Documentation

Moorthy

Documentation

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Reference Material for the Examples in this Section

- Markdown
- reStructuredText
- W3 School (first 5 lessons)
- Latex basics
- Overleaf (supports git repo)
- Literate programming
- Dynamic Report Generation in R

Documentation has two axes

- Purpose
- Tools

Purpose

- High-level design overview doc.
- Documentation at the top of a module.
- Documentation for a function/method/class
- Embedded Comments

Tools Used

- Ensure docs are long-lived, and reside as close to the code as possible
- No binary formats (word-processor) for documentation

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Why?

Importance

- Ease of Maintenance
- Ease of Use of Code
- Encourage Entry Level People
- Important mode of communicating with others
- Code may vanish - documentation remain
- Documentation may vanish - code remain

Different Types of Documentation

- Wiki
- Blog
- User's manual
- Program documentation
- Readme files

In Class Exercise

Create a repository Doc-ex1 in your github

Using the tab menu, create a wiki page

Add content to the wiki page using Markdown

Add a page using reStructuredText

Examples:

- Markdown
- reStructuredText

Moorthy's versions:

- Markdown: first page in markdown
- Restructured text: restructured example

What we learned so far

- Markdown
- reStructuredText
- We are assuming you already know about some mark up language such as html (html5), css, etc.
  - If you do not know css go through this tutorial W3 School

  - Go through first Five lessons.
- Anther markup language is xml - similar to html.

CSS Off/On Class exercise

Download sinorcaish-1.3.zip

and unzip it.

Modify **sinorcaish-screen.css** and **template.html** and see the changes.

LaTeX

- Commonly used markup language for scientific communications.
- There are online WYSWYG editors such as Overleaf
  - Overleaf provides an easy interface to LaTeX
  - Interfaces to github
  - But you pay to use the advanced features

LaTeX

Another WYSWYG editor with different output

Try typing $e^{i \pi} =-1 $ and see what renders as an image

Please read:

- Latex basics

As an "in class" exercise modify this Paper to change the title, author and the introduction.

Literate Programming

Produce a document in which both code and documentation coexist. Literate programming

Knuth has written books based on his TeX, Metafont software (with interspersed code)

Dynamic Report Generation in R

Jupyter notebook is another example for python

Read this page (through Literate Programming)

A Sample Program

- Peter Norvig's advent of code 2016 Solution

Community Participation

- quora

- reddit
- stackoverflow
- online mailing list

The End

by Moorthy