OOP-Inheritance & Methods

Inheritance allows us to reuse the code of an existing class B in creating a new class C. Let’s recap how the attribute lookup worked for classes. When looking for an attribute, the lookup procedure starts with the instance dictionary, and continues with the class attributes. If both fail, then the attribute is searched from the base classes and, recursively, from their base classes.

A derived class is sometimes also called a subclass and the base class is called super class. The \_\_init\_\_ method sets the instance attributes to some initial value. Its first parameter is self, and the subsequent parameters are the ones that were passed to the call of the class. The \_\_init\_\_ method should return no value.

For example,C is a class and x and y are its instances. \_\_hash\_\_ returns an int value, with the following requirement: x==y implies x.\_\_hash\_\_() == y.\_\_hash\_\_(). The value is used in storing objects in dictionaries and sets. The instances x and y must be immutable A class with \_\_call\_\_ method makes its instances callable. I.e. the call x(a,b, ...) will result in calling this special method with the given parameters. The method \_\_del\_\_ gets called when the corresponding instance gets deleted. Method \_\_new\_\_ is used to control the creation of new instances. It can be used, for example, to create classes that have only one instance.