Crowbook User Guide

Crowbook User Guide

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Chapter 1

Crowbook

Render a book written in markdown to HTML, Epub or PDF.

Crowbook's purpose is to allow you to automatically generate multiple outputs formats from a book written in Markdown. Its main focus is novels, and the default settings should (hopefully) generate readable books with correct typography.

1.1 Example

To see what Crowbook's output looks like, you can read (a not-necessarily up-to-date version of) the Crowbook guide (containing this README.md file and additional documentation) rendered in HTML, PDF or EPUB.

1.2 Installing

Packages

If you are on Debian GNU/Linux or Ubuntu (on a PC architecture), you can download `.deb` packages on the releases page.

Binaries

See the releases page to download a precompiled binary for your architecture (currently: Linux, Windows and MacOSX). Just extract the archive and run `crowbook` (or `crowbook.exe` on Windows). You might also want to copy the binary somewhere in your `PATH` for later usage.

Building

You'll need to have the Rust compiler on your machine first; you can download and install it here. Once it is down:

```
$ cargo install crowbook
```

will automatically download the latest `crowbook` release on crates.io and install it.

1.3 Usage

The simplest command is:

```
$ crowbook <BOOK>
```

where `BOOK` is a configuration file. Crowbook will parse this file and generate a book in HTML, Epub, LaTeX, and/or PDF, according to the settings in the configuration file.

To create a new book, assuming you have a list of Markdown files, you can generate a template configuration file with the `--create` argument:

```
$ crowbook --create my.book chapter_*.md
```

This will generate a default `my.book` file, which you'll need to complete. This configuration file contains some metadata, options, and lists the Markdown files.

For more information see the configuration file.

It is also possible to give additional parameters to `crowbook`; we have already seen `--create`, but if you want the full list, see the arguments.

1.4 Current features

Output formats

Crowbook should correctly support HTML and EPUB (either version 2 or 3) as output formats: rendered files should pass respectively the W3C validator and the IDPF EPUB validator for a wide range of (correctly Markdown formatted) input files. See the example book rendered in HTML and EPUB on github.io.

LaTeX/PDF output is a bit more tricky: it should work reasonably well for novels (the primary target of Crowbook), but `pdflatex` might occasionally choke on some "weird" unicode character. See the example book rendered in PDF on github.io.

ODT output is currently experimental at best. It might work with very basic formatting but still needs a *lot* of work. You can still see the example book rendered in ODT on github.io to have an idea of the current status for this output format.

Input format

Crowbook uses pulldown-cmark and thus should support most of CommonMark Markdown. Inline HTML, however, is not implemented, and probably won't be, as the goal is to have books that can also be generated in PDF (and maybe eventually ODT).

Maybe the most specific "feature" of Crowbook is that (by default, it can be deactivated) it tries to "clean" the input files. By default this doesn't do much (except removing superfluous spaces), but if the book's language is set to french it tries to respect french typography, replacing spaces with non-breaking ones when it is appropriate (e.g. in french you are supposed to put a non-breaking space before '?', '!', ';' or ':'). This feature is relatively limited at the moment, but I might try to add more options and support for more languages.

Links handling

Crowbook tries to correctly translate local links in the input Markdown files: e.g. if you have a link to a markdown file that is part of your book, it will be transformed into a link inside the document.

Inline YAML blocks

Crowbook supports inline YAML blocks:

```
---
author: Me
title: My title
---
```

This is mostly useful when Crowbook is runned with the `--single` argument (receiving a single Markdown file instead of a book configuration file). E.g., the following Markdown file:

```
---
author: John Doe
title: A book

output.html: book.html
---

This is a very tiny book!
```

can be processed with `crowbook --single foo.md` or `crowbook -s foo.md` to produce the `book.html` file. This is useful for short texts that typically only contain one "chapter".

Bugs

See the github's issue tracker.

1.5 Contributors

- Stéphane Mourey `<s+crowbook AT stephanemourey DOT fr>`

1.6 Acknowledgements

Besides the Rust compiler and standard library, Crowbook uses the following libraries:

- pulldown-cmark
- yaml-rust
- mustache
- clap
- chrono
- uuid
- mime_guess
- crossbeam
- walkdir

- rustc-serialize

It also embeds Highlight.js in HTML output to enable syntax highlighting for code blocks.

