

Programmierung 2

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Julian Huber & Yannic Heyer

Naming Conventions / PEP8

What is PEP8?

[PEP8](#) is a guideline or best practice on how to write Python Code. It makes writing and especially reading code easier.

Go to the website linked above to improve your ability to write clean code!

Naming Conventions

Type	Naming Convention	Examples
Function	Use a lowercase word or words. Separate words by underscores to improve readability.	function, my_function
Variable	Use a lowercase single letter, word, or words. Separate words with underscores to improve readability.	x, var, my_variable
Class	Start each word with a capital letter. Do not separate words with underscores. This style is called camel case or pascal case	Model, MyClass

Type	Naming Convention	Examples
Method	Use a lowercase word or words. Separate words with underscores to improve readability.	class_method, method
Constant	Use an uppercase single letter, word, or words. Separate words with underscores to improve readability.	CONSTANT, MY_CONSTANT, MY_LONG_CONSTANT
Module	Use a short, lowercase word or words. Separate words with underscores to improve readability.	module.py, my_module.py
Package	Use a short, lowercase word or words. Do not separate words with underscores	package, mypackage

Blank Lines

```
# Wrong: too many blank lines between to methods
class MyFirstClass:
    pass

class MySecondClass:
    pass

def top_level_function():
    return None
```

Blank Lines

```
# Right: one blank line between to methods
class MyFirstClass:
    pass

class MySecondClass:
    pass

def top_level_function():
    return None
```

Comments

Here are some key points to remember when adding comments to your code:

- Limit the line length of comments and docstrings to 72 characters.
- Use complete sentences, starting with a capital letter.
- Make sure to update comments if you change your code.

```
# Example Block Comments
for i in range(0, 10):
    # Loop over i ten times and print out the value of i, followed by a
    # new line character
    print(i, '\n')
```

```
x = 5 # This is an inline comment

# Don't use inline comments like this -> bad practice
empty_list = [] # Initialize empty list

x = 5
x = x * 5 # Multiply x by 5
```


Docstrings

The most important rules applying to docstrings are the following:

- Surround docstrings with three double quotes on either side, as in `"""This is a docstring"""`.
- Write them for all public modules, functions, classes, and methods.
- Put the `"""` that ends a multiline docstring on a line by itself

```
def quadratic(a, b, c, x):  
    """Solve quadratic equation via the quadratic formula.  
  
    A quadratic equation has the following form:  
     $ax^2 + bx + c = 0$   
  
    There always two solutions to a quadratic equation:  $x_1$  &  $x_2$ .  
    """  
     $x_1 = (-b + (b^2 - 4*a*c)^{(1/2)}) / (2*a)$   
     $x_2 = (-b - (b^2 - 4*a*c)^{(1/2)}) / (2*a)$   
    return x_1, x_2
```