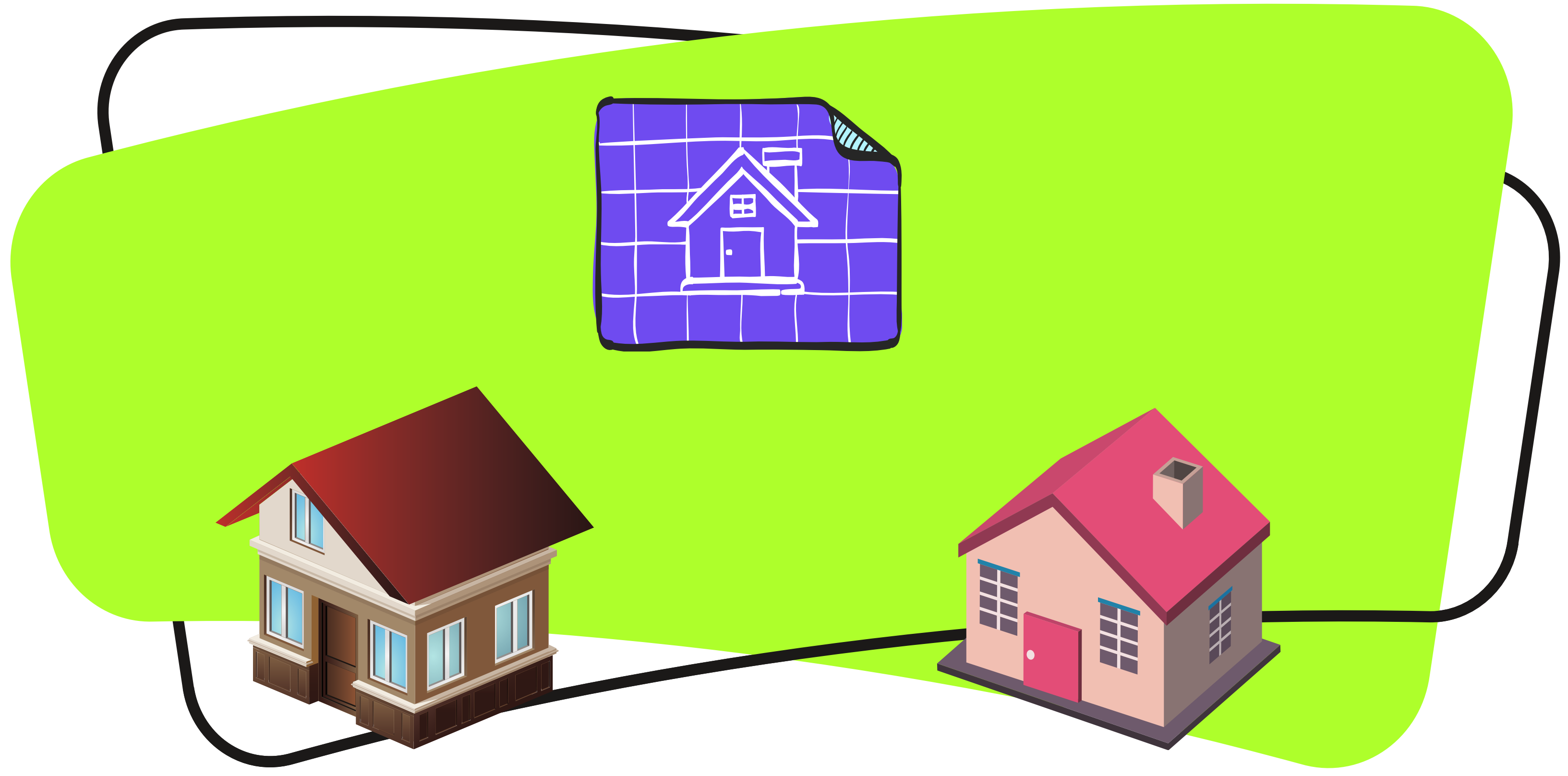
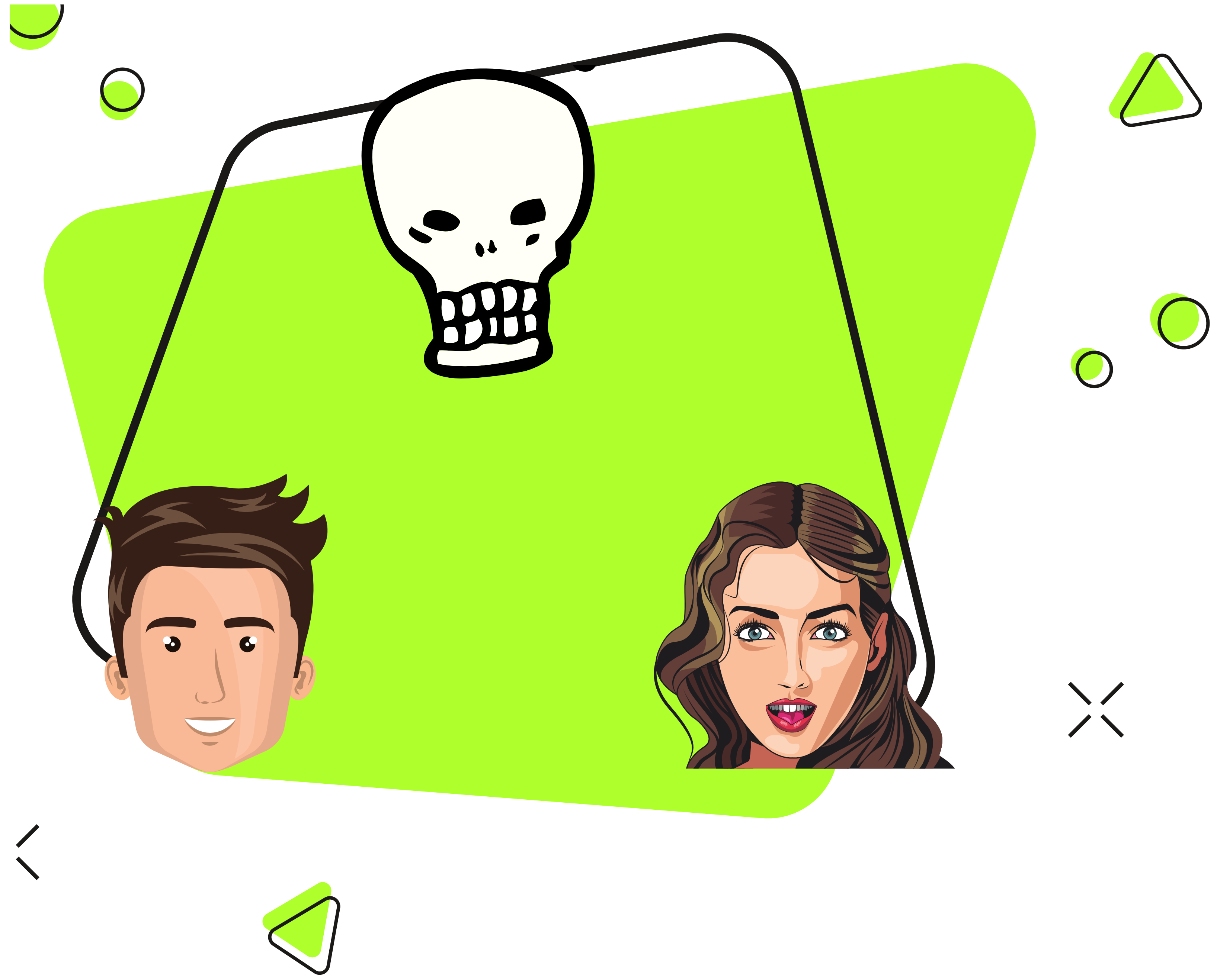
WHAT IS A CLASS ?