It also uses configuration files from rust-everywhere to use Travis and Appveyor to generate binaries for various platforms on each release.

While Crowbook directly doesn't use them, there was also inspiration from Pandoc and mdBook.

Also, the W3C HTML validator and the IDPF EPUB validator proved very useful during development.

1.7 ChangeLog

See ChangeLog.

1.8 Library

While the main purpose of Crowbook is to be runned as a command line, the code is written as a library, so if you want to build on it you can use it as such. You can look at the generated documentation on docs.rs.

1.9 License

Chapter 2

Arguments

CROWBOOK can takes a list of arguments:

```
Render a markdown book in Epub, PDF or HTML.

USAGE:
    crowbook [FLAGS] [OPTIONS] [--] [BOOK]

FLAGS:
    -h, --help            Prints help information
    -l, --list-options    Lists all possible option
    -s, --single          Use a single Markdown file
instead of a book configuration file
    -V, --version         Prints version information
    -v, --verbose         Print warnings in
parsing/rendering

OPTIONS:
    -c, --create <FILES>...           Creates a new book
with existing markdown files
    -o, --output <FILE>               Specifies output
file
        --print-template <TEMPLATE>   Displays the
default value of a template
        --set <KEY_VALUES>            Sets a list of book
options
    -t, --to <FORMAT>                 Generate specific
forma [values: epub, pdf, html, tex, odt]
```

```
ARGS:
    <BOOK>    File containing the book configuration, or a
Markdown file when called with --single
```

Note that Crowbook generates output files relatively to the directory where <BOOK> is:

```
$ crowbook foo/bar.book --to pdf --output baz.pdf
```

will thus generate baz.pdf in directory foo and not in current directory.

The most important option obviously <BOOK>, i.e. the file configuration book. It is mandatory for most options: if you don't pass it, `crowbook` will simply display this help message. In a normal use case this is the only argument you'll need to pass, and `crowbook` will generate the book in all formats specified in the configuration file.

It is, however, possible to pass more arguments to `crowbook`.

2.1 `--create`

Usage: `crowbook [BOOK] --create file_1.md file_2.md ...`

Creates a new book from a list of Markdown files. It will generate a book configuration file with all file names specified as chapters. It either prints the result to stdout (if `BOOK` is not specified) or generate the file `BOOK` (or abort if it already exists).

Examples

```
crowbook foo.book --create  README.md ChangeLog.md
LICENSE.md
```

will generate a file `foo.book` containing:

```
author: Your name
title: Your title
lang: en

# Uncomment and fill to generate files
# output.html: some_file.html
# output.epub: some_file.epub
# output.pdf: some_file.pdf
```

```
# Uncomment and fill to set cover image (for Epub)
# cover: some_cover.png

# List of chapters
+ README.md
+ ChangeLog.md
+ LICENSE.md
```

while

```
crowbook --create README.md ChangeLog.md LICENSE.md
```

will prints the same result, but to stdout (without creating a file).

When `crowbook` is runned with `--create`, it can also uses the keys/values set by `--set` (see below):

```
$ crowbook foo.book --create file1.md file2.md --set
author "Pierre Dupont" title "Mon œuvre" lang fr
```

will generate a `foo.book` file containing

```
author: Pierre Dupont
title: Mon œuvre
lang: fr

# List of chapters
+ file1.md
+ file2.md
```

2.2 `--single`

usage: `crowbook --single <FILE>`
(or `crowbook -s <FILE>`)

This options allows to pass `crowbook` a single Markdown file. This file can contain an inline YAML block to set some book options. Inline YAML blocks must start and end with a line with `---` (three dashes). E.g:

```
---
author: Joan Doe
```

```
title: A short story
---
```

If this YAML block is not at the beginning of a file, it must also be preceded by a blank line.

This allows to not have to write a `.book` configuration file for a short story or an article. `crowbook --single foo.md` is rougly equivalent to having a book configuration file containing:

```
! foo.md
```

That is, the chapter heading (if any) won't be displayed in the output documents (though they still appear in the TOC).

Note that by default, using `--single` sets the `tex.short` option to `true`, using the LaTeX class of `article` instead of `book`.

2.3 `--set`

usage: `crowbook <BOOK> --set [KEY] [VALUE]...`

This options takes a list `KEY VALUE` pairs and allows to set or override a book configuration option. All valid options in the configuration files are valid as keys. For more information, see the configuration file.

Examples

```
$ crowbook foo.book --set html.css style.css
```

will override the CSS for HTML generation (the `html.css` key) to `style.css`.

```
$ crowbook foo.book --set author Foo --title Bar
```

will override the book title to `Bar` and its author to `Foo`.

2.4 `--list-options`

usage: `crowbook --list-options`

(or `crowbook -l`)

Displays all the valid options to use, whether in a book configuration file, with `--set`, or in an inline YAML block.

2.5 --print-template

usage: `crowbook --print-template template`

Prints to stdout the built-in template. Useful if you want to customize the appearance of your document. E.g., if you want to modify the CSS used for HTML rendering:

```
$ crowbook --print-template html.css > my_style.css
# edit my_style.css in your favourite editor
$ crowbook my.book --set html.css my_style.css
# or add "html.css: my_style.css" in my.book
```

Note that it is possible to use this option in conjonction with `--set`, though it is currently only useful for EPUB template:

```
$ crowbook --print-template epub.template --set
epub.version 2
# Returns the template for Epub 2 (currently it is the
default one)
$ crowbook --print-template epub.template --set
epub.version 3
# Returns the template for Epub 3
```

2.6 --verbose

usage: `crowbook <BOOK> --verbose`

If this flag is set, Crowbook will print the warnings it detect while parsing and rendering. These warnings are typically related to the inclusion of non-local images, linking to Markdown files that are not part of the book, and so on.

2.7 --to

usage: `crowbook <BOOK>--to [FORMAT]`

(or `crowbook <BOOK> -t [FORMAT]`)

Generate only the specified format. `FORMAT` must be either `epub`, `pdf`, `html`, `odt` or `tex`.

If an output file for the format is not specified in the book configuration file, `crowbook` will fail to render PDF, ODT and Epub (whereas it will print HTML and Tex files on stdout). It is however possible to specify a file with the `--output` option.

Examples

```
crowbook --to html foo.book
```

will generate some HTML, and prints it either to the file specified by `output.html` in `foo.book`, or to stdout if it is not specified.

```
crowbook --to pdf --output foo.pdf foo.book
```

will generate a `foo.pdf` file,.

2.8 `--output`

usage: `crowbook <BOOK> --to <FORMAT> --output <FILE>`
(or `crowbook -t <FORMAT> -o <FILE> <BOOK>`)
Specifies an output file. Only valid when `--to` is used.
Note that Crowbook generates output files relatively to the directory where `BOOK` is:

```
$ crowbook foo/bar.book --to pdf --output baz.pdf
```

will thus generate `baz.pdf` in directory `foo` and not in current directory.

Chapter 3

The configuration file

If you want to use Crowbook for your book, this configuration file is all you'll have to add (assuming you already have the book in Markdown files; if you don't, you'll also have to write a book first, but that's besides the scope of this document).

The format is not very complicated. This is an example of it:

```
# metadata
author: Joan Doe
title: Some book
lang: en

output.html: some_book.html

# list of chapters
- preface.md
+ chapter_1.md
+ chapter_2.md
+ chapter_3.md
+ chapter_4.md
- epilogue.md
```

Basically, it is divided in two parts:

- a list of options, under the form `key: value`, following YAML syntax.
- a list of Markdown files.

Lines starting with the `#` characters are comments and are discarded.

3.1 The list of files

There are various options to include a markdown file.

- `+ file_name.md` includes a numbered chapter.
- `- file_name.md` includes an unnumbered chapter.
- `! file_name.md` includes a chapter whose title won't be displayed (except in the table of contents); this is useful for e.g. including a copyright at the beginning or the book, or for short stories where there is only one chapter.
- `42. file_name.md` specifies the number for a chapter.

So a typical usage might look like this:

```
! copyright.md
- preface.md
# We want first chapter to be Chapter 0 because we are
programmers!
0. chapter_0.md
# Next chapters can be numbered automatically
+ chapter_1.md
+ chapter_2.md
...
```

There are two important things to note:

1. you must *not* use quotes around the file names.
2. the path of these files are relative to the directory where your configuration file is. This means you can run `crowbook books/my_trilogy/first_book/config.book` without being in the book's directory.

Also note that you don't have to specify a title. This is because the title of the chapter is inferred from the Markdown document. To go back to our previous example:

```
+ chapter_1.md
```

does not specify a chapter title, because it will read it directly in `chapter_1.md`, e.g.:

```
The day I was born
==================

...
```

You should have one and only one level-one header (i.e. chapter title) in each markdown file.

If you have more than one, Crowbook will print a warning and treat it as another chapter (numbered according to the scheme specified for including the file). It might however mess the table of contents in some cases (e.g. for Epub).

If you do *not* have a level-1 header in a markdown file:

- if it is a numbered chapter, Crowbook will infer a chapter name from the numbering scheme;
- if it is not numbered, chapter's title will default to the empty string and won't be displayed in the TOC.

3.2 Crowbook options

The first part of the configuration file is dedicated to pass options to Crowbook. This is YAML syntax, so each line should be of the form `key: value`. Note that in most cases you don't have to put string in quotes, e.g.:

```
title: My title
```

It is however possible (and sometimes necessary) to escape some characters to use quotes around strings:

```
title: "My: title!"
```

It is possible to use multiline strings with `>-` and then indenting the lines that are part of the string:

```
title: >-
 A
 long
 title
author: Joan Doe
```

will set `title` to `"A long title"`. See block literals in YAML for more information on the various way to insert multiline strings (which mostly change the way newlines will or won't be inserted).

A final note on the syntax: all options must be set *before* the first chapter inclusion (that is, a line beginning with '+', '-', 'x.' (where `x` is a number) or '!').

Here is the complete list of options, with a short description. The usage of some of them is detailed later on.

Metadata

- `author`
  - **type**: string
  - **default value**: `Anonymous`
  - Author of the book
- `title`
  - **type**: string
  - **default value**: `Untitled`
  - Title of the book
- `lang`
  - **type**: string
  - **default value**: `en`
  - Language of the book
- `subject`
  - **type**: string
  - **default value**: `not set`
  - Subject of the book (used for EPUB metadata)
- `description`
  - **type**: string
  - **default value**: `not set`
  - Description of the book (used for EPUB metadata)
- `cover`

  - **type**: path
  - **default value**: `not set`
  - Path to the cover of the book

Additional metadata

- `license`
  - **type**: string
  - **default value**: `not set`
  - License of the book
- `version`
  - **type**: string
  - **default value**: `not set`
  - Version of the book
- `date`
  - **type**: string
  - **default value**: `not set`
  - Date the book was revised

Output options

- `output.epub`
  - **type**: path
  - **default value**: `not set`
  - Output file name for EPUB rendering
- `output.html`
  - **type**: path
  - **default value**: `not set`
  - Output file name for HTML rendering
- `output.html_dir`
  - **type**: path

  - **default value**: `not set`
  - Output directory name for HTML rendering

- `output.tex`
  - **type**: path
  - **default value**: `not set`
  - Output file name for LaTeX rendering

- `output.pdf`
  - **type**: path
  - **default value**: `not set`
  - Output file name for PDF rendering

- `output.odt`
  - **type**: path
  - **default value**: `not set`
  - Output file name for ODT rendering

- `output.base_path`
  - **type**: path
  - **default value**: `""`
  - Directory where those output files will we written

Rendering options

- `rendering.initials`
  - **type**: boolean
  - **default value**: `false`
  - Use initials ('lettrines') for first letter of a chapter (experimental)

- `rendering.inline_toc`
  - **type**: boolean
  - **default value**: `false`
  - Display a table of content in the document

- `rendering.inline_toc.name`
  - **type**: string
  - **default value**: `"{{{loc_toc}}}"`
  - Name of the table of contents if it is displayed in document
- `rendering.num_depth`
  - **type**: integer
  - **default value**: `1`
  - The maximum heading levels that should be numbered (0: no numbering, 1: only chapters, ..., 6: all)
- `rendering.chapter_template`
  - **type**: string
  - **default value**: `"{{{number}}}\\. {{{chapter_title}}}"`
  - Naming scheme of chapters

Special option

- `import_config`
  - **type**: path
  - **default value**: `not set`
  - Import another book configuration file

HTML options

- `html.header`
  - **type**: string
  - **default value**: `not set`
  - Custom header to display at the beginning of html file(s)
- `html.footer`
  - **type**: string
  - **default value**: `not set`
  - Custom footer to display at the end of HTML file(s)

