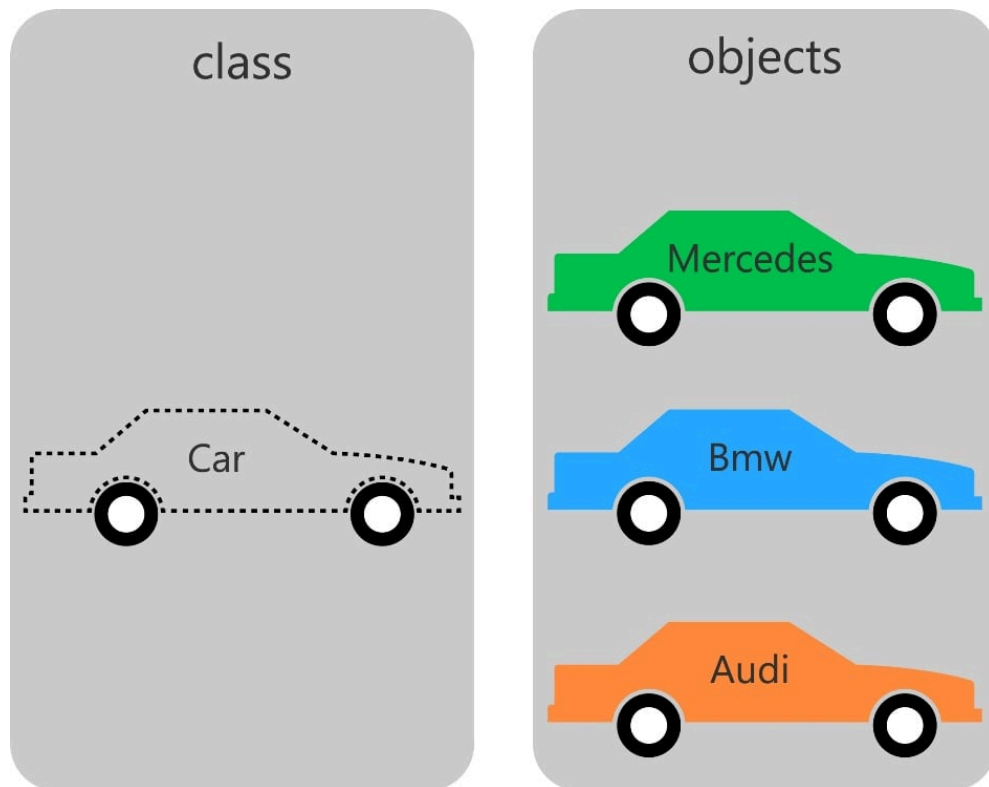


Class vs Object

- Classes and objects are two important aspects of object-oriented programming.
- a class is a template. It is like a blueprint (not real), and you can use class to create many of the "same" objects with different characteristics.
- an object is an instance of a class, it defines the details of a template.



Class vs Object.

Attribute/member: what an object has.

- For example, a car has wheels and color, so wheel and color are the attribute/member of car
- In program, an object has some variables and functions, they are called `member variable` and `member function`
- To use the attribute/member of an object, we use member operator `.`
- The syntax to use a variable/function of an object is `object.variable_name` or `object.function_name()` , e.g., `math.PI`, `math.pow()`

Different objects of a class

- have the same set of attributes as that of the class, but
- the attribute values can be different.
- For example, all cars have wheels and color, but Mercedes, BMW and Audi have different wheels and colors