

Basic Book Builder

A Pandoc template for building books and articles



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Author:	John Haverlack
Version:	1.1.0
Date:	2026-02-04
Affiliation:	Alaska Center for Energy and Power
Institution:	University of Alaska Fairbanks
ISBN:	UNSPECIFIED
DOI:	UNSPECIFIED
Maturity:	BETA

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Contents

1	Introduction	1
2	Getting Started	2
2.1	Cloning the Basic Book Builder	2
2.2	Setting Up Build Environment	2
A	Appendix A: Build Environment Notes	3
A.1	Installing Pre-Requisites	3
A.1.1	Required	3
A.1.1.1	Pandoc	3
A.1.1.2	Code Editor	3
A.1.1.3	jq and yq	4
A.1.1.4	texlive	4
A.1.1.5	MathJax	4
A.1.2	Optional	4
A.1.2.1	Obsidian	4
A.1.2.2	Zotero	5
A.1.2.3	lmodern	5
A.1.2.4	epubcheck	5
A.1.2.5	foliate	5
A.1.2.6	calibre	6
A.2	Editing the Configuration	6
B	Appendix B: Editing the Book	7
B.0.1	Configuration	7
B.0.1.1	Main Config Files	7
B.0.2	FrontMatter Config	8
B.1	Editing the Content	8
B.1.1	Citations	8
B.2	Usage: Building the Book	8
B.2.0.1	PDF	8
B.2.0.2	HTML	8
B.2.0.3	LaTeX	8
B.2.0.4	Markdown	8

CONTENTS

B.2.0.5 EPub	9
Glossary	10
Index	12
Bibliography	14

Chapter 1

Introduction

This is a basic book (or article / document) builder template based on a Pandoc(?) build process in conjunction with a number of other tools to generate PDF, HTML, LaTeX, Markdown, ODT, DOCX, and Epub book output formats from a single set Markdown source content , which can optionally be edited as an Obsidian vault.

This **basic book builder**(?) template has been curated by John Haverlack.([John Haverlack](#) | [ACEP](#), n.d.)

Chapter 2

Getting Started

2.1 Cloning the Basic Book Builder

[!cli] Cloning the repository

```
git clone https://github.com/jehaverlack/basic-book-builder.git
```

[!cli] Navigate to the repo directory

```
cd basic-book-builder
```

2.2 Setting Up Build Environment

Debian Based Linux

This script only support Debian based linux system (Debian, Ubunutu, Zorin, etc) This script has not been widely tested across platforms

[!cli] Setup Build Environment

```
./scripts/setup-linux-deb.sh
```

For more information on setting up the build environment for your system see Appendix A.

Appendix A

Appendix A

Appendix A: Build Environment Notes

A.1 Installing Pre-Requisites

Not Cross-platform Tested

For Debian / ZorinOS and likely Ubuntu based systems.

A.1.1 Required

A.1.1.1 Pandoc

- <https://pandoc.org/>
- [Download](#)

```
sudo apt install https://github.com/jgm/pandoc/releases/download/3.8.2.1
```

A.1.1.2 Code Editor

Code Editor

VSCodium is recommend for privacy (telemetry/tracking) reasons - https://vscodium.com/
--

But any text editor will work. ##### make

```
sudo apt install make
```

A.1.1.3 jq and yq

```
sudo apt install jq yq
```

A.1.1.4 texlive

```
sudo apt install texlive texlive-xetex texlive-latex-extra  
texlive-fonts-recommended texlive-fonts-extra
```

A.1.1.5 MathJax

- <https://www.mathjax.org/>

```
wget https://registry.npmjs.org/mathjax/-/mathjax-3.2.2.tgz  
tar xzf mathjax-3.2.2.tgz  
mv package/es5/* lib/mathjax  
rm -rf package mathjax-3.2.2.tgz
```

TODO

This need to be rolled into a setup script.

A.1.2 Optional

The following are not strictly requires to use this book builder template.

A.1.2.1 Obsidian

Highly Recommended

Editing book chapter content in Obsidian is a very productive means for editing Markdown source content.

- <https://obsidian.md/>
- [Deb Package](#)

```
sudo apt install https://github.com/obsidianmd/obsidian-releases/releases/download
```


A.1.2.2 Zotero

Highly Recommended

If you need to managed citations and references, Zotero integration is highly recommended.

- <https://www.zotero.org/>

```
sudo cp ./scripts/deps/zotero.list /etc/apt/sources.list.d/
```

```
sudo apt update
```

```
sudo apt install zotero
```

A.1.2.2.1 Better BibTex for Zotero Install the Better BibTex Plugin for Zotero - Zotero > Tool > Plugins

A.1.2.2.2 Export citations.bib

- Zotero > File > Export Library > Format: Better BibTeX
- ☐ Keep Updated
- ☐ Save to: ~/Documents/Lib/zotero.bib
- ☐ Symlink your ~/Documents/Lib/Citations.bib to basic-book-builder/lib/zotero.bib

A.1.2.2.3 Zotero Connector Browser Plugin

- <https://chromewebstore.google.com/detail/zotero-connector/ekhagklcjbdpajgpjgmbionohl>

Provides you the ability to auto add Web resources to your Zotero citation database.

A.1.2.3 lmodern

```
sudo apt install lmodern
```

A.1.2.4 epubcheck

```
sudo apt install epubcheck
```

A.1.2.5 foliate

An EPub Reader

- <https://johnfactotum.github.io/foliate/>

```
sudo apt install https://github.com/johnfactotum/foliate/releases/download/2
```

A.1.2.6 calibre

An EPub Reader

- <https://calibre-ebook.com>

```
sudo apt install calibre
```

A.2 Editing the Configuration

Appendix B

Appendix B: Editing the Book

B.0.1 Configuration

There are a number of other config files for each format:

```
conf/
├── epub-metadata.xml
├── epub_template.html
├── epub.yaml
├── frontmatter_epub.md
├── frontmatter_epub.xhtml
├── frontmatter.html
├── frontmatter.tex
├── header.tex
├── html.yaml
├── latex.yaml
├── markdown.yaml
├── metadata.yaml
├── pandoc.yaml
├── pdf.yaml
├── style.css
└── style_epub.css
```

B.0.1.1 Main Config Files

- metadata.yaml - Set Title, etc
- pandoc.yaml - Main Pandoc Config ##### Per format Configs
- pdf.yaml
- html.yaml
- latex.yaml
- epub.yaml

B.0.2 FrontMatter Config

There are 2 Version of the FrontMatter for PDF, and HTML bases formats that set the Title, Author, Verizon, Copyright, etc...

- `frontmatter.tex`
- `frontmatter.html`
- `frontmatter_epub.*` - Work in Progress

There is probably a better way to do this.

B.1 Editing the Content

To edit the book open the `basic-book-builder` directory as an Obsidian Vault.

- Edit the Markdown content in the `chapters` directory.

B.1.1 Citations

Note: the Zotero database needs configured to export automatically to `lib/citations.bib`

To insert a Zotero Citation - Ensure the Zotero App and DB are running on you system. - Alt + I (to insert citation) - Search for and select citation reference

B.2 Usage: Building the Book

B.2.0.1 PDF

```
make pdf
```

B.2.0.2 HTML

```
make html
```

B.2.0.3 LaTeX

```
make latex
```

B.2.0.4 Markdown

```
make markdown
```

B.2.0.5 EPub

Note: This ePub configuration still needs tuning.

`make epub`

Glossary

Term	Description
AST (Abstract Syntax Tree)	Pandoc's internal structured representation of a document. Lua filters operate on the AST before rendering to a target format.
Bibliography	A .bib file (e.g., Zotero export) used by Pandoc with citeproc to generate formatted citations and reference lists.
Callout	A styled block (e.g., [!warning]) transformed by Lua filters into format-specific output such as LaTeX environments or HTML <div> elements.
Defaults File (YAML)	A Pandoc configuration file defining output format, filters, metadata, and rendering options (e.g., pdf.yaml, html.yaml).
DOCX	Microsoft Word document format generated by Pandoc; styling is controlled via a reference.docx file.
Filter (Lua)	A script that modifies Pandoc's AST before rendering. Used in this workflow for callouts and other structural transformations.
Frontmatter	Format-specific content inserted before the main body (e.g., frontmatter.tex, frontmatter.html, frontmatter-docx.md).
HTML	Web output format generated by Pandoc, typically styled via CSS and supporting interactive features.
LaTeX	Typesetting system used for high-quality PDF generation via XeLaTeX in this workflow.
Lua Filter	A lightweight scripting extension used by Pandoc to customize document transformations programmatically.
Makefile	Automation script orchestrating the build pipeline for PDF, HTML, DOCX, ODT, and Markdown outputs.
Markdown	Plain-text markup language serving as the source format for all outputs in the workflow.

Term	Description
Metadata	Key-value pairs (e.g., <code>metadata.yaml</code>) defining title, author, license, version, and other document variables.
ODT	OpenDocument Text format used by LibreOffice; similar to DOCX but open-standard.
Pandoc	Universal document converter used to transform Markdown into PDF, HTML, DOCX, ODT, EPUB, and more.
PDF	Portable Document Format output produced via Pandoc + XeLaTeX.
Reference Document	A DOCX or ODT file defining styles (fonts, headings, spacing) used when generating Word/LibreOffice outputs.
Resource Path	Directories Pandoc searches for images, diagrams, and other assets during rendering.
Template	A format-specific layout file (e.g., LaTeX template) used to control document structure beyond styling.
TOC (Table of Contents)	Automatically generated navigation structure controlled by <code>toc</code> and <code>toc-depth</code> options.
XeLaTeX	LaTeX engine used to generate PDFs with modern font support (via <code>fontspec</code>).
Zotero	Reference manager used to generate <code>.bib</code> files for citation processing with Pandoc.

Index

Pandoc, [1](#)

Bibliography

Bibliography

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