

# Preparatory Course Informatics for Life Scientists

## An Introduction to Python 7: Classes

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# Class

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- We already briefly thought about classes
- A concept in object-oriented programming to model 'things'
- Things can be: text, numbers, files, atoms, molecules, ...
- In principle, when you write a class you create a new data type

Let's just have a brief look ...

# Class

myscript.py

```
1  class String:
2      def __init__(self, txt):
3          self.text = txt
4
5      def len(self):
6          return len(self.text)
7
8      def set_text(self, text):
9          self.text = text
10
11     def get_text(self):
12         return self.text
13
14  a = String('Hello World!')
15
16  print(a.len())
17  print(a.get_text())
18
19  a.set_text('New text')
20  print(a.get_text())
```

# Class

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- We modeled a data type similar to the built-in data type `str`
- We create objects of our data type **`String`** and assign it to a variable
- Methods are class functions with a special keyword **`bf`**
- We call that methods via an object of that type

There's a lot more ... but now you have at least a kickstart

## Diving Deeper ...

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- [https://www.w3schools.com/python/python\\_classes.asp](https://www.w3schools.com/python/python_classes.asp)
- <https://realpython.com/python3-object-oriented-programming/>
- <https://docs.python.org/3/tutorial/classes.html>

## Practice Time ... 007

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p001: Create a new Python file and implement the String class in it.

p002: Import the new class in your existing script and test its functionality.



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