Documentation tools for python

Documenting a project is crucial for maintaining code quality and ensuring that other developers can understand and contribute to the codebase. Some popular documentation tools for python projects are-

- Sphinx
- MkDocs
- ReadTheDocs
- DjangoRest frameworks etc.

❖ Sphinx:

- Widely used in Python community
- More powerful and flexible
- Supports multiple markup languages
- Supports extension for customizing documentation output
- May find the syntax less straightforward compared to Markdown.

❖ MkDocs:

- Simple and easy set up
- Widely used for small projects
- But may be less powerful than Sphinx for large or complex project

❖ ReadTheDocs:

- Integrates well with version control systems
- Automatically builds and updates documentation on each commit
- Supports various documentation formats.
- Limited theming options compared to some other tools.

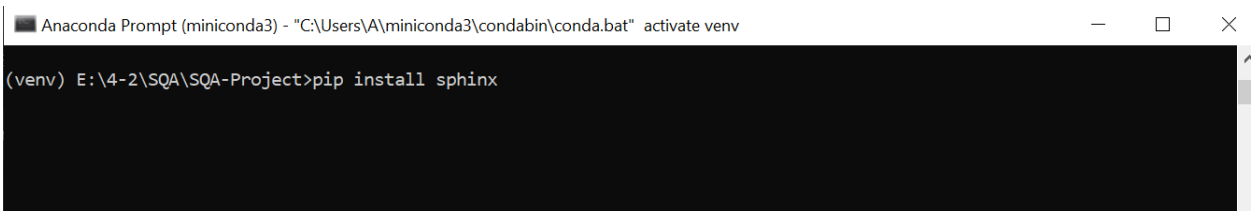
❖ DjangoRest frameworks:

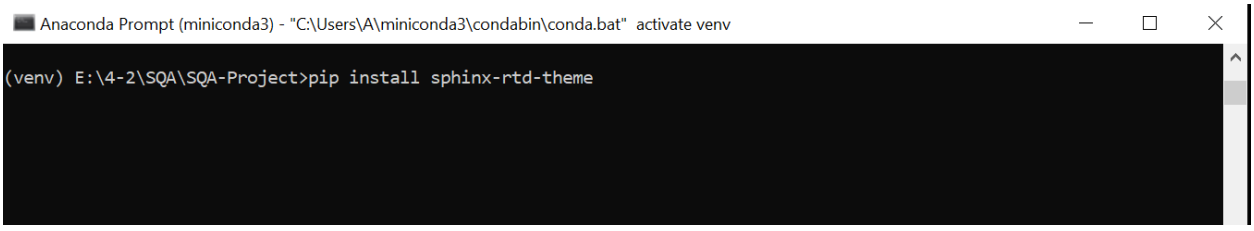
- Designed for documenting Django REST framework APIs.
- Integrates with Swagger/OpenAPI, providing interactive API documentation.
- Primarily focused on RESTful APIs.

Actually, the choice of documentation tool depends on specific needs, team's preferences, project requirements etc. Though MkDocs is good for small and medium projects but it is less powerful than sphinx and our team is familiar with Sphinx that's why we have preferred to use Sphinx than others for documentation.

