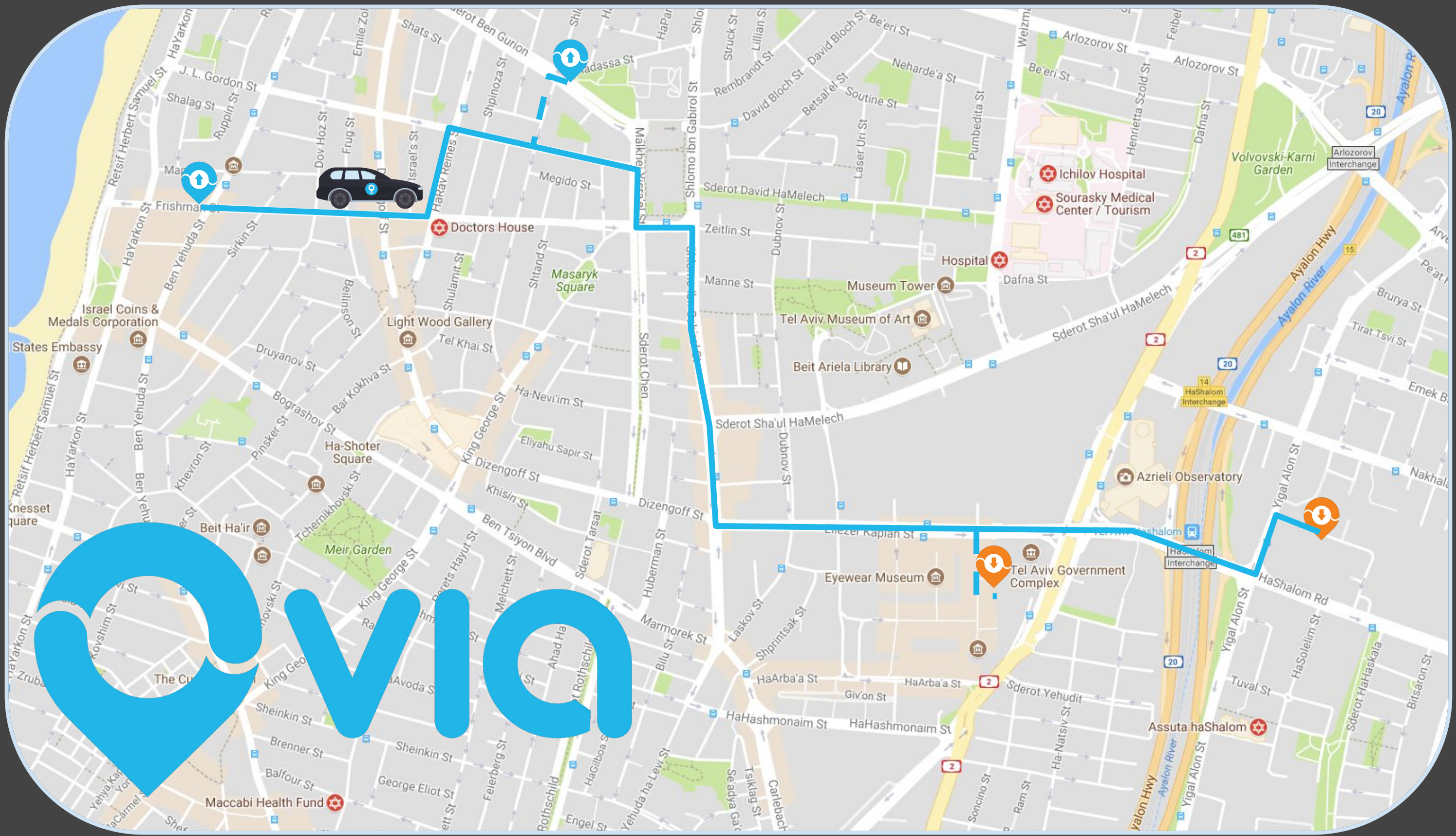
Help your colleagues help themselves - a Sphinx tutorial

Dalya Gartzman

github.com/DalyaG/Sphinx185


via
Ichilov Hospital
Sourasky Medical Center / Tourism
Doctors House
Masaryk Square
Light Wood Gallery
Israel Coins & Medals Corporation
States Embassy
Ha-Shoter Square
Meir Garden
Beit Ha'ir
Museum Tower
Tel Aviv Museum of Art
Beit Ariela Library
Azrieli Observatory
Tel Aviv Government Complex
Eyewear Museum
Volvovski-Karni Garden
Assuta haShalom
Maccabi Health Fund
Hospital
Arlozorov St
Sderot Sha'ul HaMelech
Dizengoff St
Ben Tsiyon Blvd
HaShalom Rd
Ayalon Hwy
Ayalon River
Sderot Yehudit
HaHashmonaim St
King George St
Sheinkin St
Frishman St
Ben Yehuda St
HaYarkon St
Shlomo Ibn Gabirol St
Marmorek St
Yigal Alon St


MT0A
CR1A
MT1A
MT2A
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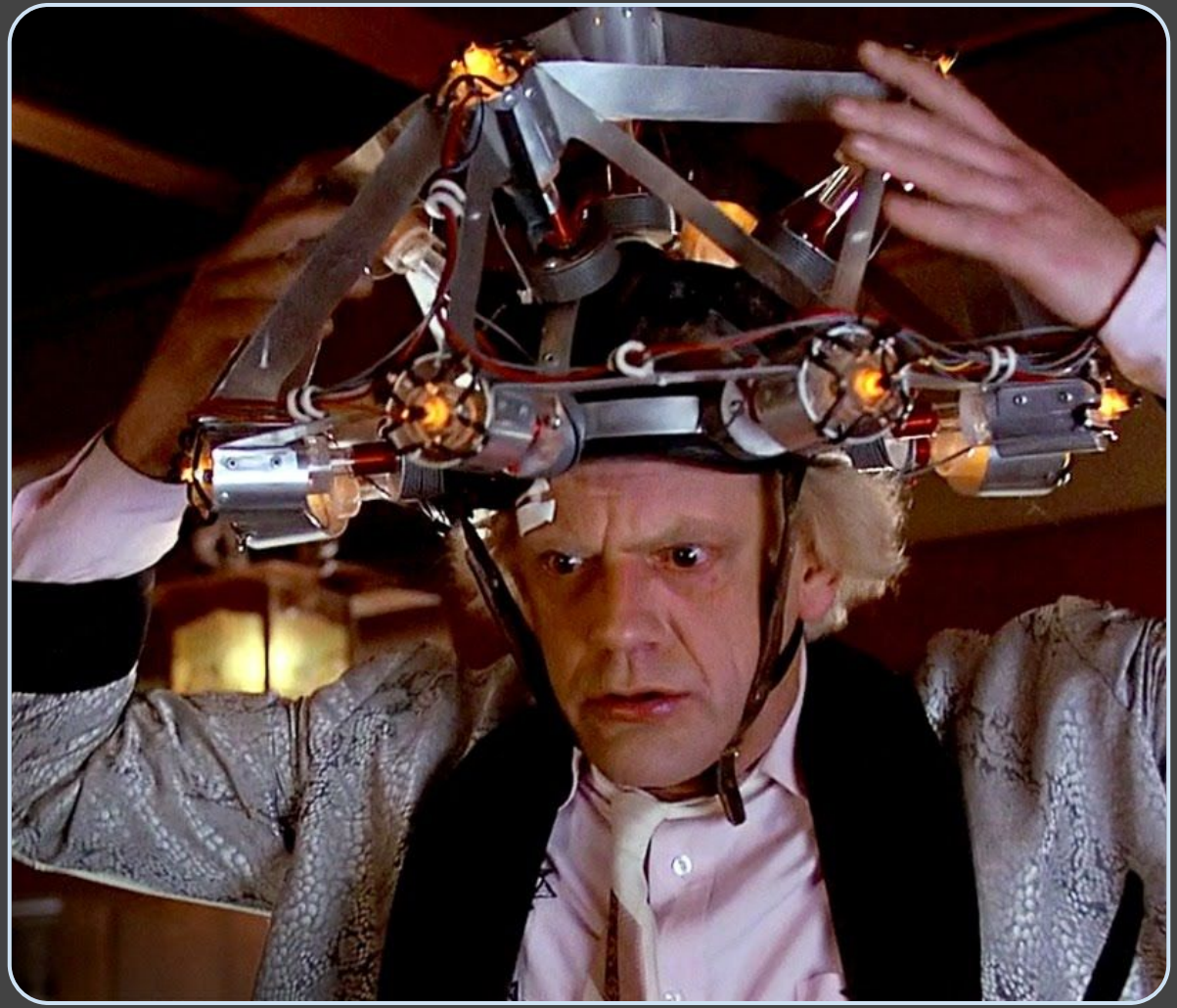
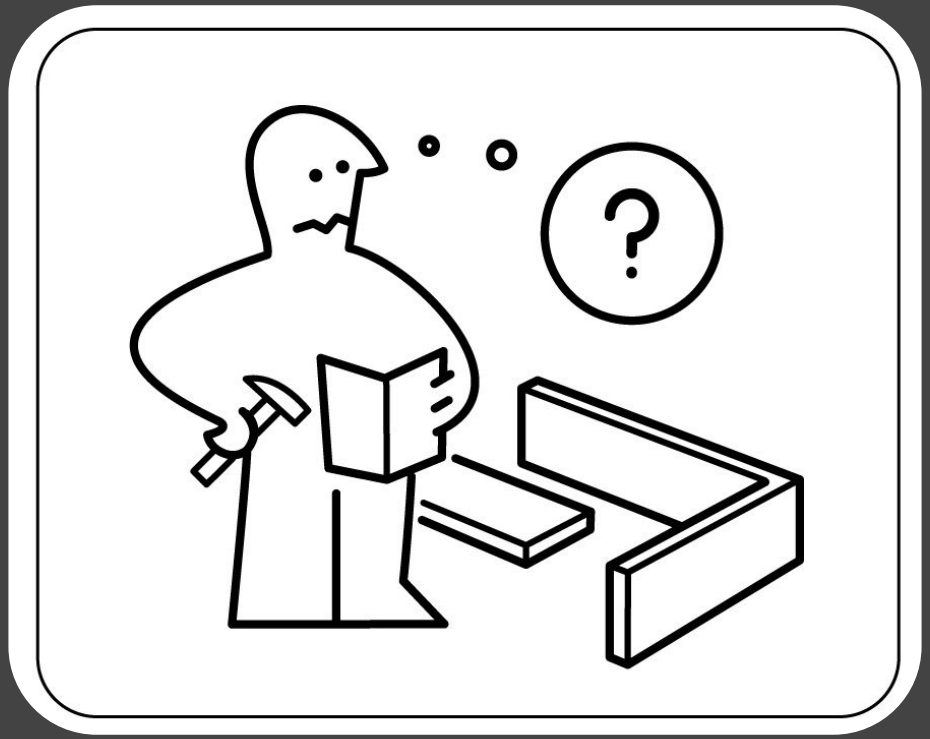
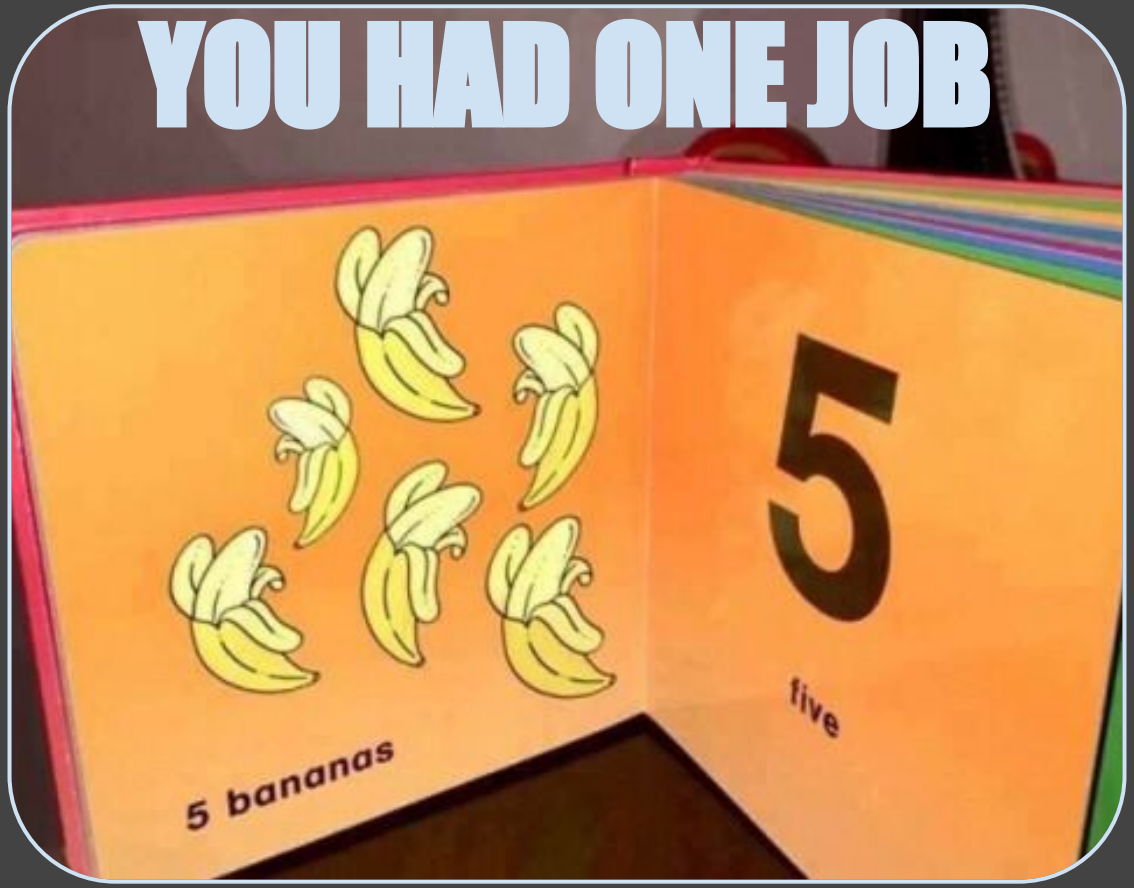
CP1A
CPJA
TY1A
CR1A
LP1A
MT2A




SPHINX
PYTHON


PUBLISH
PUBLISH EVERYTHING




YOU HAD ONE JOB
5 bananas
5
five


NEWBIES

Press Start

READY PLAYER ONE

Press Start

Intro - What will we accomplish today?

