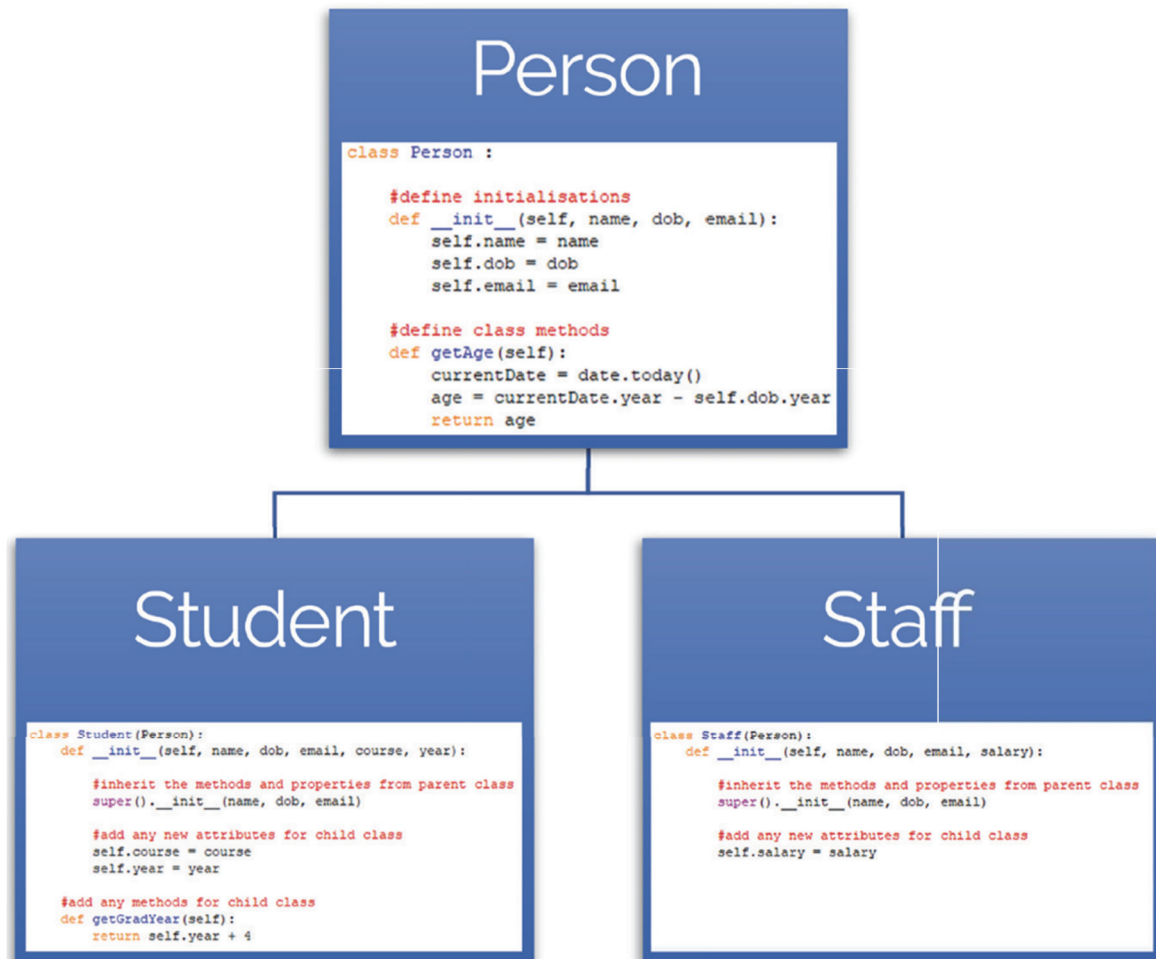


Inheritance

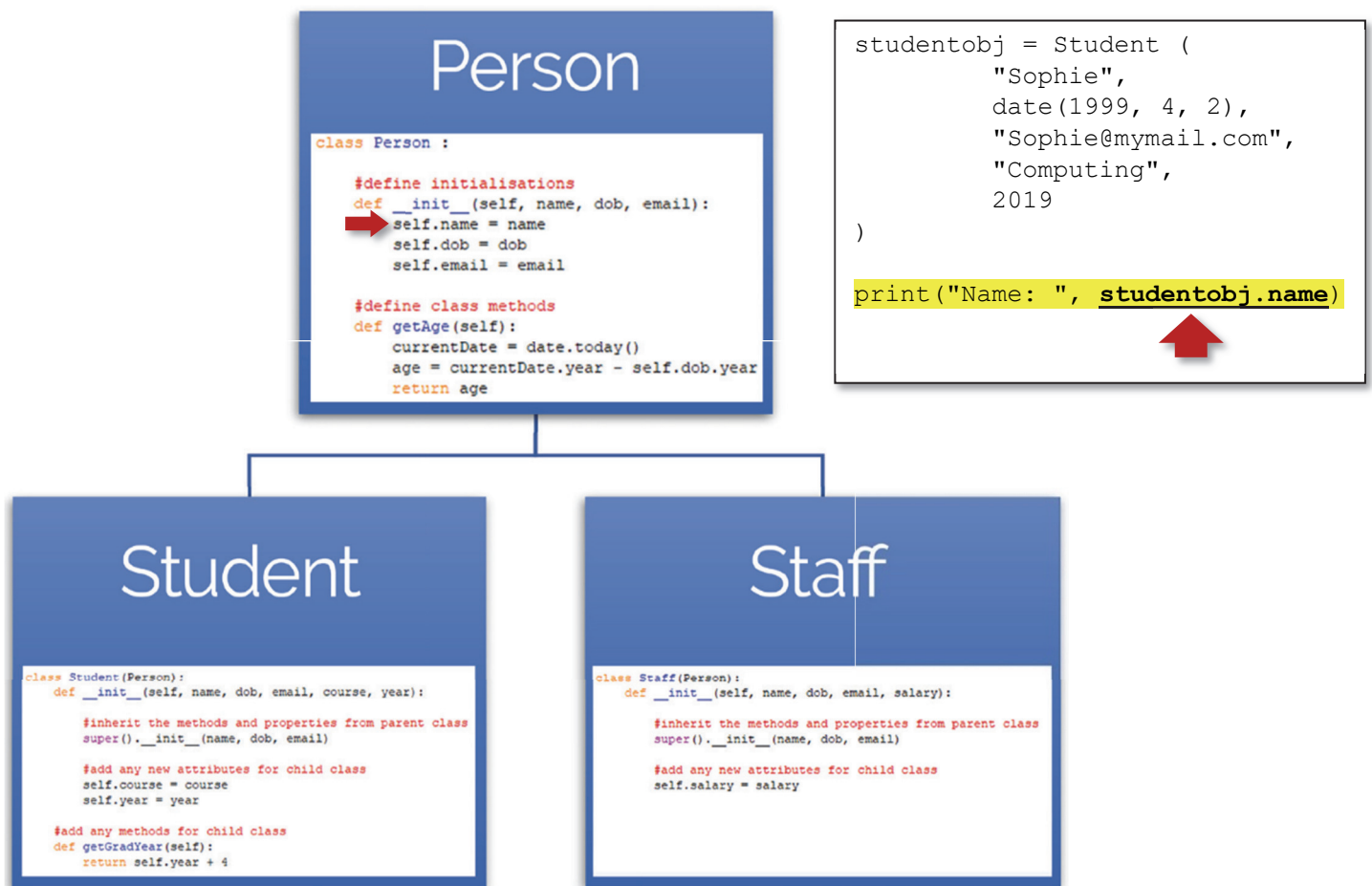
A class can inherit all the methods and attributes from another class. If a class called 'person' had name, age, and dob. We could define two other child classes called 'student' and 'staff'. Both can inherit the methods and attributes from the 'person' class.



Using the `super()` function in a child class, you can gain access to all the methods and attributes inherited from the parent class and you can call them from an object created using the child class.

We use the `super()` function when we are calling a method or attribute defined in the parent from the child class to make use of it.

In the example below, in the print statement we are calling the “name” attribute, which is defined in the parent class Person, from the object (studentobj) created using the Student class. To access this attribute from a child class, we need to use the `super()` function



To access this attribute from a child class, we need to use the `super()` function in the `__init__()` method of the child class.

If we don't need to access the attributes or methods defined in the parent class from an object created from the child class, then we don't need the `super()` function.

Here we've defined a parent class called `Polygon`, and created a child class called `Triangle`.

```
class Polygon:
    def __init__(self, width, height):
        self.width = width
        self.height = height

class Triangle(Polygon):
    def getArea(self):
        return self.width * self.height / 2
```

When we create an object from the child class `Triangle`...

```
triobj = Triangle(3,4)
```

...we are not calling any methods, or attributes defined in the parent class. Here, we're calling the `getArea()` method from the triangle object (`triobj`) defined in the `Triangle` class.

```
print(triobj.getArea())
```

So when you need to reference a method or attribute defined in the parent class from an object created by the child class, you need the `super()` function.

Have a look at `inherit.py`. What happens when you remove the `super()` function from the child class declarations? Why do you need `super()`?