- `html.css`
  - **type**: template path
  - **default value**: `not set`
  - Path of a stylesheet for HTML rendering
- `html.js`
  - **type**: template path
  - **default value**: `not set`
  - Path of a javascript file
- `html.css.print`
  - **type**: template path
  - **default value**: `not set`
  - Path of a media print stylesheet for HTML rendering
- `html.highlight_code`
  - **type**: boolean
  - **default value**: `true`
  - Provides syntax highlighting for code blocks (using highlight.js)
- `html.highlight.js`
  - **type**: template path
  - **default value**: `not set`
  - Set another highlight.js version than the bundled one
- `html.highlight.css`
  - **type**: template path
  - **default value**: `not set`
  - Set another highlight.js CSS theme than the default one
- `html.side_notes`
  - **type**: boolean
  - **default value**: `false`
  - Display footnotes as side notes in HTML/Epub (experimental)

Standalone HTML options

- `html_single.one_chapter`
  - **type**: boolean
  - **default value**: `false`
  - Display only one chapter at a time (with a button to display all)
- `html_single.html`
  - **type**: template path
  - **default value**: `not set`
  - Path of an HTML template
- `html_single.js`
  - **type**: template path
  - **default value**: `not set`
  - Path of a javascript file

Multifile HTML options

- `html_dir.index.html`
  - **type**: template path
  - **default value**: `not set`
  - Path of index.html template
- `html_dir.chapter.html`
  - **type**: template path
  - **default value**: `not set`
  - Path of a chapter.html template

EPUB options

- `epub.version`
  - **type**: integer
  - **default value**: `2`
  - EPUB version to generate (2 or 3)

- `epub.css`
  - **type**: template path
  - **default value**: `not set`
  - Path of a stylesheet for EPUB
- `epub.chapter.xhtml`
  - **type**: template path
  - **default value**: `not set`
  - Path of an xhtml template for each chapter

LaTeX options

- `tex.links_as_footnotes`
  - **type**: boolean
  - **default value**: `true`
  - Add foontotes to URL of links so they are readable when printed
- `tex.command`
  - **type**: string
  - **default value**: `pdflatex`
  - LaTeX command to use for generating PDF
- `tex.template`
  - **type**: template path
  - **default value**: `not set`
  - Path of a LaTeX template file
- `tex.class`
  - **type**: string
  - **default value**: `book`
  - LaTeX class to use

Resources option

- `resources.files`
  - **type**: string
  - **default value**: `not set`
  - Whitespace-separated list of files to embed in e.g. EPUB file; useful for including e.g. fonts
- `resources.base_path`
  - **type**: path
  - **default value**: `not set`
  - Path where to find resources (in the source tree). By default, links and images are relative to the Markdown file. If this is set, it will be to this path.
- `resources.base_path.links`
  - **type**: path
  - **default value**: `not set`
  - Set base path but only for links. Useless if resources.base_path is set.
- `resources.base_path.images`
  - **type**: path
  - **default value**: `.`
  - Set base path but only for images. Useless if resources.base_path is set.
- `resources.base_path.files`
  - **type**: path
  - **default value**: `.`
  - Set base path but only for additional files. Useless if resources.base_path is set.
- `resources.base_path.templates`
  - **type**: path
  - **default value**: `.`

  - Set base path but only for templates files. Useless if resources.base_path is set.

- `resources.out_path`
  - **type**: path
  - **default value**: `data`
  - Paths where additional resources should be copied in the EPUB file or HTML directory

Input options

- `input.autoclean`
  - **type**: boolean
  - **default value**: `true`
  - Toggle cleaning of input markdown according to lang
- `input.yaml_blocks`
  - **type**: boolean
  - **default value**: `false`
  - Enable inline YAML blocks to override options set in config file

Crowbook options

- `crowbook.temp_dir`
  - **type**: path
  - **default value**: “
  - Path where to create a temporary directory (default: uses result from Rust's std::env::temp_dir())
- `crowbook.zip.command`
  - **type**: string
  - **default value**: `zip`
  - Command to use to zip files (for EPUB/ODT)
- `crowbook.verbose`

- **type**: boolean
- **default value**: `false`
- Make Crowbook display more messages

Note that these options have a type, which in most case should be pretty straightforward (a boolean can be `true` or `false`, an integer must be composed a number, a string is, well, any string). The `path` type might puzzle you a bit, but it's equivalent to a string, except Crowbook will consider it relatively to the book file. The `template path` type is just the `path` of a template.