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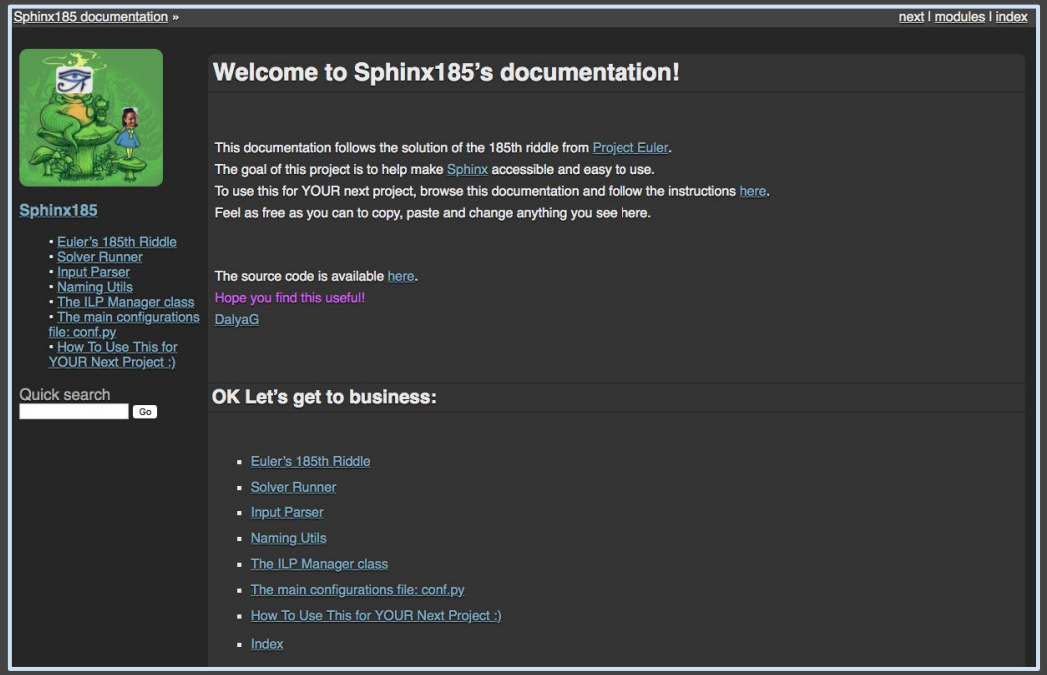
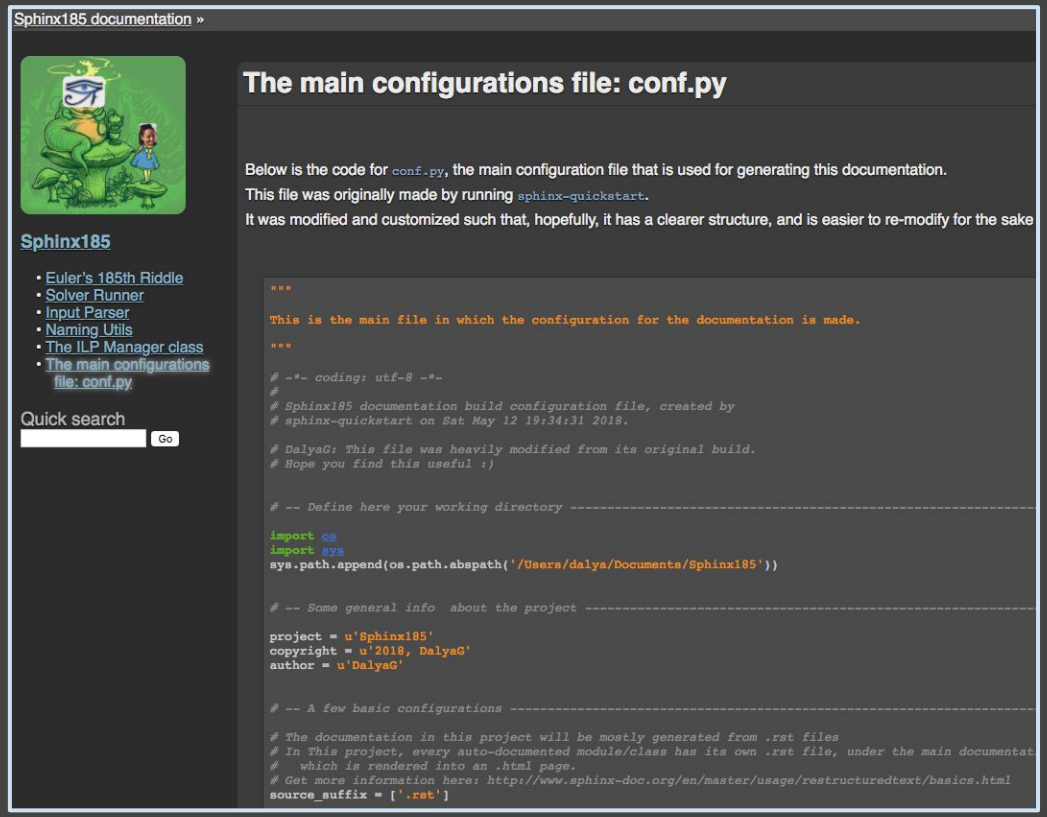


Part I - Overview

Intro - What will we accomplish today?



Part II - Main configuration file - conf.py

Intro - What will we accomplish today?

How To Use This for YOUR Next Project :)

1. `pip install sphinx`
2. Copy the `documentation_template_for_your_next_project` folder in this repository,
   make it a subdirectory in your local project and rename it `documentation`.
3. Edit `conf.py` by searching the pattern `#CHNAGEME#` inside the file and follow the instructions.
4. Edit `index.rst` by following the inline instructions.
5. To add a page to your documentation:
   a. Create a `.rst` file for the function/module you wish to document
      (you can use the templates supplied here), and
   b. Add the name of the `.rst` file to the `toctree` in `index.rst`.
6. In terminal, inside the `documentation` folder, run `make html`.
   (**TIP OF THE WEEK**: actually, always run `make clean html` to clear sphinx cache and build from scratch)
7. To view locally - open the file `documentation/_build/html/index.html` in your browser, and enjoy the read :)
8. To share - you can use GitHub Pages to host your documentation:
   a. Copy the content of `documentation/_build/html/` into a new `docs` folder, under the root of the project.
   b. Create an empty file `.nojekyll` inside `docs` folder
      (this tells GitHub Pages to bypass the default `jekyll` themes and use the `html` and `css` in your project)
   c. Push your changes to master branch.
   d. In your repository on GitHub, go to “Settings” -> “GitHub Pages” -> “Source”
      and select “master branch /docs folder”.
   e. Share your beautiful documentation site at `https://<your_git_usrname>.github.io/<project_name>/`

Part III - Document YOUR next project

Part I - Overview

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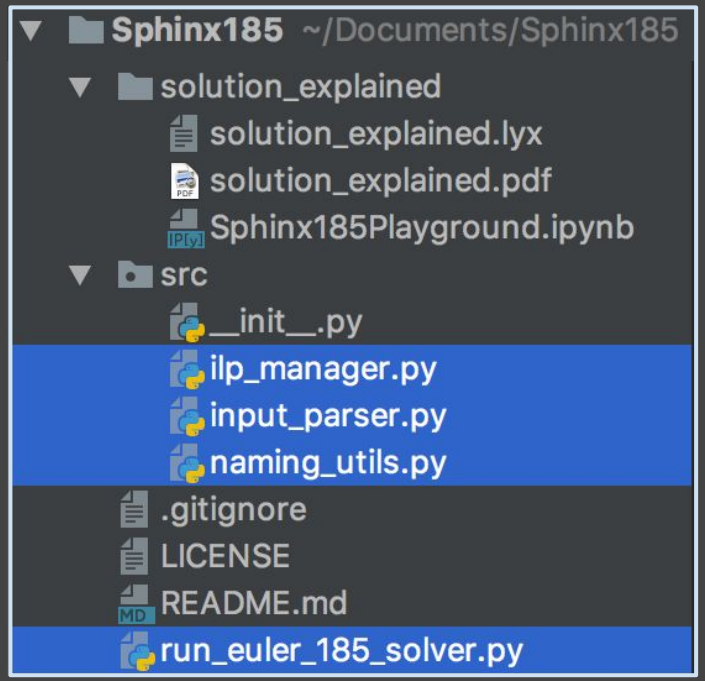

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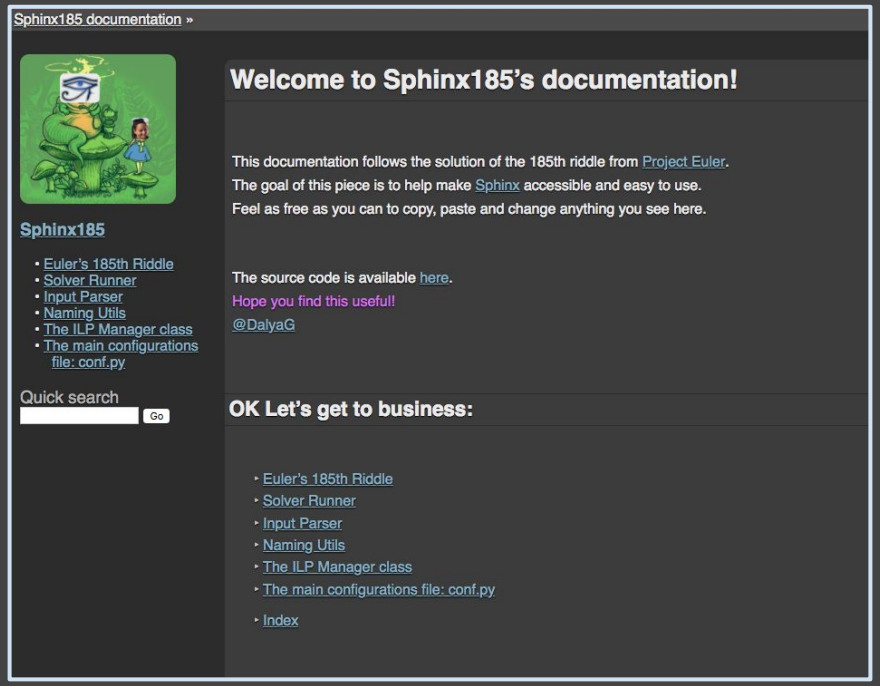
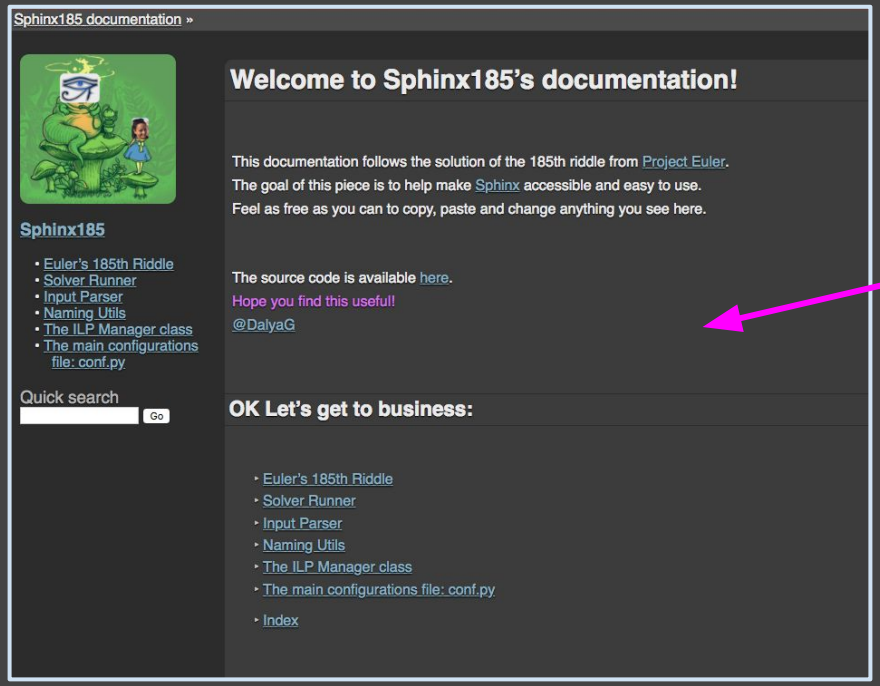


dalyag.github.io/Sphinx185

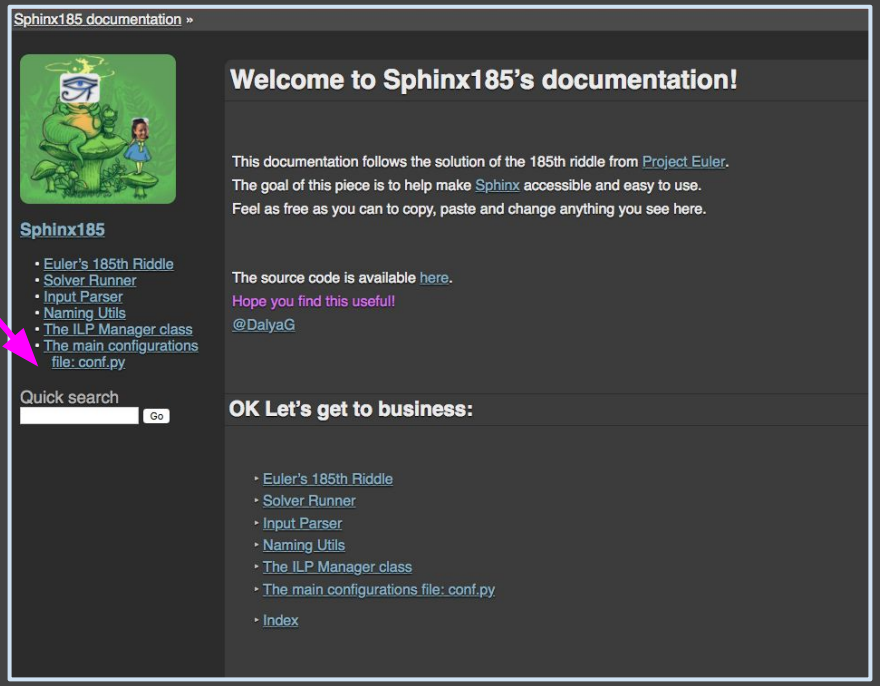
Part I - Overview



index.rst - the content of the home page

Part I - Overview

conf.py - settings for the entire project



Part I - Overview

Euler's 185th Riddle

In case you are interested, the riddle goes something like this:

> Let s^* be a sequence of m ***unknown*** digits (colors from 0 to 9).
> We are given n sequences of m ***known*** colors, $x_{i,j}$ marks the color of the j^{th} index in sequence i.
> For each sequence we are given the number of ***correct colors***, that is, indices in the sequence for which $x_{i,j} = s^*_j$.
> Our goal is to discover the colors of s^*, which we are promised are unique, given the input.

Part I - Overview

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Solver Runner

`run_euler_185_solver.main()` [SOURCE]

Run this code to get the solution to 185th problem in Project Euler.

Terminal options:

```
-m <sequence_length>, --sequence_length <sequence_length>
```

Length of sequence in the riddle. Assume file 'data/input_m.txt' exists.