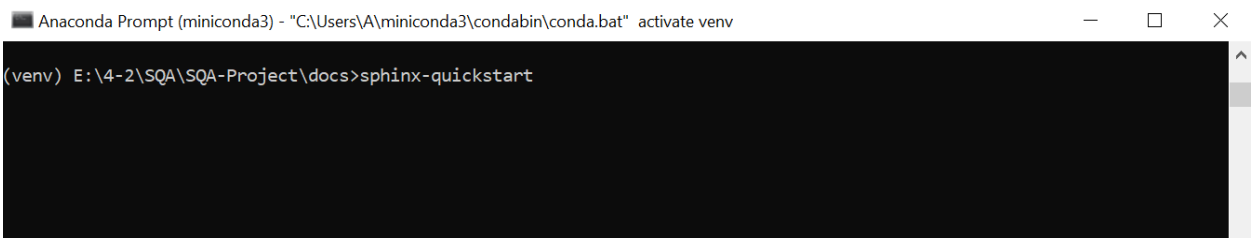
Let's start with Sphinx

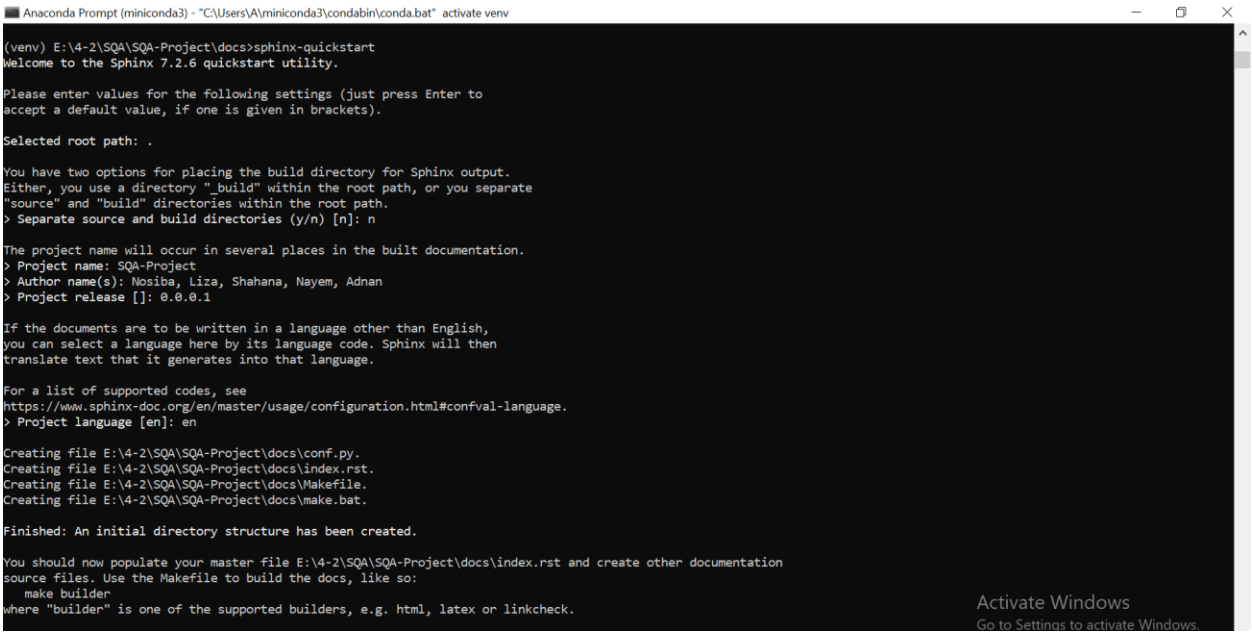
- First of all, we have to create an docs folder in our project.
- Then we have to install as following:

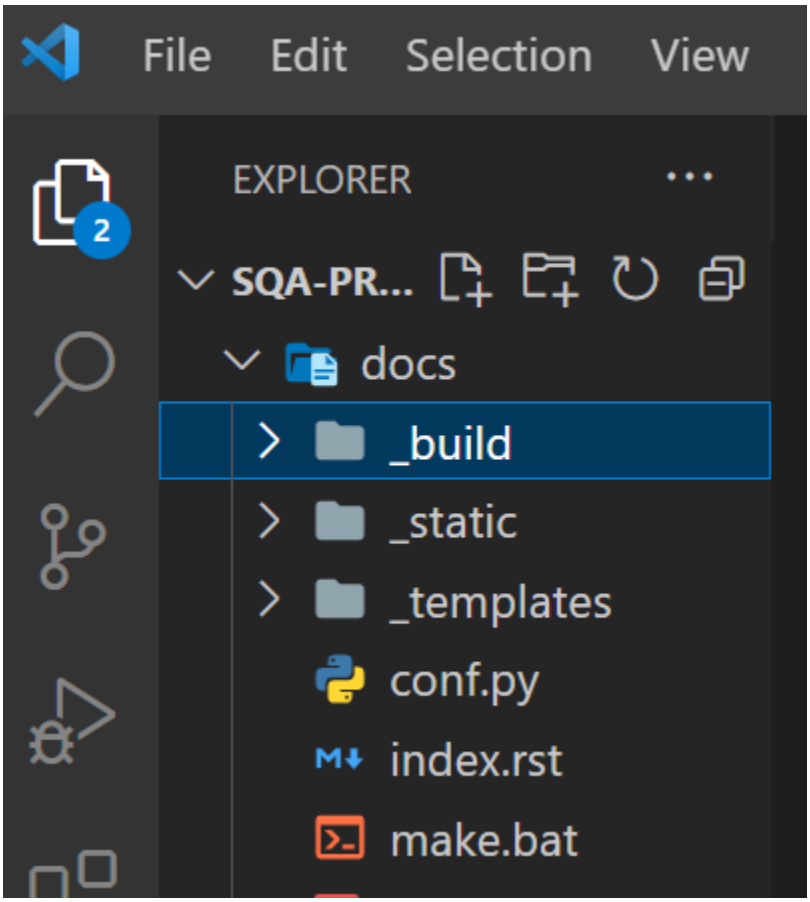




- Go to the > cd docs




Anaconda Prompt (miniconda3) - "C:\Users\A\miniconda3\condabin\conda.bat" activate venv
(venv) E:\4-2\SQA\SQA-Project\docs>sphinx-quickstart
Welcome to the Sphinx 7.2.6 quickstart utility.
Please enter values for the following settings (just press Enter to
accept a default value, if one is given in brackets).
Selected root path: .
You have two options for placing the build directory for Sphinx output.
Either, you use a directory "_build" within the root path, or you separate
"source" and "build" directories within the root path.
> Separate source and build directories (y/n) [n]: n
The project name will occur in several places in the built documentation.
> Project name: SQA-Project
> Author name(s): Nosiba, Liza, Shahana, Nayem, Adnan
> Project release []: 0.0.0.1
If the documents are to be written in a language other than English,
you can select a language here by its language code. Sphinx will then
translate text that it generates into that language.
For a list of supported codes, see
https://www.sphinx-doc.org/en/master/usage/configuration.html#confval-language.
> Project language [en]: en
Creating file E:\4-2\SQA\SQA-Project\docs\conf.py.
Creating file E:\4-2\SQA\SQA-Project\docs\index.rst.
Creating file E:\4-2\SQA\SQA-Project\docs\Makefile.
Creating file E:\4-2\SQA\SQA-Project\docs\make.bat.
Finished: An initial directory structure has been created.
You should now populate your master file E:\4-2\SQA\SQA-Project\docs\index.rst and create other documentation
source files. Use the Makefile to build the docs, like so:
make builder
where "builder" is one of the supported builders, e.g. html, latex or linkcheck.
Activate Windows
Go to Settings to activate Windows.


File
Edit
Selection
View
EXPLORER
SQA-PR...
docs
_build
_static
_templates
conf.py
index.rst
make.bat

- Now we have to edit some certain part of conf.py:

```
import os
import sys
sys.path.insert(0, os.path.abspath("../my_sqa_py_pkg/src"))
```

```
extensions = [
    "sphinx.ext.viewcode",
    "sphinx.ext.todo",
    "sphinx.ext.autodoc"

]
```

```
html_theme = 'sphinx_rtd_theme'
html_static_path = ['_static']
```