Output options

These options specify which files to generate. You must at least set one of this option, or Crowbook won't do anything.

Recall that all file paths are relative to the directory where the config file is, not to the one where you run `crowbook`. So if you set

```
output.epub = foo.epub
```

and runs

```
$ crowbook some/dir/config.book
```

`foo.epub` will be generated in `some/dir`, not in your current directory.

Crowbook will try to generate each of the `output.xxx` files that are specified. That means that you'll have to set at least one of those if you want a call to

```
$ crowbook my.book
```

to generate anything. (It's still possible to generate a specific format, and only this one, by using the `--to` argument on the command line).

Note that some formats depend on some commands being installed on your system. Most notably, Crowbook depends on LaTeX (`pdflatex` by default, though you can specify the command to use with `tex.command`) to generate a PDF file, so PDF rendering won't work if it is not installed on your system. Crowbook also uses the `zip` command to generate the EPUB and ODT, files.

Current output options are:

- `output.html`: renders a standalone HTML file;
- `output.html_dir`: render a HTML directory with one page by chapter;
- `output.epub`: renders an EPUB file;
- `output.tex`: renders a LaTeX file;
- `output.pdf`: renders a PDF file (using `tex.command`).

Resources options

These two options allow to embed additional files for some formats (currently, only EPUB). This can be useful for embedding fonts.

resources.files

A list of files or directories that should be added. It's a whitespace-separated list, so it can be, e.g.:

```
resources.files: font1.otf font2.otf
```

It is also possible to specify a directory (or multiple directories). So if you have a `fonts` directories containing `font1.otf` and `font2.otf`,

```
resources.files: fonts
```

will be equivalent to:

```
resources.files: fonts/font1.otf fonts/font2.otf
```

default: not set

resources.path

This option determine where (in which directory), *in the resulting document*, will those files be copied. The default is `data`, so by default the `resources.files` in the first example above will search `font1.otf` and `font2.otf` *in the same directory than the `.book` file, and will copy them to `data/font1.otf` and `data/font2.otf` *in the EPUB file*. This is therefore this last path that you should use if you want to access those files e.g. in a custom CSS stylesheet.

Note that if you pass directories to `resources.files`, the whole directory would be copied. So assuming `fonts/` contains `font1.otf` and `font2.otf`

```
resources.files: fonts
resources.path: data
```

will copy these two files to `data/fonts/font1.otf` and `data/fonts/font2.otf` (and not `data/font1.otf` and `data/font2.otf`).

Similarly, the whole path of `resources.files` is copied, so

```
resources.files: fonts/font1.otf fonts/font2.otf
```

will yield the same result.

default: `data`

Generic options for rendering

numbering

An integer that represents the maximum level of numbering for your book. E.g., `1` will only number chapters, while `2` will number chapters, sections, but not anything below that. `6` is the maximum level and turns numbering on for all headers.

default: `1`

numbering_template

A string that will be used for chapter titles. You can use `{{number}}` and `{{title}}` in this string, e.g.:

```
numbering_template: "Chapter {{number}} {{title}}"
```

Note that:

- in this case, quoting is necessary because `{` and `}` have special meaning in YAML;
- this string won't be used for unnumbered chapters;
- this string isn't currently used by LaTeX, either.

autoclean

This option cleans a bit the input markdown. With the default implementation, it only removes consecutive spaces, which has not real impact (they are ignored anyway both by HTML viewers and by LaTeX).

However, if `lang` is set to `fr`, it also tries to add non-breaking spaces in front (or after) characters like '?', '!', ';' to respect french typography.

Chapter 4

Templates

4.1 List of templates

CROWBOOK allows the user to specify a number of templates. Some of them, though are not "real" templates, they are just files that are inserted, but can't contain mustache tags. This will probably evolve in future versions.

html.js

The javascript file used by both the standalone HTML renderer and the multiple files HTML renderer.

This is not currently an actual template, just a plain javascript file which cannot contain `mustache` tags.

html.css

The main CSS file used by both the standalone HTML renderer and the multiple files HTML renderer.

html.css.print

An additional CSS file used by both the standalone HTML renderer and the multiple files HTML renderer. Its purpose is to provide CSS instructions for printing (i.e., when the user clicks the `print` button in her browser).