Part I - Overview

Euler's 185th Riddle

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We are given
For each sequ
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Source code for run_euler_185_solver

```
from optparse import OptionParser

from src.ilp_manager import ILPManager
from src.input_parser import input_parser


[docs]def main():
    """
    Run this code to get the solution to 185th problem in Project Euler.

    Terminal options:

    .. option:: -m <sequence_length>, --sequence_length <sequence_length>

       Length of sequence in the riddle. Assume file 'data/input_m.txt' exists.

    """
    parser = OptionParser()
    parser.add_option("-m", "--sequence_length",
                      help="Length of sequence in the riddle. Assume file 'data/input_m.txt' exists.")
    options, _ = parser.parse_args()

    m = int(options.sequence_length)
    sequences_list, n_correct_vertices_list = input_parser(m)

    ilp_manager = ILPManager(m)
    ilp_solver, s_star_to_color_edges = ilp_manager.build_ilp_solver(sequences_list, n_correct_vertices_list)
    s_star = ilp_manager.solve_ilp(ilp_solver, s_star_to_color_edges)

    print "Solution is: {}".format(''.join([str(i) for i in s_star]))


if __name__ == '__main__':
    main()
```

Solver Runner

_solver.main() [SOURCE]

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Part I - Overview

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    Terminal options:

    .. option:: -m <sequence_length>, --sequence_length <sequence_length>

       Length of sequence in the riddle. Assume file 'data/input_m.txt' exis

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    parser = OptionParser()
    parser.add_option("-m", "--sequence_length",
                      help="Length of sequence in the riddle. Assume file '
    options, _ = parser.parse_args()

    m = int(options.sequence_length)
    sequences_list, n_correct_vertices_list = input_parser(m)

    ilp_manager = ILPManager(m)
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    s_star = ilp_manager.solve_ilp(ilp_solver, s_star_to_color_edges)

    print "Solution is: {}".format(''.join([str(i) for i in s_star]))


if __name__ == '__main__':
    main()
```

Solver Runner

class src.ilp_manager.ILPManager(*m*) [SOURCE]

Model the 185th problem in Project Euler as an ILP (Integer Linear Program)
To instantiate this module, please specify the length on sequences.

build_ilp_solver(*sequences_list, n_correct_vertices_list*) [SOURCE]

Given input sequences, and number or correct vertices in each of them, build an ILP representation of the problem.

Parameters:

- **sequences_list** – List of sequences, each of length self.m, of integers between 0 and 9.
- **n_correct_vertices_list** – Number of correct vertices in each sequence in sequences_list. A vertex is correct if its color is equal to the color of the corresponding vertex in the solution s_star.

Returns:

tuple, containing:

- ilp_solver: Pulp instance, holding all the information needed for the solution.
- s_star_to_color_edges: The edges (variables) in the ilp_solver.

solve_ilp(*ilp_solver, s_star_to_color_edges*) [SOURCE]

Given a solver with the needed information, solve the ILP and extract the solution to problem 185.

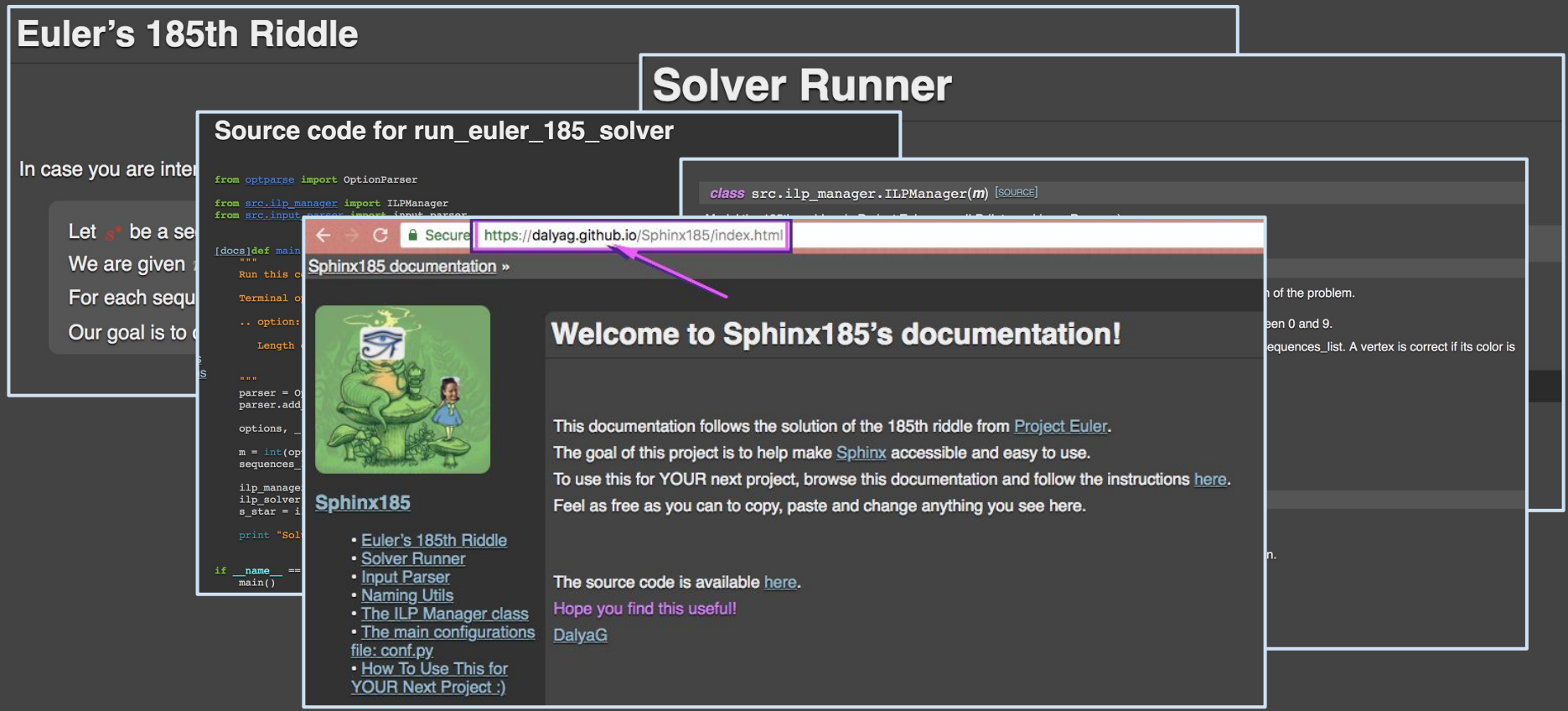
Parameters:

- **ilp_solver** – Pulp instance, holding all the information needed for the solution.
- **s_star_to_color_edges** – The edges (variables) in the ilp_solver.

Returns:

s_star: List of integers that is the solution to problem 185.

Part I - Overview



Part II - Main configuration file - conf.py

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```
"""

This is the main file in which the configuration for the documentation is made.

"""

# -*- coding: utf-8 -*-
#
# Sphinx185 documentation build configuration file, created by
# sphinx-quickstart on Sat May 12 19:34:31 2018.

# DalyaG: This file was heavily modified from its original build.
# Hope you find this useful :)


# -- Define here your working directory ------------------------------------------------------------------------------

import os
import sys
sys.path.append(os.path.abspath('/Users/dalya/Documents/Sphinx185'))


# -- Some general info  about the project ----------------------------------------------------------------------------

project = u'Sphinx185'
copyright = u'2018, DalyaG'
author = u'DalyaG'


# -- A few basic configurations --------------------------------------------------------------------------------------

# The documentation in this project will be mostly generated from .rst files
# In This project, every auto-documented module/class has its own .rst file, under the main documentation dir,
#   which is rendered into an .html page.
# Get more information here: http://www.sphinx-doc.org/en/master/usage/restructuredtext/basics.html
source_suffix = ['.rst']

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# (this is a standard name. change it only if you know what you are doing)
master_doc = 'index'

# List of patterns, relative to source directory, that match files and
# directories to ignore when looking for source files.
# This patterns also effect to html_static_path and html_extra_path
exclude_patterns = ['_build']

# List here any paths that contain templates, relative to this directory.
# You can find some not-so-intuitive information here: http://www.sphinx-doc.org/en/master/templating.html
# But the best way to learn is by example, right? :)
# So, for example, in this project, I wanted to change the title of the Table Of Contents in the sidebar.
#   So I copied `<Sphinx install dir>/themes/basic/globaltoc.html` into the `_templates` folder,
#      and replaced 'Table of Content' with 'Sphinx185'.
templates_path = ['_templates']
```

```
# -- Define and configure non-default extensions ---------------------------------------------------------------------

# You can find a list of available extension here: http://www.sphinx-doc.org/en/master/extensions.html
extensions = ['sphinx.ext.todo', 'sphinx.ext.viewcode', 'sphinx.ext.autodoc', 'sphinx.ext.imgmath']

# Above extensions explanation and configurations:

# todo: When you use the syntax ".. todo:: some todo comment" in your docstring,
#         it will appear in a highlighted box in the documentation.
#       In order for this extension to work, make sure you include the following:
todo_include_todos = True

# viewcode: Next to each function/module in the documentation, you will have an internal link to the source code.
#           The source code will have colors defined by the Pygments (syntax highlighting) style.
#           You can checkout the available pygments here: https://help.farbox.com/pygments.html
pygments_style = 'native'

# autodoc: The best thing about Sphinx IMHO is autodoc.
#          It allows Sphinx to automatically generate documentation for the docstrings in your code.
#          Get more info here: http://www.sphinx-doc.org/en/master/ext/autodoc.html
# Some useful configurations:
autoclass_content = "both"  # Include both the class's and the init's docstrings.
autodoc_member_order = 'bysource'  # In the documentation, keep the same order of members as in the code.
autodoc_default_flags = ['members']  # Default: include the docstrings of all the class/module members.

# imgmath: Sphinx allows use of LaTeX in the html documentation, but not directly. It is first rendered to an image.
# You can add here whatever preamble you are used to adding to your LaTeX document.
imgmath_latex_preamble = r'''
\usepackage{xcolor}
\definecolor{offwhite}{rgb}{238,238,238}
\everymath{\color{offwhite}}
\everydisplay{\color{offwhite}}
'''


# -- Options for HTML output -----------------------------------------------------------------------------------------

# The theme to use for HTML and HTML Help pages.
# You can find available themes here: http://www.sphinx-doc.org/en/master/theming.html
# In this project, I wanted to use a non-default theme, and so I downloaded the `graphite` template from here:
#    https://github.com/Cartroo/sphinx-theme-graphite
#    Some adjustments I made to graphite:
#    - I did not use the pygment configuration, and so removed "pygments_style = graphite.GraphiteStyle" from theme.conf
#                                                              and deleted graphite.py
#    - In the static folder, I configured several classes both in graphite.css and in html4css1.css,
#          you can download the original and compare to find those changes.
html_theme = 'graphite'
# When using a non-built-in theme, define the path to your template code.
html_theme_path = ['.']

# Add any paths that contain custom static files (such as style sheets) here,
# relative to this directory. They are copied after the builtin static files,
# so a file named "default.css" will overwrite the builtin "default.css".
html_static_path = ['_static']

# Defining the static path allows me to add my own logo for the project:
#   (make sure the theme of your choice support the use of logo.
html_logo = '_static/sphinx_and_dalya.png'

# Custom sidebar templates, must be a dictionary that maps document names to template names.
# In This project I chose to include in the sidebar:
#   - Table of Contents: I chose globaltoc as it is less refined,
#     and configured the title by editing the globaltoc template (see explanation above, in the templates_path comment)
#   - Search box: appears below the TOc, and can be configured by editing css attributes.
html_sidebars = {
    '**': [
        'globaltoc.html',
        'searchbox.html'
    ]
}
```

Part II - Main configuration file - conf.py

Full details - EXTRA SLIDES

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Templates are html exmaples for designing predifined elements

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We will see:
a template for sidebar

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# You can find available themes here: http://www.sphinx-doc.org/en/master/theming.html
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#                                                              and deleted graphite.py
#    - In the static folder, I configured several classes both in graphite.css and in html4css1.css,
#          you can download the original and compare to find those changes.
html_theme = 'graphite'
# When using a non-built-in theme, define the path to your template code.
html_theme_path = ['.']

# Add any paths that contain custom static files (such as style sheets) here,
# relative to this directory. They are copied after the builtin static files,
# so a file named "default.css" will overwrite the builtin "default.css".
html_static_path = ['_static']

# Defining the static path allows me to add my own logo for the project:
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html_logo = '_static/sphinx_and_dalya.png'

# Custom sidebar templates, must be a dictionary that maps document names to template names.
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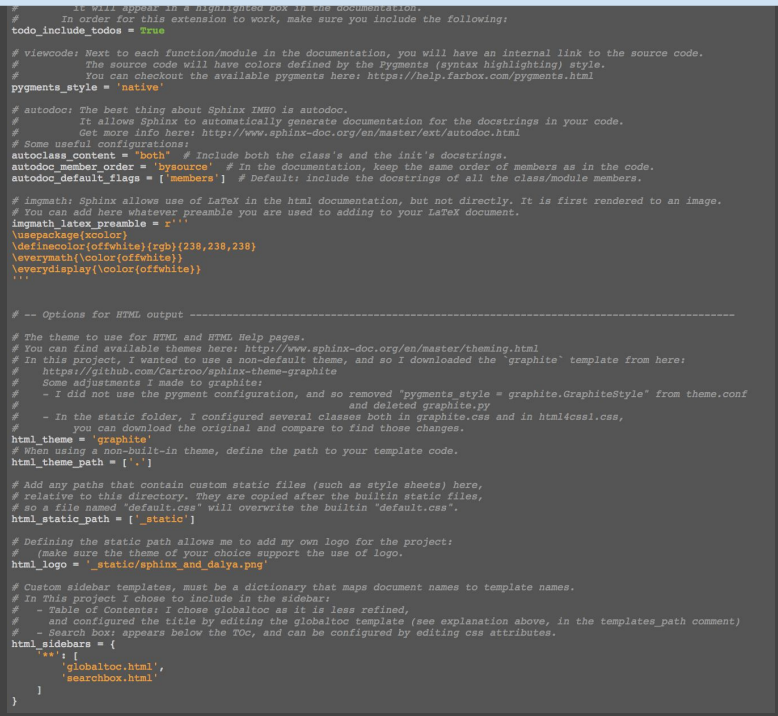
#   - Search box: appears below the TOc, and can be configured by editing css attributes.
html_sidebars = {
    '**': [
        'globaltoc.html',
        'searchbox.html'
    ]
}
```

Part II - Main configuration file - conf.py

```
extensions = ['sphinx.ext.todo', 'sphinx.ext.viewcode', 'sphinx.ext.autodoc',
'sphinx.ext.imgmath']
```

Let Sphinx know what extentions to use



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# Some useful configurations:
autoclass_content = "both"  # Include both the class's and the init's docstrings.
autodoc_member_order = 'bysource'  # In the documentation, keep the same order of members as in the code.
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Part II - Main configuration file - conf.py

'sphinx.ext.autodoc'

```
# --

# Yo
exte

# Above extensions explanation and configurations:

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    '**': [
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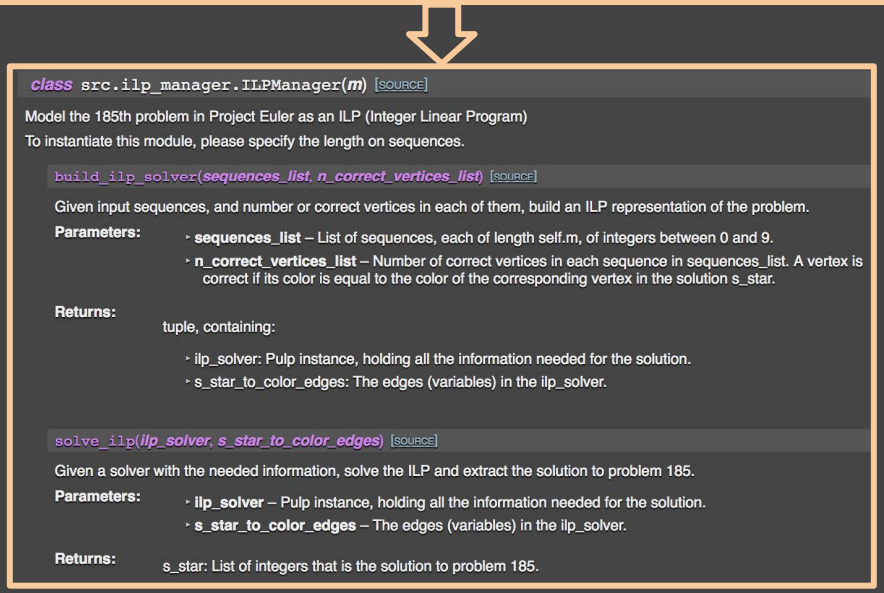
    ]
}
```

Part II - Main configuration file - conf.py