In object-oriented programming, a class is a blueprint for creating objects (a particular data structure), providing initial values for state (member variables or attributes), and implementations of behavior (member functions or methods). The user-defined objects are created using the class keyword.

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INSTANCE

In object-oriented programming (OOP), an instance is a concrete occurrence of any object, existing usually during the runtime of a computer program. An object is an instance of a class, and may be called a class instance or class object; instantiation is then also known as construction.

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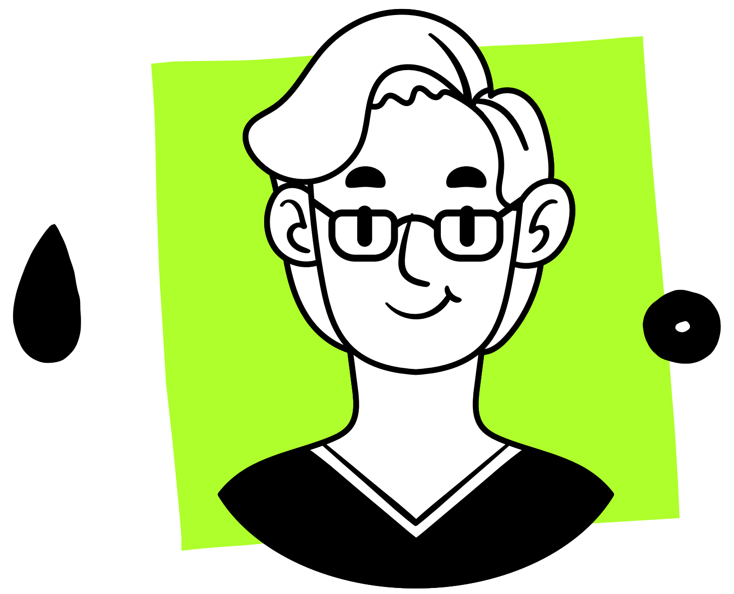
WRITTING THE CLASS!!!

```
class Class_Name():
```



BEHIND THE SCENES

When we are calling a class, we are actually calling a function named __init__ which is defined inside the class. init statnds for intiallize, and it creates space in memory for a new instance/ object of the class.
The __init__ function creates the instance of the class or construct space in the memory foe the new instance, hence also called the constructor of the class.

__init__

The name of the function includes two underscores before and after init. These underscore are the way of python to tell the programmers that hey the name init is essentially reserved in the python, and it is a special fucntion and method.

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WRITTING THE CLASS!!!

```
class Class_Name():
    def __init__(self):
    # THE FIRST ARGUMENT THAT WE
    # PASS TO THE INIT FUNCTION IS
    # THE PYTHON KEYWORD SELF
```

We can think of the self as the instance being created

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Now let's decide what you want in your class!!

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WRITTING THE CLASS!!!

```
class Class_Name():
    def __init__(self):
        self.var1 =
        self.var2 =
        self.var3 =
```

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INITIALISING THE VARIABLES

Now somehow we need to initialize the values in the init function. The way to do is either we can pass the values as the arguments in the init function or we can just assign same values to all the instance being created of the class.