- Then edit index.rst

index.rst

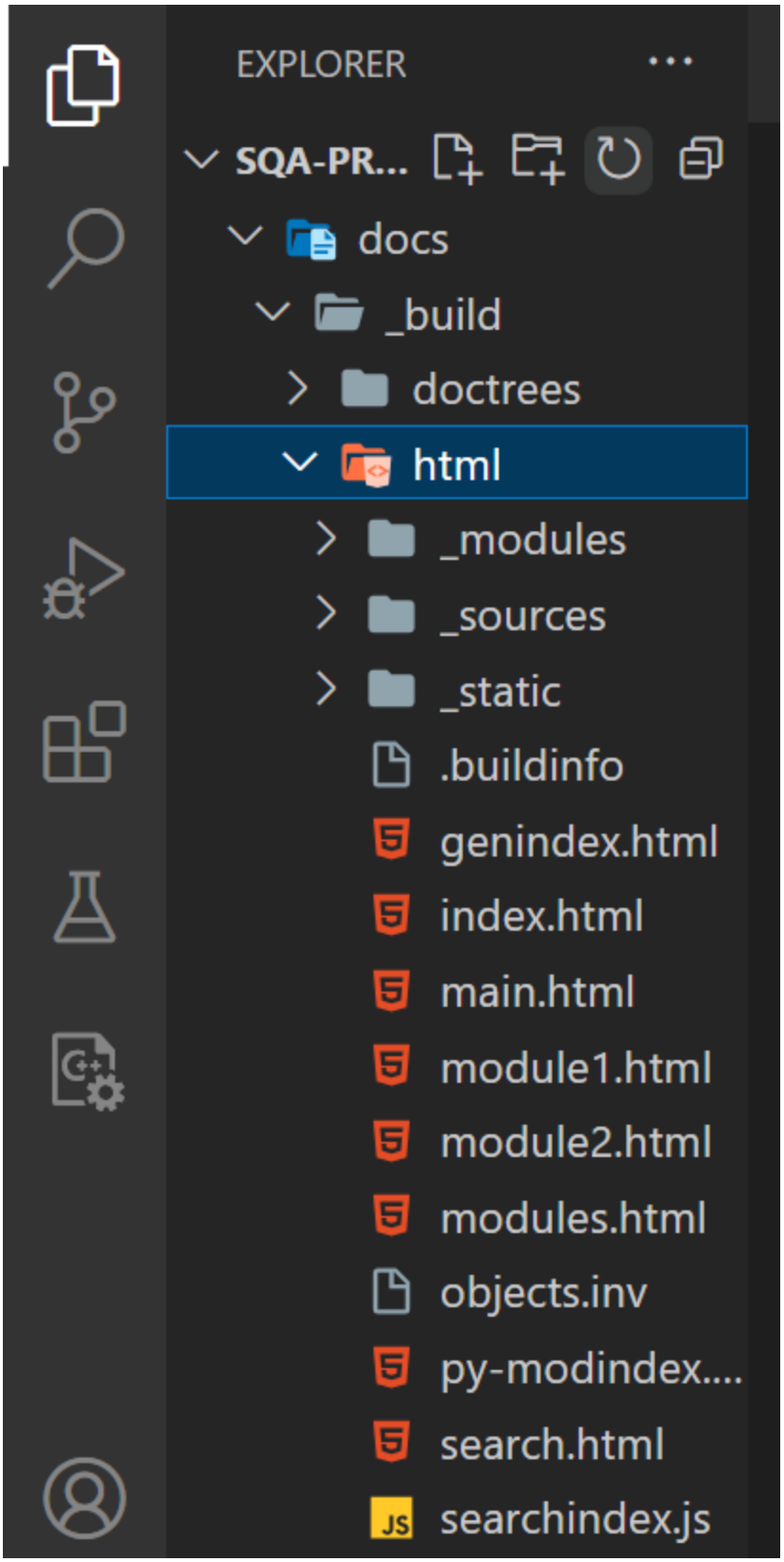
docs > index.rst

```
.. SQA-Project documentation master file, created by
   sphinx-quickstart on Tue Dec  5 22:35:51 2023.
   You can adapt this file completely to your liking, but it should at least
   contain the root `toctree` directive.

Welcome to SQA-Project's documentation!
=======================================

.. toctree::
   :maxdepth: 2
   :caption: Contents:

   modules

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

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

```
(venv) E:\4-2\SQA\SQA-Project>cd my_sqa_py_pkg

(venv) E:\4-2\SQA\SQA-Project\my_sqa_py_pkg>sphinx-apidoc -o ../docs src/
```

- For making html doc

```
(venv) E:\4-2\SQA\SQA-Project>cd docs

(venv) E:\4-2\SQA\SQA-Project\docs>make html
Running Sphinx v7.2.6
making output directory... done
building [mo]: targets for 0 po files that are out of date
writing output...
building [html]: targets for 5 source files that are out of date
updating environment: [new config] 5 added, 0 changed, 0 removed
reading sources... [100%] modules
looking for now-outdated files... none found
pickling environment... done
checking consistency... done
preparing documents... done
copying assets... copying static files... done
copying extra files... done
done
writing output... [100%] modules
generating indices... genindex py-modindex done
highlighting module code... [100%] module2.file2
writing additional pages... search done
dumping search index in English (code: en)... done
dumping object inventory... done
build succeeded.

The HTML pages are in _build\html.
```


EXPLORER
SQA-PR...
docs
_build
doctrees
html
_modules
_sources
_static
.buildinfo
genindex.html
index.html
main.html
module1.html
module2.html
modules.html
objects.inv
py-modindex....
search.html
searchindex.js

- Then copy the path of index.html file.
- Then open this path using our browser.
- Now, the documentation is: