PDF Generation with Pandoc and GitHub Actions

How to generate good looking PDFs from Markdown files using Pandoc and how to automate the process with GitHub Actions

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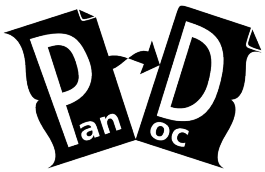

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Contents

1 Introduction

This document explores how to generate a PDF from a Markdown file using Pandoc.

1.1 Requirements

Here are the requirements for each level of complexity described in the next section:

1.1.1 Level 1

- Pandoc[1]
- LaTeX[2]

1.1.2 Level 2

- Pandoc
- LaTeX
- LaTeX packages:

  ```
  sudo tlmgr install adjustbox footnotebackref pagecolor csquotes
     mdframed zref needspace sourcesanspro sourcecodepro titling
     selnolig lualatex-math
  ```

  (for Mac users)

1.1.3 Level 3

None! Everything is done in a container in the cloud.

1.2 Contributors

This is a small project I did in my free time to help generate good-looking documentation for my school projects. Feel free to make pull requests!

[1] https://pandoc.org/
[2] https://www.latex-project.org/get/

2 Usage

There are three levels of complexity:

2.1 Simple PDF Generation

To generate a basic PDF without special formatting, use:

```
pandoc <file.md> -o <file.pdf>
```

2.2 Enhanced PDF with Template

To generate a PDF that uses the `eisvogel.tex` template from the pandoc-latex-template[3] repository, use:

```
pandoc -s -o <file.pdf> -f markdown_strict+backtick_code_blocks+
   pipe_tables+auto_identifiers+yaml_metadata_block+implicit_figures+
   table_captions+footnotes+smart+escaped_line_breaks+header_attributes --
   data-dir=pandoc --template eisvogel.tex --toc --listings --columns=50
   --number-sections --dpi=300 --pdf-engine=xelatex -M date="$(date +%Y-%m
   -%d)" md/HEADER.YAML md/*.md
```

Ensure your directory structure is as follows:

```
.
+-- assets
|   +-- (...)
|   +-- your-assets.png
+-- md
|   +-- (...)
|   +-- your-files.md
|   +-- HEADER.YAML
+-- pandoc
    +-- templates
        +-- eisvogel.tex
```

2.3 Automated PDF Generation with GitHub Actions

Artifacts generated by the workflow are available in the Actions tab[4] of this repository and are also pushed to the root of the `docs` folder.

For more details, check the GitHub workflow file.

[3] https://github.com/Wandmalfarbe/pandoc-latex-template
[4] https://github.com/Nishogi/pdf-from-markdown/actions

3 Sources

Markdown Syntax

> https://www.markdownguide.org/basic-syntax/

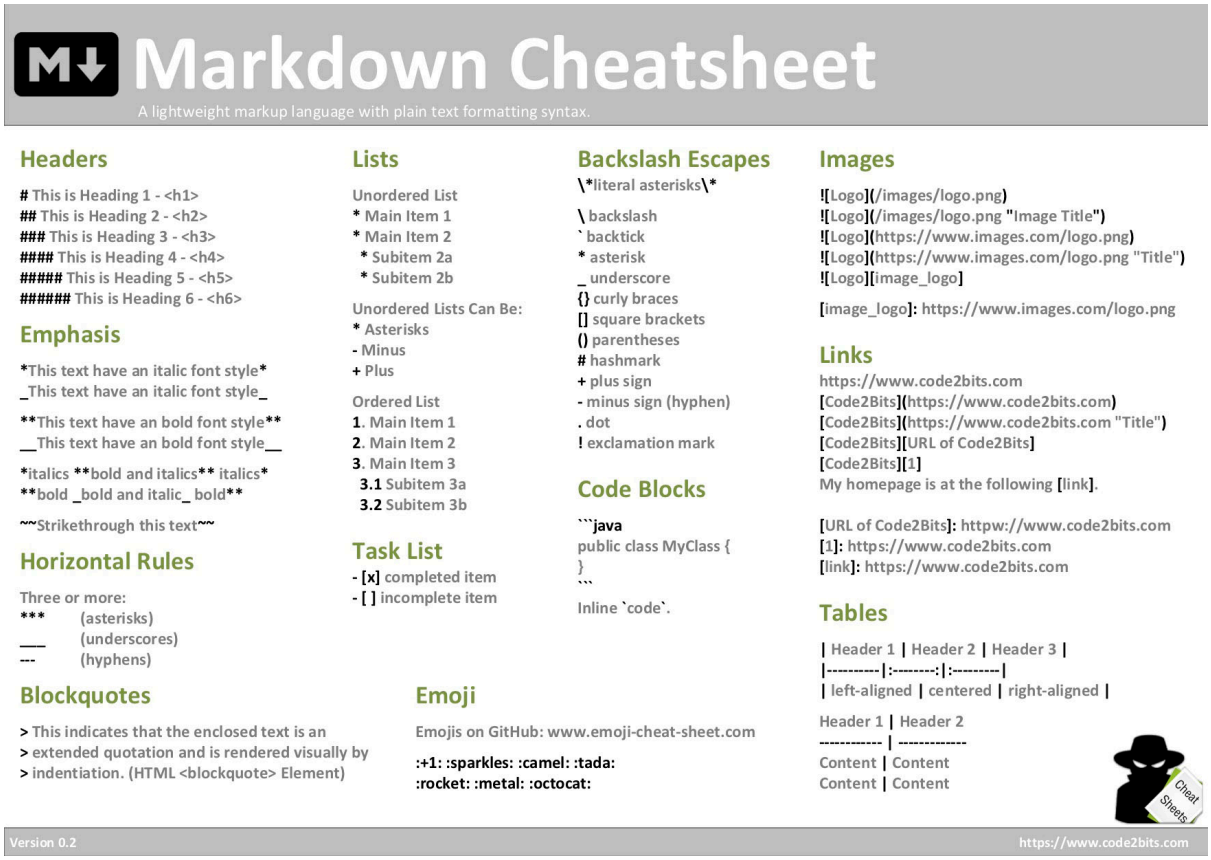

Figure 1: Markdown Cheatsheet

CI with Pandoc

> https://gitlab.com/pandoc/pandoc-ci-example

Templating with Pandoc

> https://github.com/alexeygumirov/pandoc-for-pdf-how-to

GitHub Actions

> https://docs.github.com/en/actions