Getters and Setters

In this lesson, we will learn about getters and setters in OOP.

WE'LL COVER THE FOLLOWING

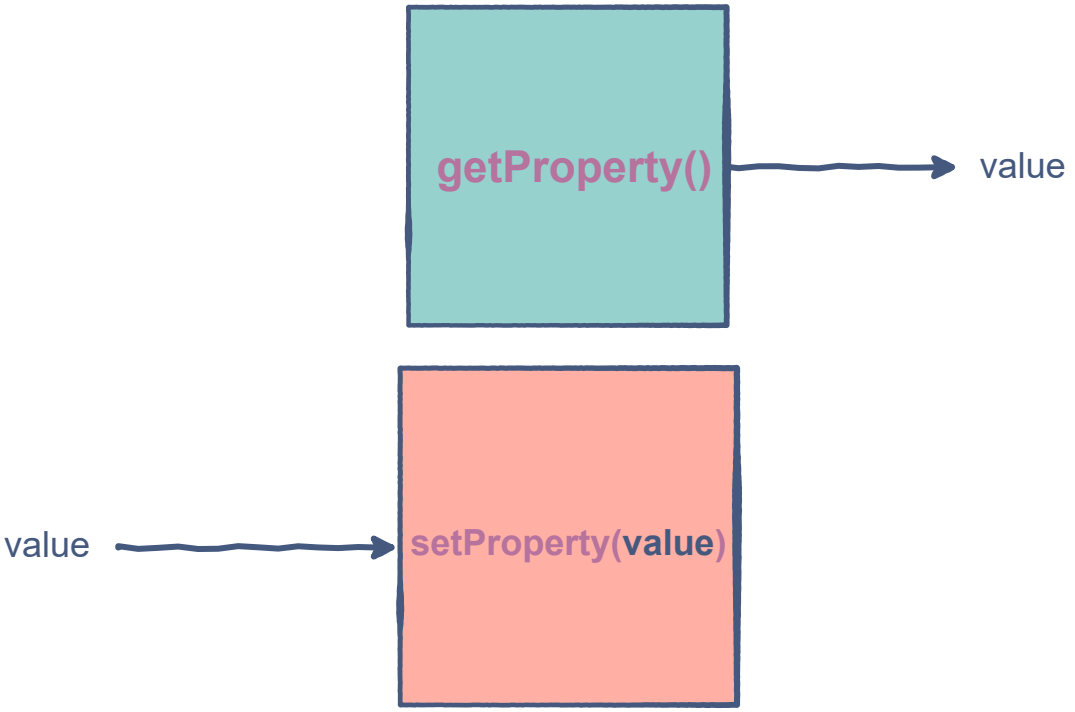
Get and Set

In order to allow controlled access to properties from outside the class, getter and setter methods are used.

> A **getter** method allows reading a property's value.

> A **setter** method allows modifying a property's value.

It is a common convention to write the name of the corresponding member fields with the get or set command.



Example

Let's write get and set methods for `__username` in our `User` class:

```
class User():
    def __init__(self, username=None):  # defining initializer
        self.__username = username

    def setUsername(self, x):
        self.__username = x

    def getUsername(self):
        return (self.__username)


Steve = User('steve1')
print('Before setting:', Steve.getUsername())
Steve.setUsername('steve2')
print('After setting:', Steve.getUsername())
```

In the above class, `User`, we have defined a private property, named `__username`, which the main code cannot access. Also, note that we have started the name of this private property with `__`.

For this property to interact with any external environment, we have to use the get and set functions. The get function, `getUsername()`, returns the value of

`__username` and the `setUsername(x)` sets the value of `__username` equal to the parameter `x` passed.

Now let's understand encapsulation using examples in our next lesson.