```
.. autoclass:: src.ilp_manager.ILPManager
```



class src.ilp_manager.ILPManager(*m*) [SOURCE]

Model the 185th problem in Project Euler as an ILP (Integer Linear Program)

To instantiate this module, please specify the length on sequences.

build_ilp_solver(*sequences_list*, *n_correct_vertices_list*) [SOURCE]

Given input sequences, and number or correct vertices in each of them, build an ILP representation of the problem.

Parameters:

- **sequences_list** – List of sequences, each of length self.m, of integers between 0 and 9.
- **n_correct_vertices_list** – Number of correct vertices in each sequence in sequences_list. A vertex is correct if its color is equal to the color of the corresponding vertex in the solution s_star.

Returns:

tuple, containing:

- ilp_solver: Pulp instance, holding all the information needed for the solution.
- s_star_to_color_edges: The edges (variables) in the ilp_solver.

solve_ilp(*ilp_solver*, *s_star_to_color_edges*) [SOURCE]

Given a solver with the needed information, solve the ILP and extract the solution to problem 185.

Parameters:

- **ilp_solver** – Pulp instance, holding all the information needed for the solution.
- **s_star_to_color_edges** – The edges (variables) in the ilp_solver.

Returns:

s_star: List of integers that is the solution to problem 185.

'sphinx.ext.autodoc'

```
# --
# Yo
exte

# Above extensions explanation and configurations:

# todo: When you use the syntax ".. todo:: some todo comment" in your docstring,
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#       In order for this extension to work, make sure you include the following:
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```

Part II - Main configuration file - conf.py

'sphinx.ext.autodoc'

autoclass_content = "both"

Include both the class's and the init's docstrings

Part II - Main configuration file - conf.py

```
'sphinx.ext.autodoc'
```

```
autodoc_member_order = 'bysource'
```

In the documentation, keep the same order of members as in the code

```
# -- General configuration ------------------------------------------------

# You can specify multiple extension modules:
extensions = ['sphinx.ext.autodoc', 'sphinx.ext.doctest', 'sphinx.ext.todo',
              'sphinx.ext.imgmath', 'sphinx.ext.ifconfig', 'sphinx.ext.viewcode']

# Above extensions explanation and configurations:

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```

Part II - Main configuration file - conf.py

```
'sphinx.ext.autodoc'
```

```
autodoc_default_flags = ['members']
```

Default: include the docstrings of all the class/module members

Part II - Main configuration file - conf.py

```
# -- Define and configure non-default extensions ---------------------------------------------------

# You can find a list of available extension here: http://www.sphinx-doc.org/en/master/extensions.html
extensions = ['sphinx.ext.todo', 'sphinx.ext.viewcode', 'sphinx.ext.autodoc', 'sphinx.ext.imgmath']

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Options for HTML output

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Part II - Main configuration file - conf.py

Sphinx185

- Euler's 185th Riddle
- Solver Runner
- Input Parser
- Naming Utils
- The ILP Manager class
- The main configurations file: conf.py

Quick search

Go

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Part II - Main configuration file - conf.py

Sphinx185

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Part II - Main configuration file - conf.py

copy `<Sphinx install dir>/themes/basic/globaltoc.html`
into the `_templates` folder,
and replaced 'Table of Content' with 'Sphinx185':

Sphinx185

```
<h3>
    <a href="{{ pathto(master_doc) }}">
        {{ _('Sphinx185') }}</a>
</h3>
{{ toctree() }}
```

```
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#           The source code will have colors defined by the Pygments (syntax highlighting) style.
#           You can checkout the available pygments here: https://help.farbox.com/pygments.html
pygments_style = 'native'

# autodoc: The best thing about Sphinx IMHO is autodoc.
#          It allows Sphinx to automatically generate documentation for the docstrings in your code.
#          Get more info here: http://www.sphinx-doc.org/en/master/ext/autodoc.html
# Some useful configurations:
autoclass_content = "both"  # Include both the class's and the init's docstrings.
autodoc_member_order = 'bysource'  # In the documentation, keep the same order of members as in the code.
autodoc_default_flags = ['members']  # Default: include the docstrings of all the class/module members.

# imgmath: Sphinx allows use of LaTeX in the html documentation, but not directly. It is first rendered to an image.
# You can add here whatever preamble you are used to adding to your LaTeX document.
imgmath_latex_preamble = r'''
\usepackage{xcolor}
\definecolor{offwhite}{rgb}{238,238,238}
\everymath{\c
\everydisplay{
'''


# -- Options f
```

Options for HTML output

```
# The theme t
# You can fin
# In this project, I wanted to use a non-default theme, and so I downloaded the `graphite` template from here:
#    https://github.com/Cartroo/sphinx-theme-graphite
#    Some adjustments I made to graphite:
#    - I did not use the pygment configuration, and so removed "pygments_style = graphite.GraphiteStyle" from theme.conf
#                                                              and deleted graphite.py
#    - In the static folder, I configured several classes both in graphite.css and in html4css1.css,
```

```
html_sidebars = {
    '**': [
        'globaltoc.html',
        'searchbox.html'
    ]
}
```

```
names.

ve, in the templates_path comment)
tes.
```

Part III - Document YOUR next project

Part III - Document YOUR next project

We will follow these instructions:

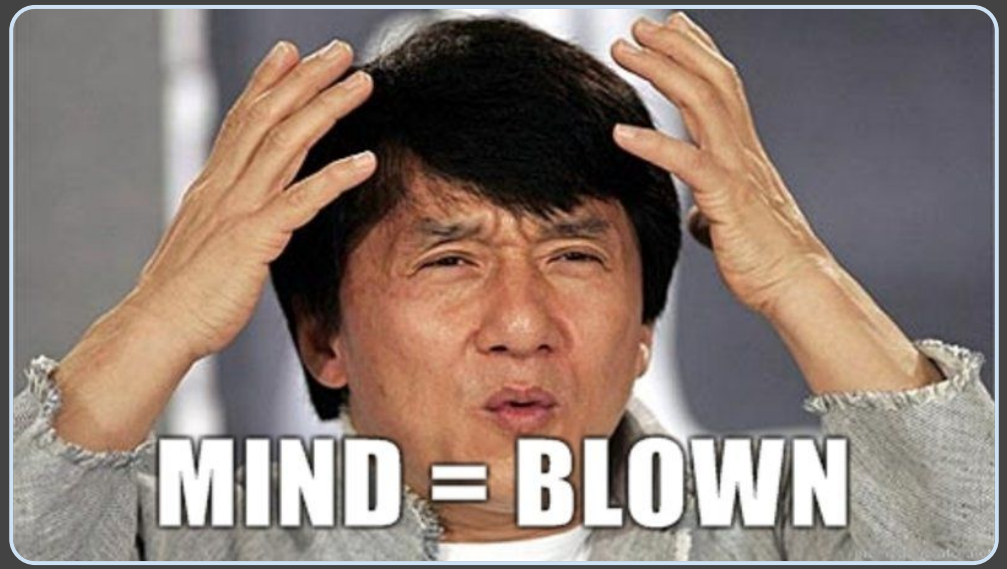
(found here https://dalyag.github.io/Sphinx185/how_to_use_this_for_your_next_project.html)

How To Use This for YOUR Next Project :)

1. `pip install sphinx`
2. Copy the `documentation_template_for_your_next_project` folder in this repository, make it a subdirectory in your local project and rename it `documentation`.
3. Edit `conf.py` by searching the pattern `#CHNAGEME#` inside the file and follow the instructions.
4. Edit `index.rst` by following the inline instructions.
5. To add a page to your documentation:
    a. Create a `.rst` file for the function/module you wish to document (you can use the templates supplied here), and
    b. Add the name of the `.rst` file to the `toctree` in `index.rst`.
6. In terminal, inside the `documentation` folder, run `make html`.
   (**TIP OF THE WEEK**: actually, always run `make clean html` to clear sphinx cache and build from scratch)
7. To view locally - open the file `documentation/_build/html/index.html` in your browser, and enjoy the read :)
8. To share - you can use GitHub Pages to host your documentation:
    a. Copy the content of `documentation/_build/html/` into a new `docs` folder, under the root of the project.
    b. Create an empty file `.nojekyll` inside `docs` folder (this tells GitHub Pages to bypass the default `jekyll` themes and use the `html` and `css` in your project)
    c. Push your changes to master branch.
    d. In your repository on GitHub, go to “Settings” -> “GitHub Pages” -> “Source” and select “master branch /docs folder”.
    e. Share your beautiful documentation site at `https://<your_git_usrname>.github.io/<project_name>/`

Part III - Document YOUR next project

1. pip install sphinx

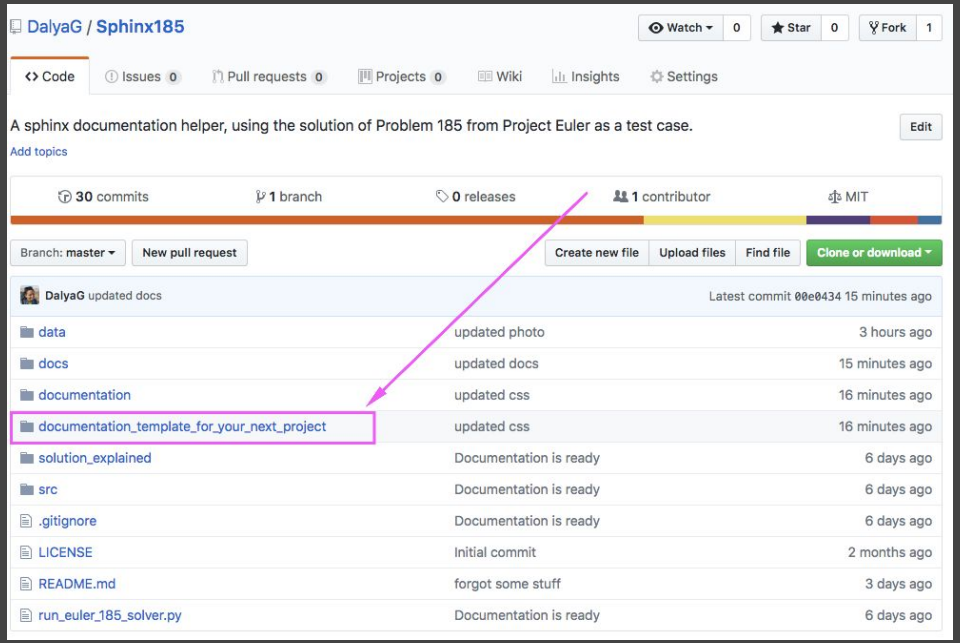


Part III - Document YOUR next project

2. Go to https://github.com/DalyaG/Sphinx185

Part III - Document YOUR next project

2. Go to https://github.com/DalyaG/Sphinx185



Part III - Document YOUR next project

2. Go to https://github.com/DalyaG/Sphinx185

* Download this folder to your local project: *documentation_template_for_your_next_project*

* Rename it *documentation*

Part III - Document YOUR next project

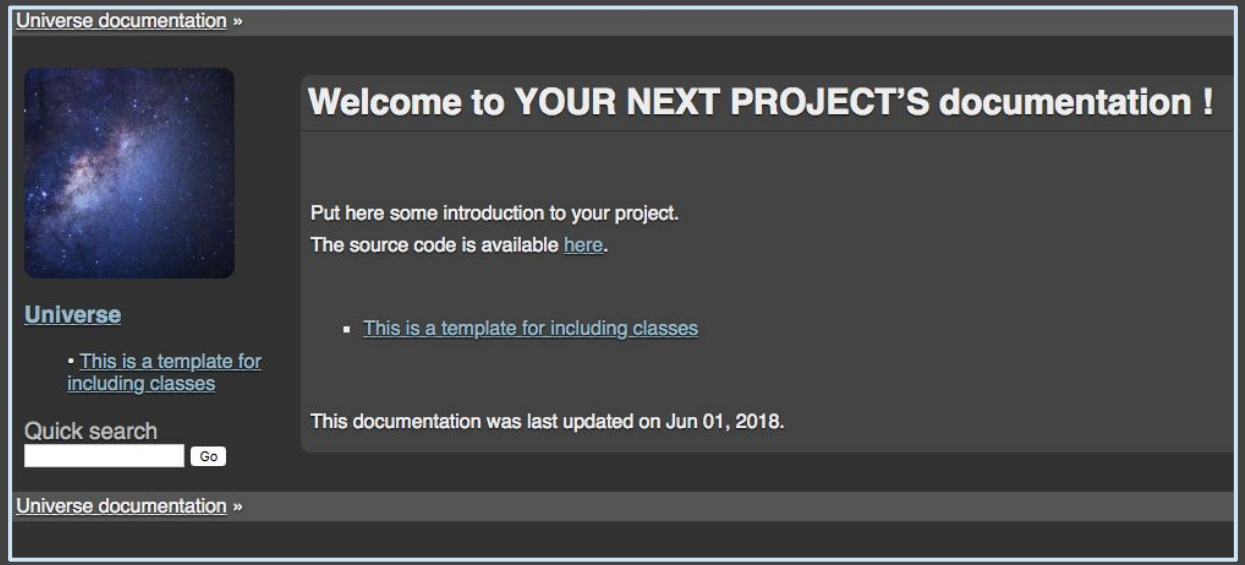
Bravo! You now have a documentation!

Part III - Document YOUR next project

Bravo! You now have a documentation!

