Documenting Your Python Project: A Beginner’s Guide

Making Your Code Understandable and Maintainable

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# Why Document Your Project?

* Improve code readability
* Help others understand your code
* Facilitate maintenance and collaboration

# Why Use Docstrings?

* Documentation: Provides clear explanations of your code’s functionality.
* Maintainability: Makes it easier for others (and yourself) to understand and maintain the code.
* Automatic Documentation: Tools like MkDocs and Sphinx can generate documentation from docstrings.
* Testing: With doctest, you can include examples that serve as both documentation and tests.

# What are Docstrings?

* Inline documentation for modules, classes, functions, and methods
* Written as triple-quoted strings

# Example: Function Docstring

def add(a, b):  
 """  
 Add two numbers and return the result.  
  
 Args:  
 a (int or float): The first number.  
 b (int or float): The second number.  
  
 Returns:  
 int or float: The sum of `a` and `b`.  
  
 Examples:  
 >>> add(2, 3)  
 5  
 >>> add(1.5, 2.5)  
 4.0  
 """  
 return a + b

# Writing a README.md

**Purpose of README.md** - Provide an overview of your project - Explain how to install and use it - Highlight key features and dependencies

# Example: README.md

# Project Title  
  
## Overview  
Brief description of your project.  
  
## Installation  
```bash  
pip install your\_project

## Usage

from your\_project import your\_function  
result = your\_function()  
print(result)

## Features

* Feature 1
* Feature 2

## License

MIT

# Introducing MkDocs  
  
\*\*What is MkDocs?\*\*  
- Simple static site generator for project documentation  
- Easy to setup and use  
  
# Installing MkDocs  
  
\*\*Install MkDocs\*\*  
```bash  
pip install mkdocs

# Setting Up MkDocs

**Create MkDocs Project**

mkdocs new my\_project\_docs  
cd my\_project\_docs

# Editing mkdocs.yml

**Basic mkdocs.yml Configuration**

site\_name: My Project Documentation  
  
nav:  
 - Home: index.md  
 - API Reference: api.md

# Writing Documentation Pages

**Example: index.md**

# Welcome to My Project  
  
This is the documentation for My Project.  
  
## Getting Started  
  
Follow these instructions to get started.

# Serving Documentation Locally

**Serve Documentation**

mkdocs serve

* Access the documentation locally at http://127.0.0.1:8000

# Building the Documentation

**Build Static Site**

mkdocs build

* Generates static site in the site/ directory

# Summary

* Use **docstrings** for inline documentation
* Create a **README.md** for project overview
* Use **MkDocs** for project documentation

# Next Session

* Focus on finalising the project.
* Distribution methods.