Writing Readable Code

I won't bore you with a long finger-wagging speech about the importance of documenting your code. Just know that code is written once but read many times, and the most important audience for your code is yourself, six months after writing it (i.e. after you've forgotten everything but need to fix something). Python makes it easy to write readable code, so take advantage of it. You'll thank me in six months.

Documentation Strings

You can document a Python function by giving it a documentation string (`docstring` for short). In this program, the `approximate_size()` function has a `docstring`:

```python
def approximate_size(size, a_kilobyte_is_1024_bytes=True):
    '''Convert a file size to human-readable form.

    Keyword arguments:
    size -- file size in bytes
    a_kilobyte_is_1024_bytes -- if True (default), use multiples of 1024
                                if False, use multiples of 1000

    Returns: string

    '''
```

Triple quotes signify a multi-line string. Everything between the start and end quotes is part of a single string, including carriage returns, leading white space, and other quote characters. You can use them anywhere, but you'll see them most often used when defining a `docstring`.

*Triple quotes are also an easy way to define a string with both single and double quotes, like **qq/.../** in Perl 5.*

Every function deserves a decent *docstring.*

Everything between the triple quotes is the function's `docstring`, which documents what the function does. A `docstring`, if it exists, must be the first thing defined in a function (that is, on the next line after the function declaration). You don't technically need to give your function a `docstring`, but you always should. I know you've heard this in every programming class you've ever taken, but Python gives you an added incentive: the `docstring` is available at runtime as an attribute of the function.

*Many Python **IDEs** use the **docstring** to provide context-sensitive documentation, so that when you type a function name, its **docstring** appears as a tooltip. This can be incredibly helpful, but it's only as good as the **docstrings** you write.*