Open this file in your browser to see:

<your_project>/documentation/_build/html/index.html



Part III - Document YOUR next project

3. Edit *conf.py*

Part III - Document YOUR next project

3. Edit *conf.py* by searching the pattern *#CHNAGEME#* inside the file and follow the instructions.

```
# -- Some general info  about the project -----

#CHNAGEME# Change this to fit your project.
project = u'Universe'
copyright = u'2018, DalyaG'
author = u'DalyaG'
```

Part III - Document YOUR next project

4. Edit *index.rst*

Part III - Document YOUR next project

4. Edit *index.rst* by following the inline instructions.

```
Welcome to YOUR NEXT PROJECT'S documentation !
==============================================

Put here some introduction to your project.

The source code is available `here <https://github.com/usrname/projectname>`_.
```

Part III - Document YOUR next project

5. To add a page to your documentation:

Part III - Document YOUR next project

5. To add a page to your documentation:

dummy_class_template_for_your_next_project.py

```
class DummyClassTemplateForYourNextProject(object):
    """Some general info about this class."""
    def __init__(self):
        """Some info about the init method"""
        self.some_att = 42

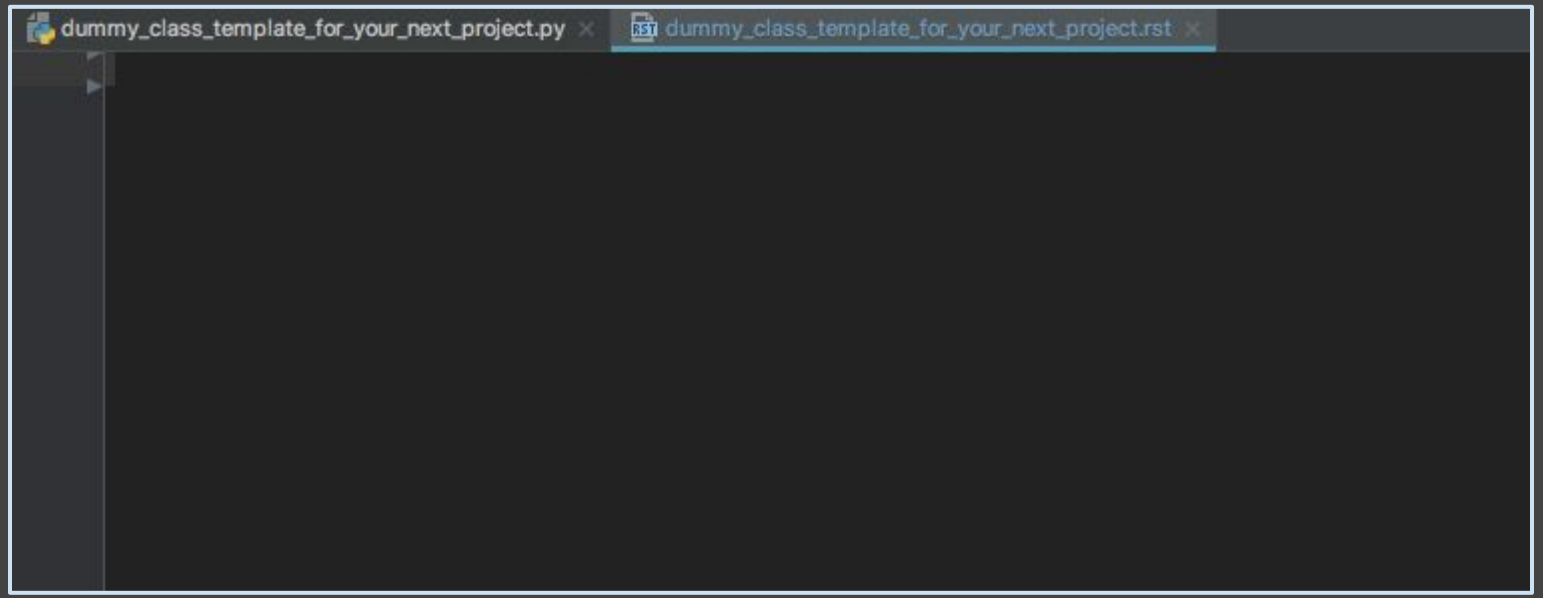
    def answer_to_the_universe(self):
        """

        To make a "real" docstring leave blank lines before and after the text.

        :return: Prints the answer to the universe.
        """
        print "The answer to the universe is: {}".format(self.some_att)
```

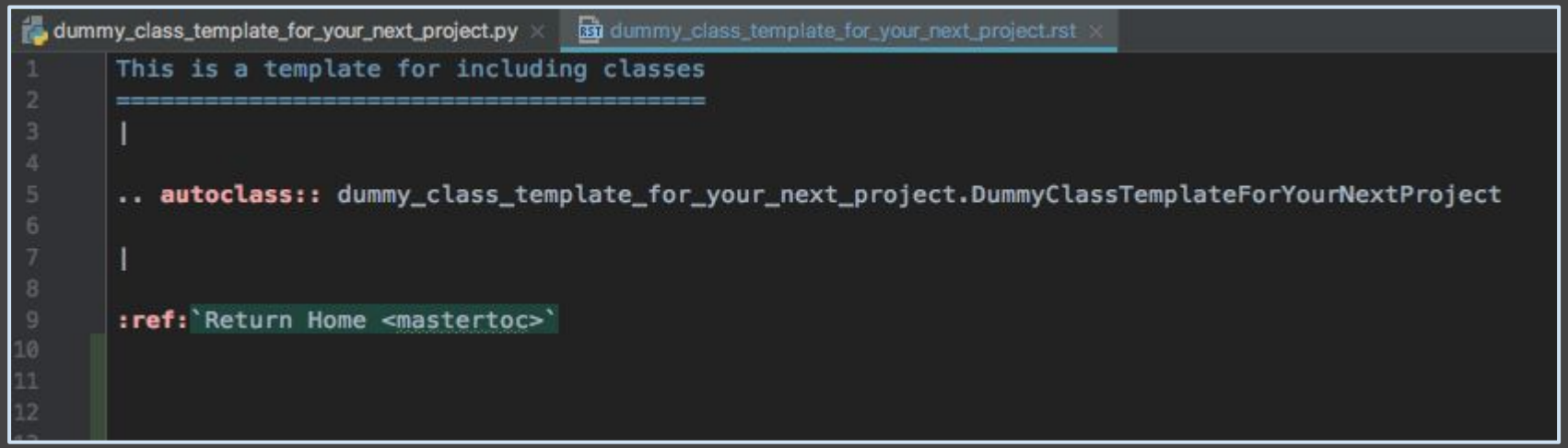
Part III - Document YOUR next project

5. To add a page to your documentation: Create a *.rst* file



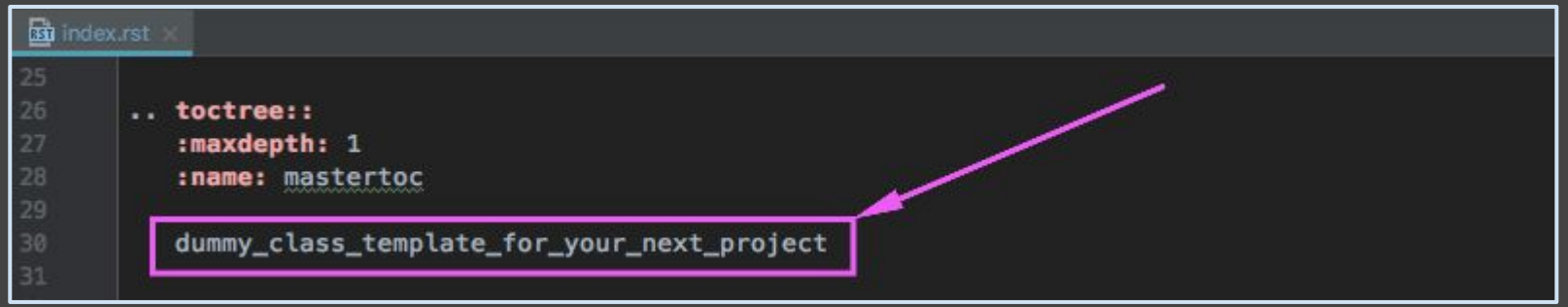
Part III - Document YOUR next project

5. To add a page to your documentation:
Create a *.rst* file and edit is to include your module



Part III - Document YOUR next project

5. To add a page to your documentation:
   Create a *.rst* file and edit is to include your module
   And add its name to the *TOC* in *index.rst*

