Pythonic Coding Style

C-START Python PD Workshop
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Python is one of the few languages with an official style guide (PEP-8) since there is a huge amount of Python code out there and the language’s core principle is readability.
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**Legacy Code**

It should be noted that when working on a project that was started before the ages of PEP-8 (before 2001), generally they have their own style guide and you should follow that instead. Otherwise, it would be generally considered unacceptable to not follow PEP-8.
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- When there are conflicts with builtin keywords and a better name is not possible, an underscore should be appended to the variable name (e.g. `class_`)
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Class names should be typed in CapWords.
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Function, method, and class names should describe the interface rather than the implementation.
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Function, method, and class names should describe the interface rather than the implementation.

Private methods and variables should start with an underscore.
As Python uses the indentation of the text to denote scope, consistency of indentation is critically important. PEP-8 recommends the following:

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- Use 4 spaces per indentation level, **never use hard tabs**.
- On multiline function calls, list literals, etc., the arguments should be aligned and indented from the rest of the text. “Hanging indent” is acceptable as well.
- Multiline `if/while` etc. should be indented to align with the top line
Keep lines to 79 characters\(^1\)

\(^1\)It’s OK to go to 90 or 100 if everyone in your project agrees.
Other Pet Peeves

- Keep lines to 79 characters\(^1\)

- Avoid extraneous whitespace inside parentheses, brackets, and braces
  
  Yes: spam(ham[1], {eggs: 2})
  
  No:  spam( ham[ 1 ], { eggs: 2 } )

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  Yes: `spam(ham[1], {eggs: 2})`
  
  No: `spam( ham[ 1 ], { eggs: 2 } )`

- Don't use parentheses on `if/while` etc. like you might in C-like languages

  Yes: `if i < 3:`
  
  No: `if(i < 3):`

\(^1\)It’s OK to go to 90 or 100 if everyone in your project agrees.
Anything False, zero, or an empty sequence/mapping will implicitly be false, and you should take advantage of that.

Ok:          if mybool  ==  True:
Pythonic:    if mybool:

Ok:          if mynumber  !=  0:
Pythonic:    if mynumber:

Ok:          if len(mylist)  ==  0:
Pythonic:    if not mylist:
Comments

Every comment in the source code is a personal failure of the programmer, because it proves that he didn’t manage to express the purpose of the code fragment with the programming language itself.

— Uncle Bob

Take Home: Comments are important when they are needed, but you should try and make your code readable instead.
Readability Counts!

No really, it is of utmost importance that Python code be readable by following the guidelines of PEP-8. You should read through PEP-8 before getting serious with Python.