SPHINX

PYTHON
DOCUMENTATION
GENERATOR

Adapted from:

https://codeandchaos.wordpress.com/2012/07/30/sphinx-autodoc-tutorial-for-dummies/

http://www.sphinx-doc.org/en/stable/tutorial.html

Sphinx

- Sphinx can be used to turn your docstrings into beautiful web pages

- It was originally created for the Python documentation, and it has excellent facilities for the documentation of software projects in a range of languages.

- First lets make proper numpydoc docstrings:

```python
def fib(n):
    """
    Return the first Fibonacci number above n.

    Iteratively calculate Fibonacci numbers until it finds one
    greater than n, which it then returns.

    Parameters
    ----------
    n : integer
        The minimum threshold for the desired Fibonacci number.

    Returns
    -------
    b : integer
        The first Fibonacci number greater than the input, `n`.

    Examples
    --------
    >>> fib.fib(1)
    2
    >>> fib.fib(3)
    5
    """
```

Sphinx

- Now lets setup our Sphinx configuration:

```
$ mkdir docs
$ sphinx-quickstart
Welcome to the Sphinx 1.2.3 quickstart utility.

Please enter values for the following settings (just press Enter to
accept a default value, if one is given in brackets).

Enter the root path for documentation.
> Root path for the documentation [.]: docs
…
```

- I took mostly the default options except I enabled autodoc and asked for a Makefile to be created

- Now we need to tell it where our code is. Edit the newly created **docs/conf.py** and add:

```
sys.path.insert(0,os.path.abspath('..'))
```

- We also need to add **numpydoc** to the list of extension:

```
extensions = [
    'sphinx.ext.autodoc',
    'numpydoc'
]
```

Sphinx

- And finally tell Sphinx the modules that should be documented. Edit **index.rst** to add the modules of interest:

```
Welcome to fibonacci's documentation!
=====================================

Contents:

.. toctree::
   :maxdepth: 2

.. automodule:: fib
   :members:

Indices and tables
==================

* :ref:`genindex`
* :ref:`modindex`
* :ref:`search`
```

- To actually generate the documentation run:

```
$ make html
sphinx-build -b html -d _build/doctrees   . _build/html
Making output directory...
Running Sphinx v1.2.3
loading pickled environment... not yet created
building [html]: targets for 1 source files that are out of date
updating environment: 1 added, 0 changed, 0 removed
reading sources... [100%] index
looking for now-outdated files... none found
pickling environment... done
checking consistency... done
preparing documents... done
writing output... [100%] index
writing additional files... genindex py-modindex search
copying static files... done
copying extra files... done
dumping search index... done
dumping object inventory... done
build succeeded.

Build finished. The HTML pages are in _build/html.

$ open _build/html/index.html
```

Sphinx

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Enter search terms or a module, class or function name.

Welcome to fibonacci's documentation!

Contents:

fib.**fib**(*n*)

Return the first Fibonacci number above n.

Iteratively calculate Fibonacci numbers until it finds one greater than n, which it then returns.

Parameters:	n : integer
	The minimum threshold for the desired Fibonacci number.
Returns:	b : integer
	The first Fibonacci number greater than the input, *n*.

Examples

```
>>> fib.fib(1)
2
>>> fib.fib(3)
5
```

Indices and tables

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