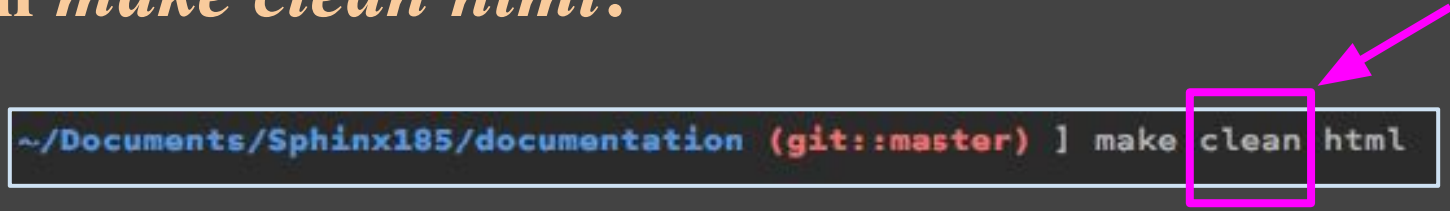


Part III - Document YOUR next project

6. In terminal, inside the *documentation* folder, run *make clean html*:

Part III - Document YOUR next project

6. In terminal, inside the *documentation* folder, run *make clean html*:

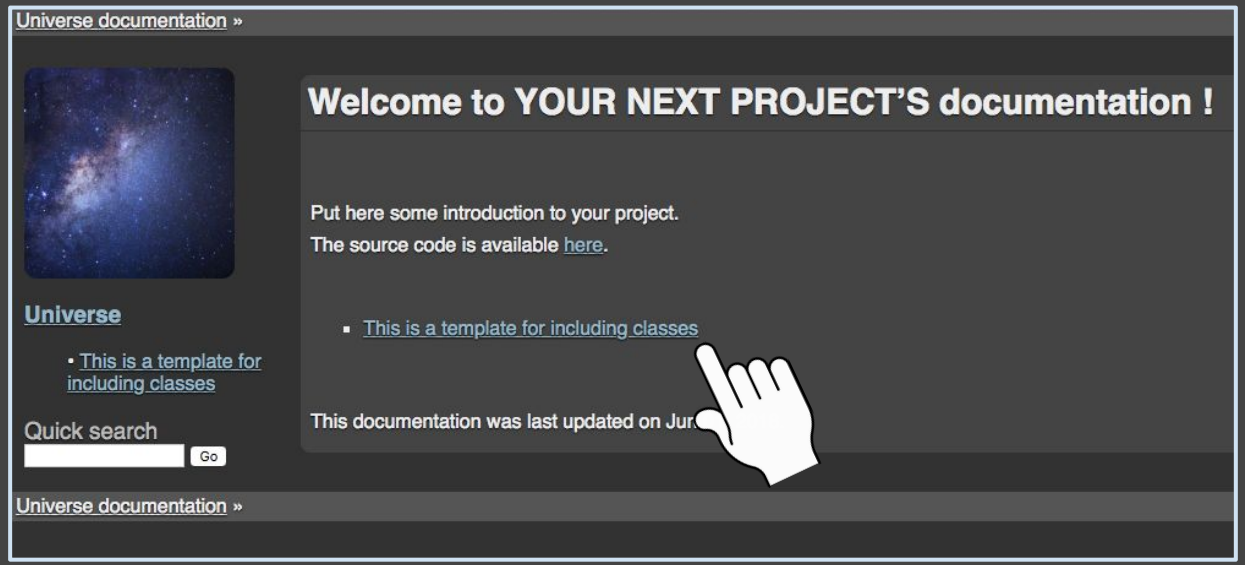


Part III - Document YOUR next project

7. To view locally

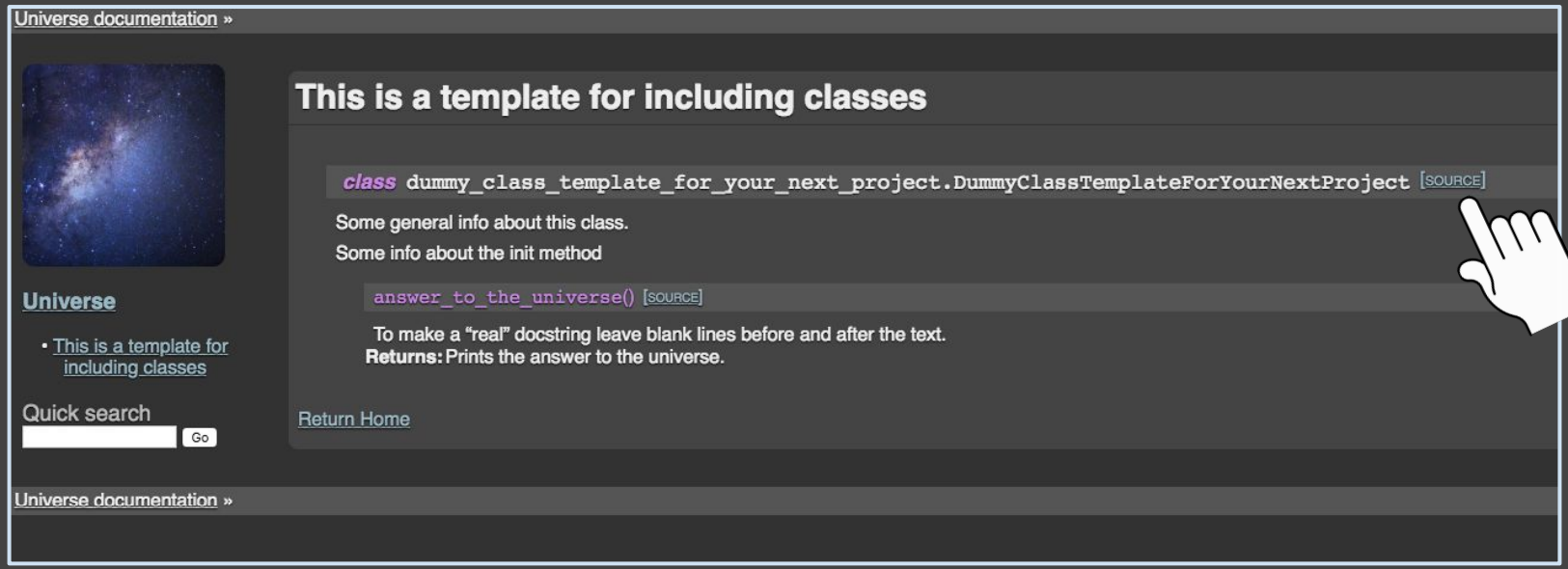
Part III - Document YOUR next project

7. To view locally, open this file in your browser *documentation/_build/html/index.html*



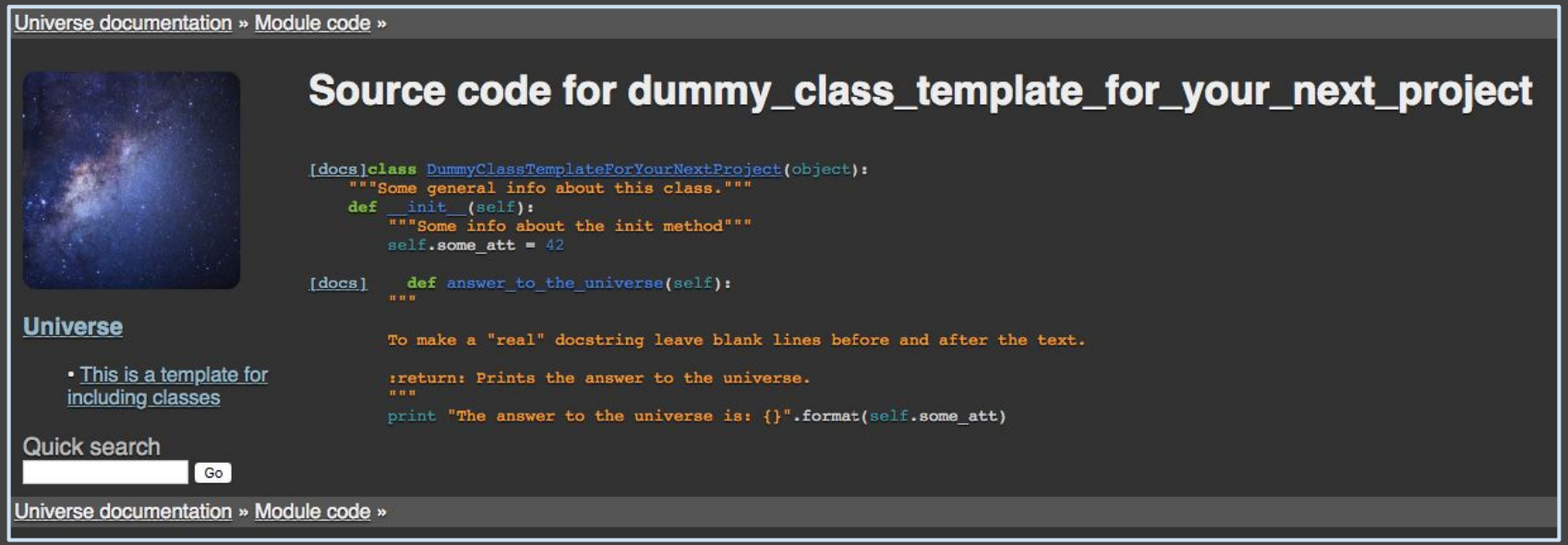
Part III - Document YOUR next project

7. To view locally, open this file in your browser *documentation/_build/html/index.html*



Part III - Document YOUR next project

7. To view locally, open this file in your browser *documentation/_build/html/index.html*



Part III - Document YOUR next project

7. To view loc browser
   documenta

Part III - Document YOUR next project

8. SHARE your documentation!

Part III - Document YOUR next project

8. Hosting on GitHub Pages:

Part III - Document YOUR next project

8. Hosting on GitHub Pages:

Part III - Document YOUR next project

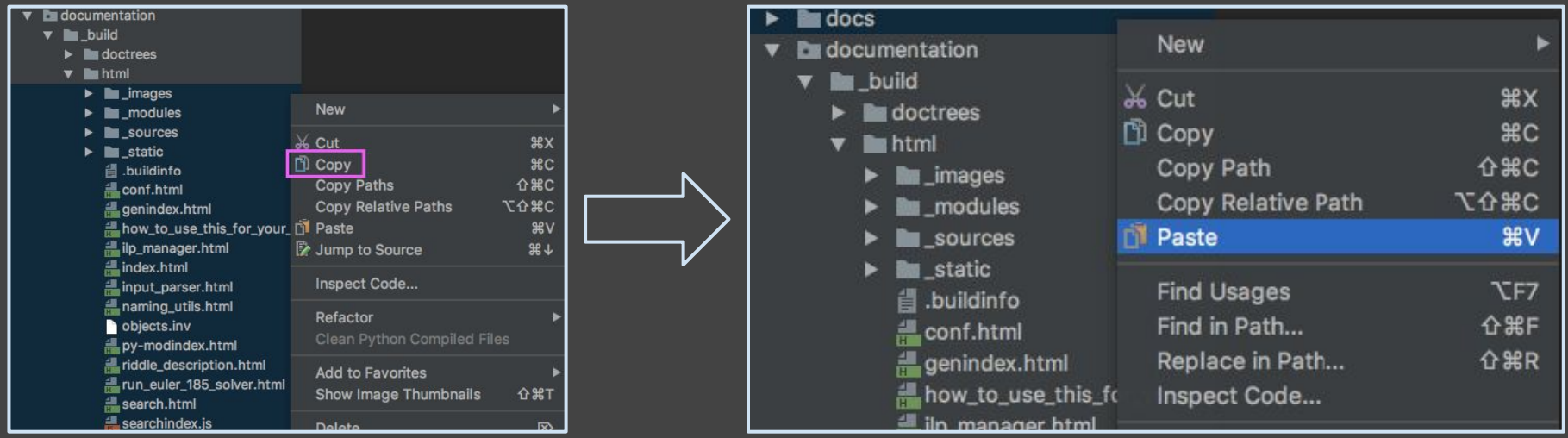
8. Hosting on GitHub Pages:

a. Create a folder *docs* under the root of the project

Part III - Document YOUR next project

8. Hosting on GitHub Pages:

a. And copy inside it the content of *documentation/_build/html/*

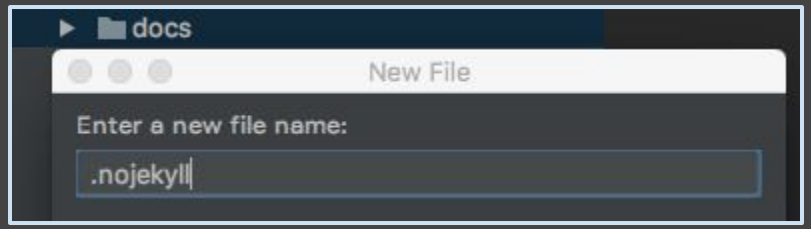


Part III - Document YOUR next project

8. Hosting on GitHub Pages:

b. Create an empty file *.nojekyll* inside *docs* folder

(this tells GitHub Pages to bypass the default jekyll themes and use the html and css in your project)



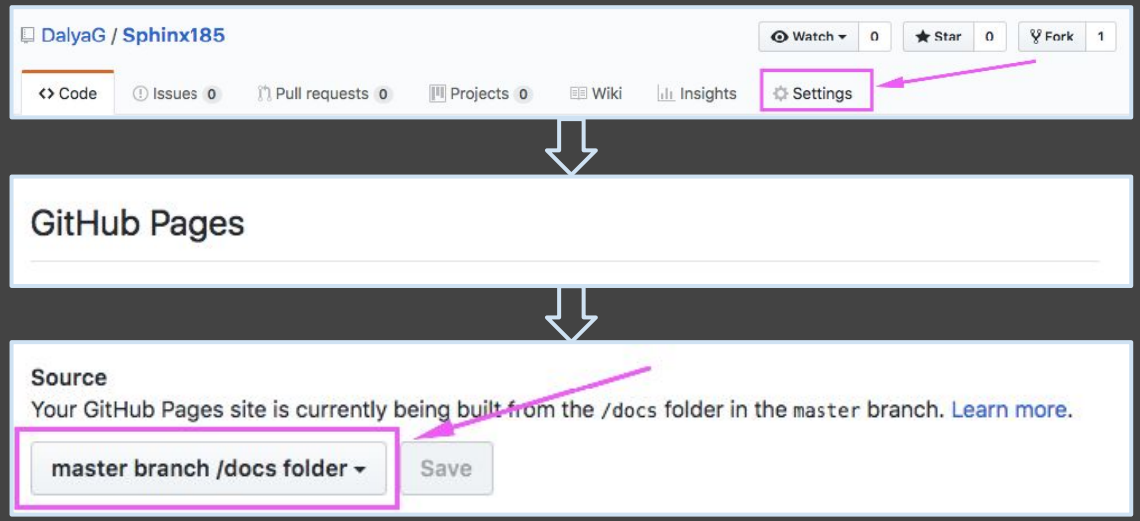
Part III - Document YOUR next project

8. Hosting on GitHub Pages:
    c. Push your changes to master branch.

Part III - Document YOUR next project

8. Hosting on GitHub Pages:

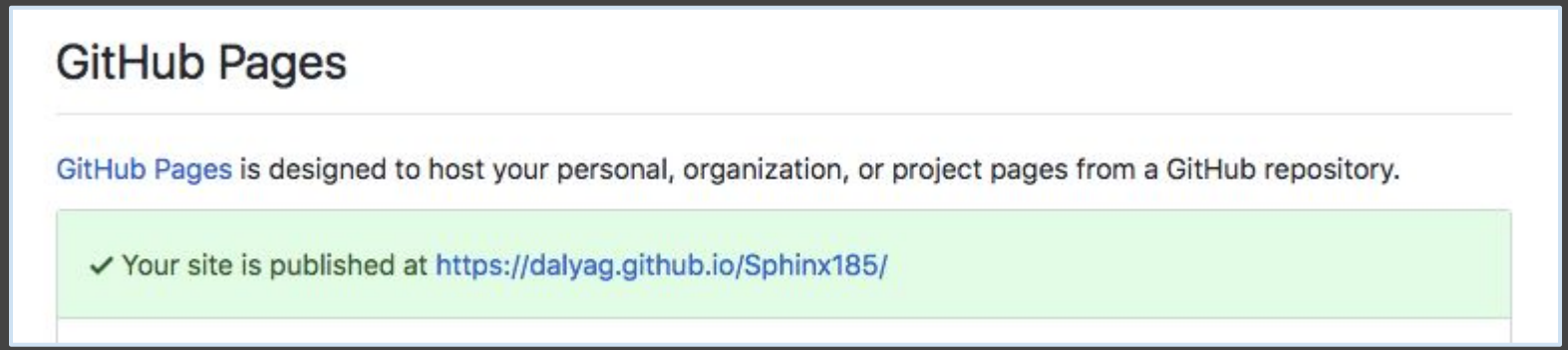
d. In your repository on GitHub, go to “Settings” -> “GitHub Pages” -> “Source”



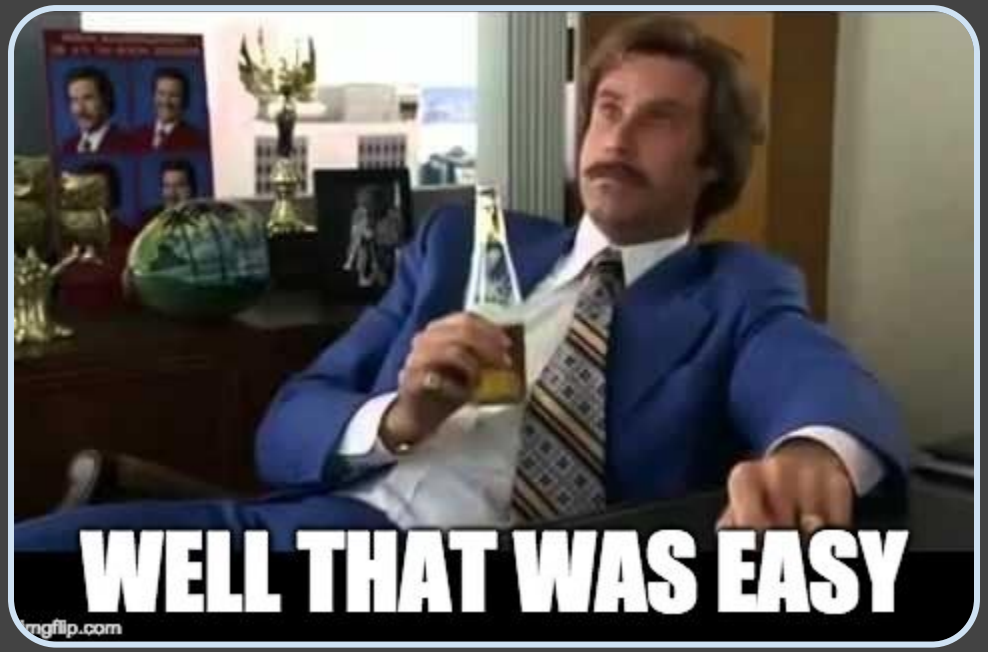
Part III - Document YOUR next project

8. Hosting on GitHub Pages:

e. Share your beautiful documentation site at https://<your_git_usrname>.github.io/<project_name>/

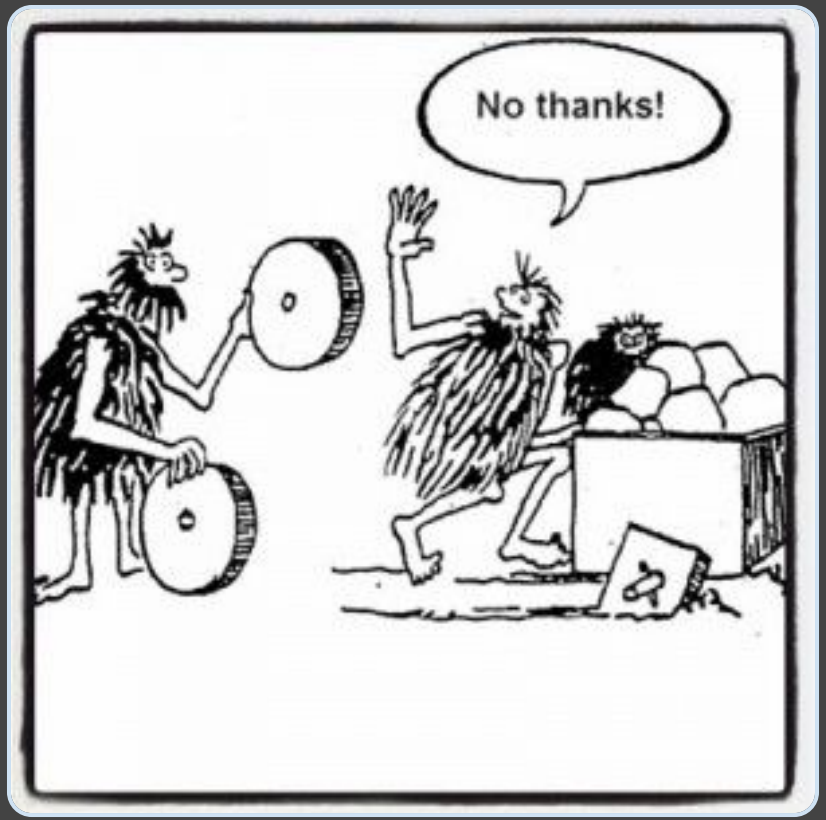


Part III - Document YOUR next project



Part III - Document YOUR next project

Take Home Message



Thank you :)

Questions?

