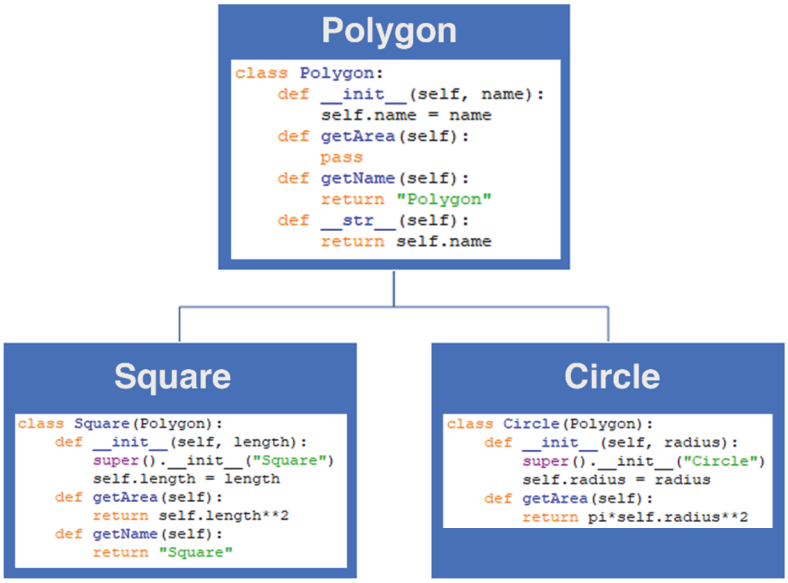
Polymorphism

The child classes in Python inherits methods and attributes from the parent class. We can redefine certain methods and attributes specifically for the child class using a feature called **Method Overriding**.



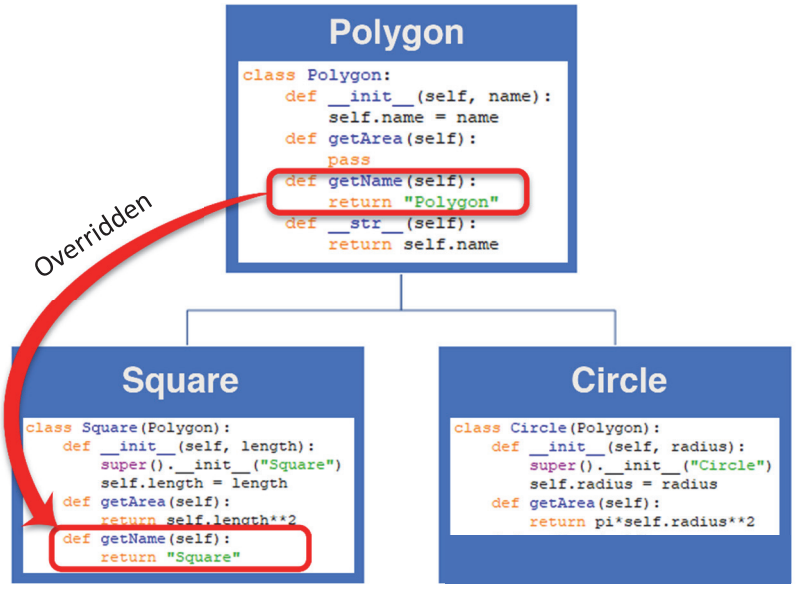
Polymorphism allows us to access these overridden methods and attributes that have the same name as defined in the parent class. For example, if we create an object called squareObj from the Square class:

```
squareObj = Square(7)
```

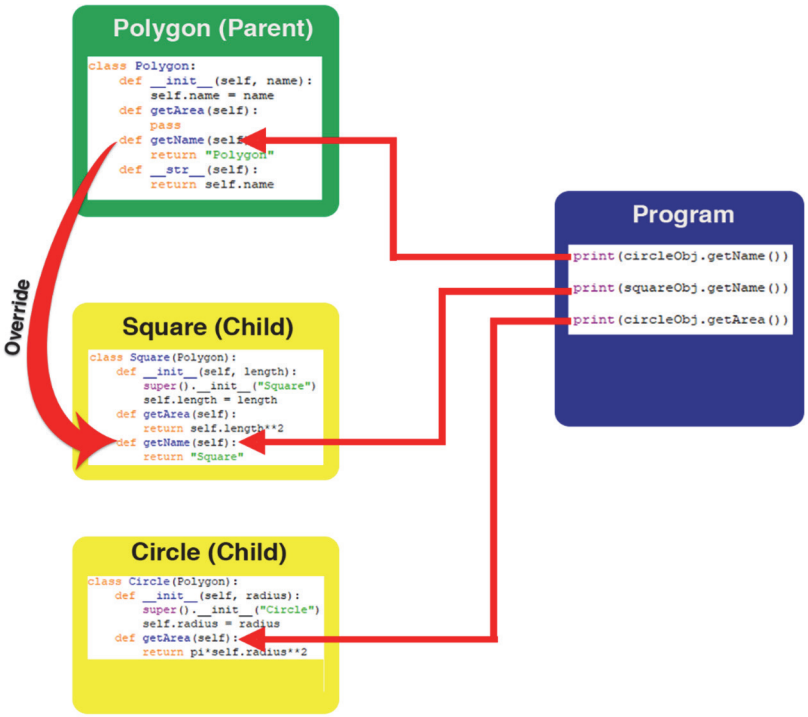
Then call the `getName()` method.

```
print(squareObj.getName())
```

The interpreter automatically recognizes that the `getName()` method for squareObj is overridden.



So the `getName()` method defined in the child class (Square) is used. The `getName()` method defined in the Square class is overriding the `getName()` method defined in the parent (Polygon). Similarly with `getArea()`.



You'll also notice that we have called the `getName()` method from the circle class object circleObj.

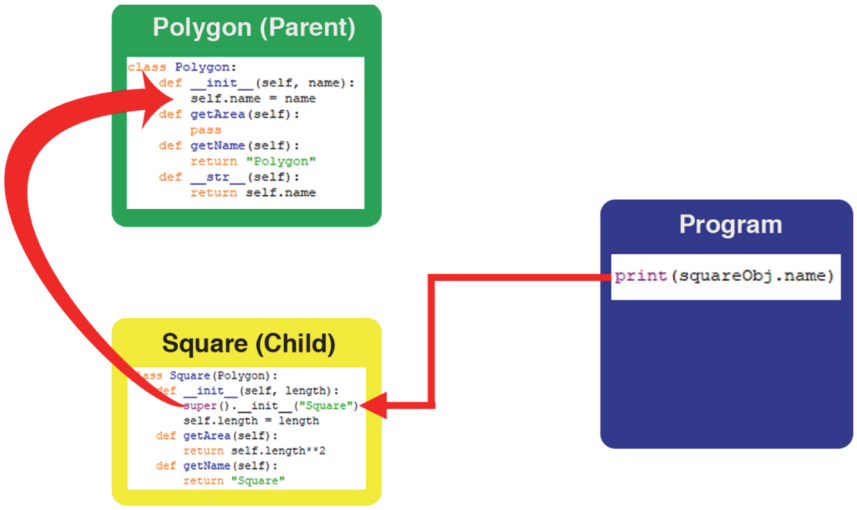
```
print (circleObj.getName()
```

In this case, there is no `getName()` method defined in the circle class, so the interpreter will call the `getName()` method from the parent.

If we reference the name attribute from squareObj

```
print(squareObj.name)
```

You'll notice that name is defined in the parent not in the child class(quare). To access this we need the `super()` function in the child class to allow access.



Have a look at polyclass2.py