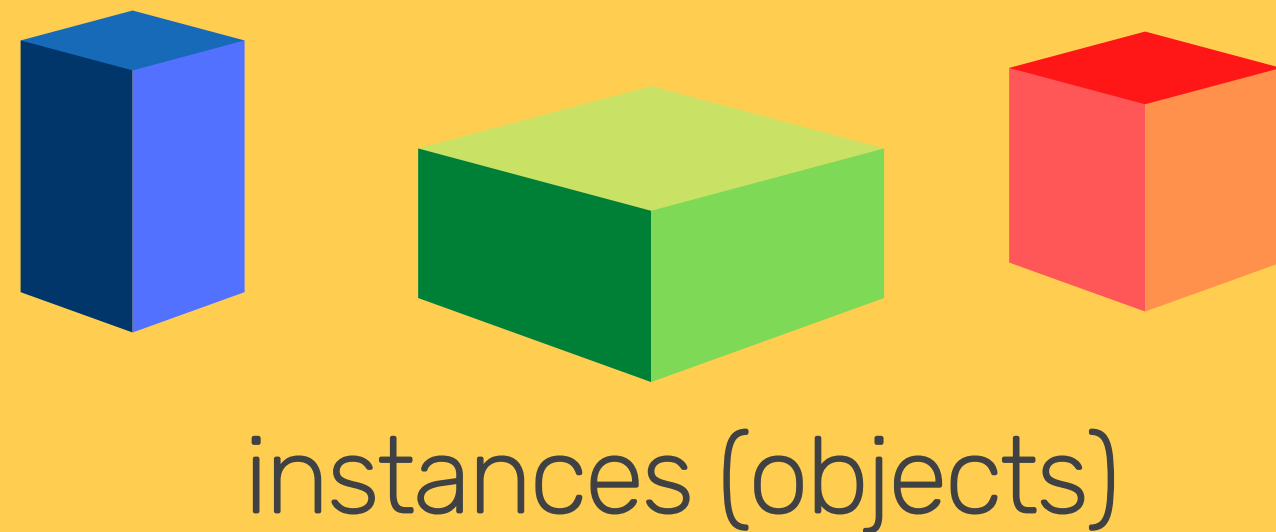# attributes

Attributes are variables that belong to the class. There are **class attributes** (shared by all instances of the class), and **instance attributes** (which are different in each instance of the class).

```
class Cube:
```

class

instances (objects)

Each object created from the class can share certain characteristics

Each object created from the class can contain specific characteristics

class attributes
(for example: number of faces)

instance attributes
(for example: color, height, width, length...)

```
class Cube:
    faces = 6
    def __init__(self, color):
        self.color = color
```

class attribute

the parameters of the __init__ function are passed to the instance attributes

instance attribute

All classes have a function called __init__() called when *instantiated*, which is used to pass values to properties of the object being created.
self: represents the *instance* of the object to be created