DalyaG@gmail.com

EXTRA SLIDES

Intializing sphinx

Part III - Document YOUR next project

2. Initialize sphinx: there is always the option of

```
~/Documents/Sphinx185 (git::master) ] sphinx-quickstart
```

Part III - Document YOUR next project

2. Initialize sphinx: there is always the option of

```
~/Documents/Sphinx185 (git::master) ] sphinx-quickstart
```

One advice: create a dedicated documentation folder

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

Part III - Document YOUR next project

2. Initialize sphinx: there is always the option of

```
~/Documents/Sphinx185 (git::master) ] sphinx-quickstart
```

One advice: create a dedicated documentation folder

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

After that its all Blah blah blah, enter enter enter…

Main configuration file - conf.py

Part II - Main configuration file - conf.py

```
"""

This is the main file in which the configuration for the documentation is made.

"""

# -*- coding: utf-8 -*-
#
# Sphinx185 documentation build configuration file, created by
# sphinx-quickstart on Sat May 12 19:34:31 2018.

# DalyaG: This file was heavily modified from its original build.
# Hope you find this useful :)


# -- Define here your working directory ------------------------------------------------------------------------------

import os
import sys
sys.path.append(os.path.abspath('/Users/dalya/Documents/Sphinx185'))


# -- Some general info  about the project ----------------------------------------------------------------------------

project = u'Sphinx185'
copyright = u'2018, DalyaG'
author = u'DalyaG'


# -- A few basic configurations --------------------------------------------------------------------------------------

# The documentation in this project will be mostly generated from .rst files
# In This project, every auto-documented module/class has its own .rst file, under the main documentation dir,
#   which is rendered into an .html page.
# Get more information here: http://www.sphinx-doc.org/en/master/usage/restructuredtext/basics.html
source_suffix = ['.rst']

# This is the name of the main page of the project.
# It means that you need to have an `index.rst` file where you will design the landing page of your project.
# It will be rendered into an .html page that you can find at: `_build/html/index.html`
# (this is a standard name. change it only if you know what you are doing)
master_doc = 'index'

# List of patterns, relative to source directory, that match files and
# directories to ignore when looking for source files.
# This patterns also effect to html_static_path and html_extra_path
exclude_patterns = ['_build']

# List here any paths that contain templates, relative to this directory.
# You can find some not-so-intuitive information here: http://www.sphinx-doc.org/en/master/templating.html
# But the best way to learn is by example, right? :)
# So, for example, in this project, I wanted to change the title of the Table Of Contents in the sidebar.
#   So I copied `<Sphinx install dir>/themes/basic/globaltoc.html` into the `_templates` folder,
#      and replaced 'Table of Content' with 'Sphinx185'.
templates_path = ['_templates']
```

```
# -- Define and configure non-default extensions ---------------------------------------------------------------------

# You can find a list of available extension here: http://www.sphinx-doc.org/en/master/extensions.html
extensions = ['sphinx.ext.todo', 'sphinx.ext.viewcode', 'sphinx.ext.autodoc', 'sphinx.ext.imgmath']

# Above extensions explanation and configurations:

# todo: When you use the syntax ".. todo:: some todo comment" in your docstring,
#         it will appear in a highlighted box in the documentation.
#       In order for this extension to work, make sure you include the following:
todo_include_todos = True

# viewcode: Next to each function/module in the documentation, you will have an internal link to the source code.
#           The source code will have colors defined by the Pygments (syntax highlighting) style.
#           You can checkout the available pygments here: https://help.farbox.com/pygments.html
pygments_style = 'native'

# autodoc: The best thing about Sphinx IMHO is autodoc.
#          It allows Sphinx to automatically generate documentation for the docstrings in your code.
#          Get more info here: http://www.sphinx-doc.org/en/master/ext/autodoc.html
# Some useful configurations:
autoclass_content = "both"  # Include both the class's and the init's docstrings.
autodoc_member_order = 'bysource'  # In the documentation, keep the same order of members as in the code.
autodoc_default_flags = ['members']  # Default: include the docstrings of all the class/module members.

# imgmath: Sphinx allows use of LaTeX in the html documentation, but not directly. It is first rendered to an image.
# You can add here whatever preamble you are used to adding to your LaTeX document.
imgmath_latex_preamble = r'''
\usepackage{xcolor}
\definecolor{offwhite}{rgb}{238,238,238}
\everymath{\color{offwhite}}
\everydisplay{\color{offwhite}}
'''


# -- Options for HTML output -----------------------------------------------------------------------------------------

# The theme to use for HTML and HTML Help pages.
# You can find available themes here: http://www.sphinx-doc.org/en/master/theming.html
# In this project, I wanted to use a non-default theme, and so I downloaded the `graphite` template from here:
#    https://github.com/Cartroo/sphinx-theme-graphite
#    Some adjustments I made to graphite:
#    - I did not use the pygment configuration, and so removed "pygments_style = graphite.GraphiteStyle" from theme.conf
#                                                              and deleted graphite.py
#    - In the static folder, I configured several classes both in graphite.css and in html4css1.css,
#          you can download the original and compare to find those changes.
html_theme = 'graphite'
# When using a non-built-in theme, define the path to your template code.
html_theme_path = ['.']

# Add any paths that contain custom static files (such as style sheets) here,
# relative to this directory. They are copied after the builtin static files,
# so a file named "default.css" will overwrite the builtin "default.css".
html_static_path = ['_static']

# Defining the static path allows me to add my own logo for the project:
#   (make sure the theme of your choice support the use of logo.
html_logo = '_static/sphinx_and_dalya.png'

# Custom sidebar templates, must be a dictionary that maps document names to template names.
# In This project I chose to include in the sidebar:
#   - Table of Contents: I chose globaltoc as it is less refined,
#     and configured the title by editing the globaltoc template (see explanation above, in the templates_path comment)
#   - Search box: appears below the TOc, and can be configured by editing css attributes.
html_sidebars = {
    '**': [
        'globaltoc.html',
        'searchbox.html'
    ]
}
```

Part II - Main configuration file - conf.py

```
"""

This is the main file in which the configuration for the documentation is made.

"""

# -*- coding: utf-8 -*-
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# Sphinx185 documentation build configuration file, created by
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# DalyaG: This file was heavily modified from its original build.
# Hope you find this useful :)


# -- Define here your working directory -------------------------------------------------------------------------

import os
import sys
sys.path.append(os.path.abspath('/Users/dalya/Documents/Sphinx185'))


# -- Some general info  about the project -----------------------------------------------------------------------

project = u'Sphinx185'
copyright = u'2018, DalyaG'
author = u'DalyaG'


# -- A few basic configurations ---------------------------------------------------------------------------------

# The documentation in this project will be mostly generated from .rst files
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master_doc = 'index'

# List of patterns, relative to source directory, that match files and
# directories to ignore when looking for source files.
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exclude_patterns = ['_build']

# List here any paths that contain templates, relative to this directory.
# You can find some not-so-intuitive information here: http://www.sphinx-doc.org/en/master/templating.html
# But the best way to learn is by example, right? :)
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#   So I copied `<Sphinx install dir>/themes/basic/globaltoc.html` into the `_templates` folder,
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```

Part II - Main configuration file - conf.py

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"""

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# sphinx-quickstart on Sat May 12 19:34:31 2018.
```

```
import os
import sys
sys.path.append(os.path.abspath('/Users/dalya/Documents/Sphinx185'))
```

```
project = u'Sphinx185'
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author = u'DalyaG'


# -- A few basic configurations -------------------------------------------------------------------

# The documentation in this project will be mostly generated from .rst files
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#   So I copied `<Sphinx install dir>/themes/basic/globaltoc.html` into the `_templates` folder,
#      and replaced 'Table of Content' with 'Sphinx185'.
templates_path = ['_templates']
```

Let Spinx know what is the path to your project

Part II - Main configuration file - conf.py

```
"""
This is the main file in which the configuration for the documentation is made.
"""

# -*- coding: utf-8 -*-
#
# Sphinx185 documentation build configuration file, created by
# sphinx-quickstart on Sat May 12 19:34:31 2018.

# DalyaG: This file was heavily modified from its original build.
# Hope you find this useful :)

# ------------------------------------------------------------------------
im
im
sy

# ------------------------------------------------------------------------
pr
co
au

# ------------------------------------------------------------------------
# The documentation in this project will be mostly generated from .rst files
# In This project, every auto-documented module/class has its own .rst file, under the main documentation dir,
#   which is rendered into an .html page.
# Get more information here: http://www.sphinx-doc.org/en/master/usage/restructuredtext/basics.html
source_suffix = ['.rst']

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master_doc = 'index'

# List of patterns, relative to source directory, that match files and
# directories to ignore when looking for source files.
# This patterns also effect to html_static_path and html_extra_path
exclude_patterns = ['_build']

# List here any paths that contain templates, relative to this directory.
# You can find some not-so-intuitive information here: http://www.sphinx-doc.org/en/master/templating.html
# But the best way to learn is by example, right? :)
# So, for example, in this project, I wanted to change the title of the Table Of Contents in the sidebar.
#   So I copied `<Sphinx install dir>/themes/basic/globaltoc.html` into the `_templates` folder,
#      and replaced 'Table of Content' with 'Sphinx185'.
templates_path = ['_templates']
```

```
project = u'Sphinx185'
copyright = u'2018, DalyaG'
author = u'DalyaG'
```

Some basic info about the project. This will appear in the documentation.

Part II - Main configuration file - conf.py

```
"""
This is the main file in which the configuration for the documentation is made.
"""

# -*- coding: utf-8 -*-
#
# Sphinx185 documentation build configuration file, created by
# sphinx-quickstart on Sat May 12 19:34:31 2018.

# DalyaG: This file was heavily modified from its original build.
# Hope you find this useful :)


# -- Define here your working directory -------------------------------------------------------------------

import os
import sys
sys.path.append(os.path.abspath('/Users/dalya/Documents/Sphinx185'))


# -- Some general info  about the project -----------------------------------------------------------------

project = u'Sphinx185'
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What markdown languages will you be using to generate pages

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What markdown languages will you be using to generate pages

.rst = reStructuredText

http://www.sphinx-doc.org/en/master/usage/restructuredtext/basics.html

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```

What is the name of the master document (landing page)

Part II - Main configuration file - conf.py

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Inside '_build' is the output of the documentation.

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And we don't want to recursively document what we recursively document what we...

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Templates are html exmaples for designing predifined elements

```
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# This patterns also effect to html_static_path and html_extra_path
exclude_patterns = ['_build']
```

Templates are html exmaples for designing predifined elements

We will see:
a template for sidebar

```
templates_path = ['_templates']
```

Part II - Main configuration file - conf.py

```
# -- Define and configure non-default extensions ---------------------------------------------------------------------

# You can find a list of available extension here: http://www.sphinx-doc.org/en/master/extensions.html
extensions = ['sphinx.ext.todo', 'sphinx.ext.viewcode', 'sphinx.ext.autodoc', 'sphinx.ext.imgmath']

# Above extensions explanation and configurations:

# todo: When you use the syntax ".. todo:: some todo comment" in your docstring,
#         it will appear in a highlighted box in the documentation.
#       In order for this extension to work, make sure you include the following:
todo_include_todos = True

# viewcode: Next to each function/module in the documentation, you will have an internal link to the source code.
#           The source code will have colors defined by the Pygments (syntax highlighting) style.
#           You can checkout the available pygments here: https://help.farbox.com/pygments.html
pygments_style = 'native'

# autodoc: The best thing about Sphinx IMHO is autodoc.
#          It allows Sphinx to automatically generate documentation for the docstrings in your code.
#          Get more info here: http://www.sphinx-doc.org/en/master/ext/autodoc.html
# Some useful configurations:
autoclass_content = "both"  # Include both the class's and the init's docstrings.
autodoc_member_order = 'bysource'  # In the documentation, keep the same order of members as in the code.
autodoc_default_flags = ['members']  # Default: include the docstrings of all the class/module members.

# imgmath: Sphinx allows use of LaTeX in the html documentation, but not directly. It is first rendered to an image.
# You can add here whatever preamble you are used to adding to your LaTeX document.
imgmath_latex_preamble = r'''
\usepackage{xcolor}
\definecolor{offwhite}{rgb}{238,238,238}
\everymath{\color{offwhite}}
\everydisplay{\color{offwhite}}
'''


# -- Options for HTML output -----------------------------------------------------------------------------------------

# The theme to use for HTML and HTML Help pages.
# You can find available themes here: http://www.sphinx-doc.org/en/master/theming.html
# In this project, I wanted to use a non-default theme, and so I downloaded the `graphite` template from here:
#    https://github.com/Cartroo/sphinx-theme-graphite
#    Some adjustments I made to graphite:
#    - I did not use the pygment configuration, and so removed "pygments_style = graphite.GraphiteStyle" from theme.conf
#                                                              and deleted graphite.py
#    - In the static folder, I configured several classes both in graphite.css and in html4css1.css,
#          you can download the original and compare to find those changes.
html_theme = 'graphite'
# When using a non-built-in theme, define the path to your template code.
html_theme_path = ['.']

# Add any paths that contain custom static files (such as style sheets) here,
# relative to this directory. They are copied after the builtin static files,
# so a file named "default.css" will overwrite the builtin "default.css".
html_static_path = ['_static']

# Defining the static path allows me to add my own logo for the project:
#   (make sure the theme of your choice support the use of logo.
html_logo = '_static/sphinx_and_dalya.png'

# Custom sidebar templates, must be a dictionary that maps document names to template names.
# In This project I chose to include in the sidebar:
#   - Table of Contents: I chose globaltoc as it is less refined,
#     and configured the title by editing the globaltoc template (see explanation above, in the templates_path comment)
#   - Search box: appears below the TOc, and can be configured by editing css attributes.
html_sidebars = {
    '**': [
        'globaltoc.html',
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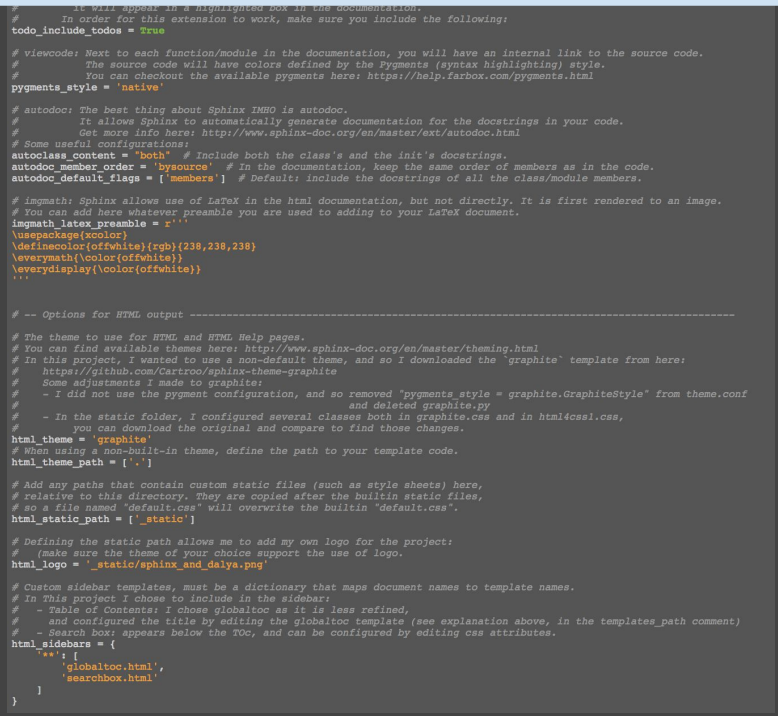
}
```

Part II - Main configuration file - conf.py

```
extensions = ['sphinx.ext.todo', 'sphinx.ext.viewcode', 'sphinx.ext.autodoc',
'sphinx.ext.imgmath']
```

Let Sphinx know what extentions to use



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```
.. todo:: find a better name for n_correct_vertices_list
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Todo

find a better name for n_correct_vertices_list

Part II - Main configuration file - conf.py

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Todo

find a better name for n_correct_vertices_list

Part II - Main configuration file - conf.py

'sphinx.ext.viewcode'

```
# Above extensions explanation and configurations:

# todo: When you use the syntax ".. todo:: some todo comment" in your docstring,
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# -- Options for HTML output ----------------------------------------------------------------------------------

# The theme to use for HTML and HTML Help pages.
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html_sidebars = {
    '**': [
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    ]
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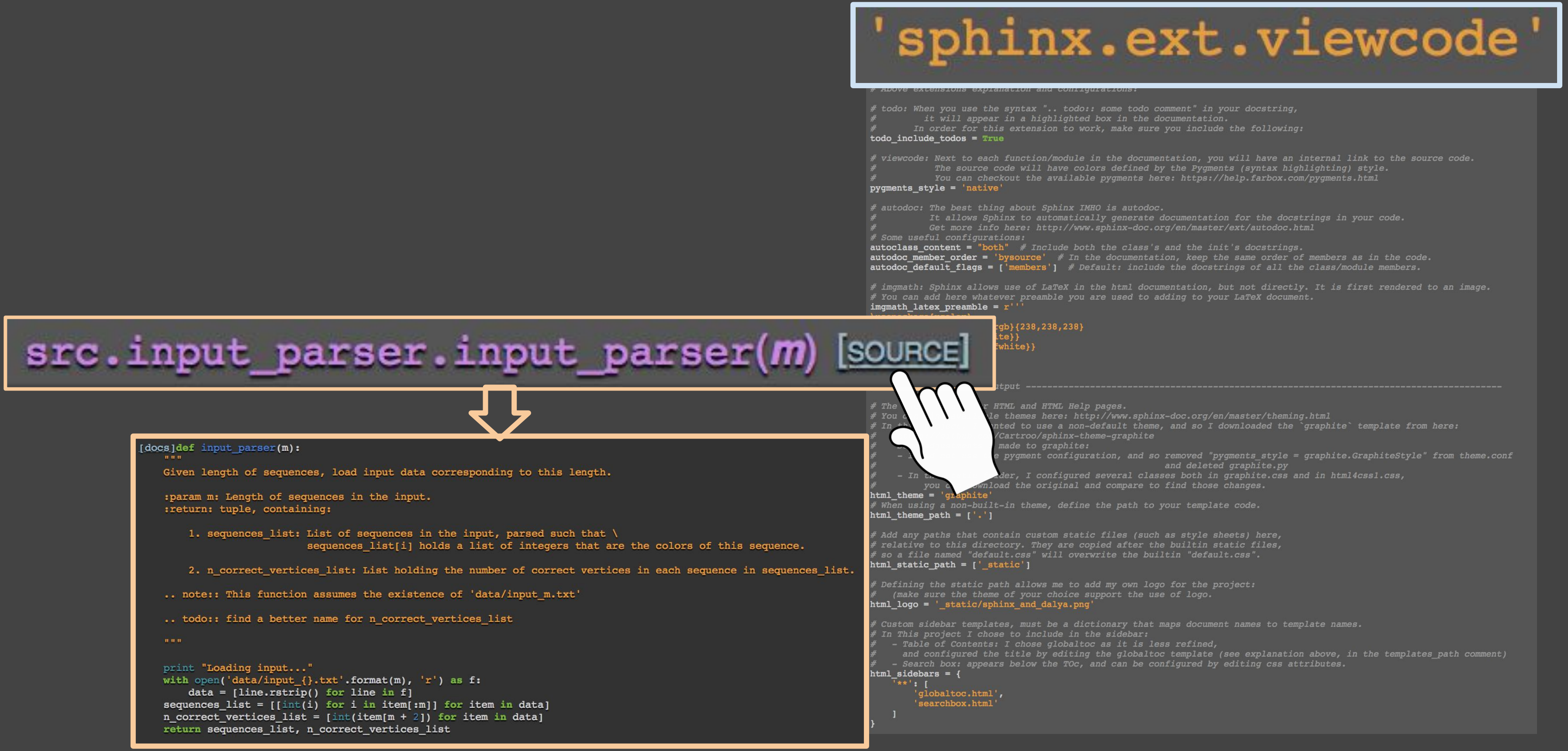
Part II - Main configuration file - conf.py



Part II - Main configuration file - conf.py

```
'sphinx.ext.viewcode'
```

```
pygments_style = 'native'
```

https://help.farbox.com/pygments.html

```
src.input_parser.input_parser(m) [SOURCE]
```

```
[docs]def input_parser(m):
    """
    Given length of sequences, load input data corresponding to this length.

    :param m: Length of sequences in the input.
    :return: tuple, containing:

        1. sequences_list: List of sequences in the input, parsed such that \
                           sequences_list[i] holds a list of integers that are the colors of this sequence.

        2. n_correct_vertices_list: List holding the number of correct vertices in each sequence in sequences_list.

    .. note:: This function assumes the existence of 'data/input_m.txt'

    .. todo:: find a better name for n_correct_vertices_list

    """

    print "Loading input..."
    with open('data/input_{}.txt'.format(m), 'r') as f:
        data = [line.rstrip() for line in f]
    sequences_list = [[int(i) for i in item[:m]] for item in data]
    n_correct_vertices_list = [int(item[m + 2]) for item in data]
    return sequences_list, n_correct_vertices_list
```

```
# Above extensions explanation and configurations:

                                                    nal link to the source code.
                                                    ting) style.
                                                    ments.html

                                                    tion for the docstrings in your code.
                                                    ter/ext/autodoc.html

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                                                    gb}{238,238,238}
                                                    te}}
                                                    white}}

                                                    tput ----------

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Part II - Main configuration file - conf.py

'sphinx.ext.autodoc'

```
# --

# Yo
exte

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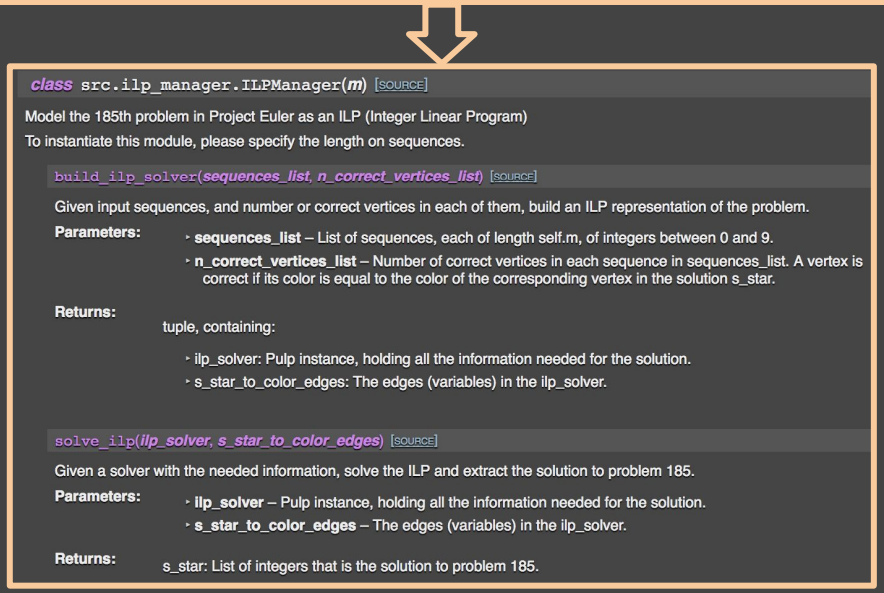
    '**': [
        'globaltoc.html',
        'searchbox.html'
    ]
}
```

Part II - Main configuration file - conf.py

```
.. autoclass:: src.ilp_manager.ILPManager
```



class src.ilp_manager.ILPManager(*m*) [SOURCE]

Model the 185th problem in Project Euler as an ILP (Integer Linear Program)

To instantiate this module, please specify the length on sequences.

build_ilp_solver(*sequences_list*, *n_correct_vertices_list*) [SOURCE]

Given input sequences, and number or correct vertices in each of them, build an ILP representation of the problem.

Parameters:

- **sequences_list** – List of sequences, each of length self.m, of integers between 0 and 9.
- **n_correct_vertices_list** – Number of correct vertices in each sequence in sequences_list. A vertex is correct if its color is equal to the color of the corresponding vertex in the solution s_star.

Returns:

tuple, containing:

- ilp_solver: Pulp instance, holding all the information needed for the solution.
- s_star_to_color_edges: The edges (variables) in the ilp_solver.

solve_ilp(*ilp_solver*, *s_star_to_color_edges*) [SOURCE]

Given a solver with the needed information, solve the ILP and extract the solution to problem 185.

Parameters:

- **ilp_solver** – Pulp instance, holding all the information needed for the solution.
- **s_star_to_color_edges** – The edges (variables) in the ilp_solver.

Returns:

s_star: List of integers that is the solution to problem 185.

'sphinx.ext.autodoc'

```
# --
# Yo
exte

# Above extensions explanation and configurations:

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```

Part II - Main configuration file - conf.py

'sphinx.ext.autodoc'

autoclass_content = "both"

Include both the class's and the init's docstrings

Part II - Main configuration file - conf.py

```
'sphinx.ext.autodoc'
```

```
autodoc_member_order = 'bysource'
```

In the documentation, keep the same order of members as in the code

```
# -- General configuration ------------------------------------------------

# You can specify multiple extension modules:
extensions = ['sphinx.ext.autodoc', 'sphinx.ext.doctest', 'sphinx.ext.todo',
              'sphinx.ext.imgmath', 'sphinx.ext.ifconfig', 'sphinx.ext.viewcode']

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Part II - Main configuration file - conf.py

```
'sphinx.ext.autodoc'
```

```
autodoc_default_flags = ['members']
```

Default: include the docstrings of all the class/module members

Part II - Main configuration file - conf.py

```
'sphinx.ext.imgmath'
```

```
# --

# Yo
exte

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Part II - Main configuration file - conf.py

```
'sphinx.ext.imgmath'
```

```
Let :math:`\color{red}s^{*}` be a sequence
```

Let s^* be a sequence

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```

Let s^* be a sequence

```
# -- Options for HTML output -------------------------------------------------

# You can find available themes here: http://www.sphinx-doc.org/en/master/theming.html
# In this project, I wanted to use a non-default theme, and so I downloaded the `graphite` template from here:
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#    - I did not use the pygment configuration, and so removed "pygments_style = graphite.GraphiteStyle" from theme.conf
#                                                              and deleted graphite.py
#    - In the static folder, I configured several classes both in graphite.css and in html4css1.css,
#          you can download the original and compare to find those changes.
html_theme = 'graphite'
# When using a non-built-in theme, define the path to your template code.
html_theme_path = ['.']

# Add any paths that contain custom static files (such as style sheets) here,
# relative to this directory. They are copied after the builtin static files,
# so a file named "default.css" will overwrite the builtin "default.css".
html_static_path = ['_static']

# Defining the static path allows me to add my own logo for the project:
#   (make sure the theme of your choice support the use of logo.
html_logo = '_static/sphinx_and_dalya.png'

# Custom sidebar templates, must be a dictionary that maps document names to template names.
# In This project I chose to include in the sidebar:
#   - Table of Contents: I chose globaltoc as it is less refined,
#     and configured the title by editing the globaltoc template (see explanation above, in the templates_path comment)
#   - Search box: appears below the TOc, and can be configured by editing css attributes.
html_sidebars = {
    '**': [
        'globaltoc.html',
        'searchbox.html'
    ]
}
```

Part II - Main configuration file - conf.py

```
# -- Define and configure non-default extensions ---------------------------------------------------

# You can find a list of available extension here: http://www.sphinx-doc.org/en/master/extensions.html
extensions = ['sphinx.ext.todo', 'sphinx.ext.viewcode', 'sphinx.ext.autodoc', 'sphinx.ext.imgmath']

# Above extensions explanation and configurations:

# todo: When you use the syntax ".. todo:: some todo comment" in your docstring,
#        it will appear in a highlighted box in the documentation.
#       In order for this extension to work, make sure you include the following:
todo_include_todos = True

# viewcode: Next to each function/module in the documentation, you will have an internal link to the source code.
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pygments_style = 'native'

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#          It allows Sphinx to automatically generate documentation for the docstrings in your code.
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# Some useful configurations:
autoclass_content = "both"  # Include both the class's and the init's docstrings.
autodoc_member_order = 'bysource'  # In the documentation, keep the same order of members as in the code.
autodoc_default_flags = ['members']  # Default: include the docstrings of all the class/module members.

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# You can add here whatever preamble you are used to adding to your LaTeX document.
imgmath_latex_preamble = r'''
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\definecolor{offwhite}{rgb}{238,238,238}
\everymath{\c
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# -- Options f                                                                          ----------

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Options for HTML output

Part II - Main configuration file - conf.py

The themes holds the design for the output html documentation.
I downloaded ‘graphite’ and made some personalizations.

https://github.com/Cartroo/sphinx-theme-graphite

```
html_theme = 'graphite'
```

```
# When using a non-built-in theme
html_theme_path = ['.']
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Part II - Main configuration file - conf.py

The folder where you keep images etc.

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# -- Options f
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```

```
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```

Part II - Main configuration file - conf.py

Such as the logo for this project

Part II - Main configuration file - conf.py

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# -- Options f
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Options for HTML output

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Part II - Main configuration file - conf.py

Sphinx185

- Euler's 185th Riddle
- Solver Runner
- Input Parser
- Naming Utils
- The ILP Manager class
- The main configurations file: conf.py

Quick search

Go

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Part II - Main configuration file - conf.py

Sphinx185

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Part II - Main configuration file - conf.py

copy `<Sphinx install dir>/themes/basic/globaltoc.html`
into the `_templates` folder,
and replaced 'Table of Content' with 'Sphinx185':

Sphinx185

```
<h3>
    <a href="{{ pathto(master_doc) }}">
        {{ _('Sphinx185') }}</a>
</h3>
{{ toctree() }}
```

```
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Some more fun features

Special boxes: note

(in the docstring)

```
.. note:: This function assumes the existence of 'data/input_m.txt'
```

Note

This function assumes the existence of 'data/input_m.txt'

Special boxes: exmaple

(in the docstring)

```
**Example:** ::

    s_star_index_node(3) = 's_star_3'
```

Example:

```
s_star_index_node(3) = 's_star_3'
```

Special boxes: choose your title

(in the .rst file)

```
.. topic:: Tiny disclaimer:

   As I enjoy Project Euler greatly, I was hesitant to publish my solution online.

   Yet, since I saw many similar solutions are already available, I decided the educational
   cause of this tutorial justifies the means.

   So all you Euler buddies out there – hope you share my view :)
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(in the .rst file)

Insert code

```
This page was generated using this .rst code:
**********************************************

|

.. literalinclude:: input_parser.rst
```

This page was generated using this .rst code:

```
Input Parser
==================
|
|

.. automodule:: src.input_parser
   :members: input_parser

|
|

This page was generated using this .rst code:
**********************************************

|

.. literalinclude:: input_parser.rst

|
|

:ref:`Return Home <mastertoc>`
```

Special formatting: textcolor

```
.. role:: pinktext

.. To make sure this is indeed colored pink, I added a .pinktext class to graphite.css

:pinktext:`Hope you find this useful!`
```

(in the .rst file)

```
.pinktext {
  color: #d481e6;
}
```

(in graphite.css)

Hope you find this useful!

Special formatting: breakline and code

(in the .rst file)

```
.. |br| raw:: html

   <br />


#. ``pip install sphinx``

#. Copy the ``documentation_template_for_your_next_project`` folder in this repository, |br|
   make it a subdirectory in your local project and rename it ``documentation``.
```

1. `pip install sphinx`
2. Copy the `documentation_template_for_your_next_project` folder in this repository, make it a subdirectory in your local project and rename it `documentation`.

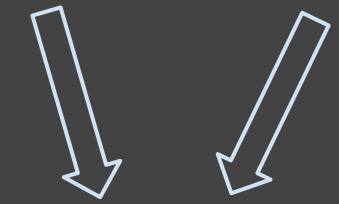
Links: to a specific item

(in .rst file: where the link will be)

(in .rst file: where the link directs)

```
:ref:`Return Home <mastertoc>`
```

```
.. toctree::
   :maxdepth: 1
   :name: mastertoc
```



Return Home

Links: to a page in the project

(in .rst file)

```
To use this for YOUR next project, browse this documentation and follow the instructions
:doc:`here <how_to_use_this_for_your_next_project>`.
```

To use this for YOUR next project, browse this documentation and follow the instructions here.

Links: to the web

(in .rst file)

```
The goal of this project is to help make `Sphinx <http://www.sphinx-doc.org/en/master/>`_ accessible and easy to use.
```

The goal of this project is to help make Sphinx accessible and easy to use.

THE END

(for reals this time)