This is not currently an actual template, just a plain CSS file which cannot contain `mustache` tags.

html.highlight.js

A javascript file used by both HTML renderers to highlight codes in code blocks. It should be a variant of highlight.js.

This is not an actual template, just a plain javascript file.

html.highlight.css

A CSS file used by both HTML renderers to set the theme of highlight.js. It should, though, be an highlight.js theme.

This is not an actual template, just a plain CSS file.

html_single.js

A javascript file used only by the standalone HTML renderer. Its main purpose is to handle the displaying of a single chapter at a time when `one_chapter` is set to true.

html_single.html

The main template for standalone HTML renderer.

html_dir.chapter.html

The main template for multiple files HTML renderer. It is the template for rendering each chapter.

html_dir.index.html

The template used by multiple files HTML renderer to render the `index.html` file.

tex.template

The main (and currently only) template used by the LaTeX renderer.

epub.chapter.xhtml

This template is the main template used by the Epub renderer. It contains the XHTML template that will be used for each chapter.

epub.css

This template is used by the Epub renderer and contains the style sheet.

Inline templates

Crowbook also has some inline templates, that are set in the book configuration file:

- `rendering.inline_toc.name` sets the name of the inline table of content, if it is displayed. By default, is is set to `{{{loc_toc}}}`, that is, a localised version of "Table of Contents".
- `rendering.chapter_template` sets the naming scheme for chapters.

4.2 Create and edit template

Except for inline templates, which are set directly in the book configuration file:

```
rendering.chapter_template: "{{{loc_chapter}}}
{{{number}}}: {{{chapter_title}}}"
```

most templates must be in a separate file:

```
tex.template: my_template.tex
```

`--print-template` argument

The easiest way to create a new template is to start with the default one used by Crowbook. In order to do so, you can use the `--print-template` argument:

```
$ crowbook --print-template tex.template > my_template.tex
```

In order to get the `chapter.xhtml` template for EPUB3, you'll also have to use `--set epub.version 3`:

```
$ crowbook --print-template epub.chapter.xhtml --set
epub.version 3 > my_epub3_template.xhtml
```

Mustache syntax

Crowbook uses rust-mustache as its templating engine, which allows to use Mustache syntax in the templates.

It mainly boils down to using `{{{foo}}}`[1] to insert the value of variable `foo` in the document:

```
<h1 class = "title" >{{{title}}}<h1>
<h2 class = "author">{{{author}}}</h2>
```

Mustache also provides the possibility of checking whether a variable is set:

```
{{#foo}}
Foo exists
{{/foo}}
{{^foo}}
Foo does not exist
{{^foo}}
```

Crowbook uses this and sets some variables to `true` to allow templates to conditionally include some portions. E.g., in `html.css`:

```
{{#fr}}
/* Make list displays '-' instead of bullets */
ul li {
    list-style-type: '-';
    padding-left: .5em;
}
{{/fr}}
```

In this case, Crowbook sets a variable whose name is equal to the `lang` value to `true`, allowing to have different styles for some elements according to the language.

For more information about Mustache syntax, see Mustache manual.

[1] Mustache also provides the `{{foo}}` variant, which HTML-escapes the content of the variable. You should not use this, as Crowbook already renders and correctly escapes the variables it sets for use in templates.

Syntax in LaTeX

Since LaTeX already uses a lot of curly brackets, the default template sets an altenative syntax to access variables, with `«&foo»`[2]:

```
\title{<<&title>>}
\author{<<&author>>}
<<#has_date>>\date{<<&date>>}<</has_date>
```

4.3 List of accessible variables

Metadata

For every template, Crowbook exports all of the metadata:

- `author`;
- `title`;
- `lang`;
- `subject`;
- `description`;
- `license`;
- `version`;
- `date`;
- any option `metadata.foo` defined in the book configuration file will also be exported as `metadata_foo`.

These metadata can contain Markdown, which will be rendered. E.g., setting `date: "20th of **september**"` will render `september` in bold, using `<b>` tag for HTML or `\textbf` for LaTeX. (It might be a bad idea to insert Markdown into `author` or `title` fields, and it

[2] `«foo»` might also work, but the ampersand is required to prevent mustache HTML-escaping the value. This is not good because:

1. escaping is already done by Crowbook before setting variable content;
2. escaping HTML in a LaTeX document won't probably look good.

certainly is for `lang`, but it an be useful for custom metadata or for fields like `description`).

For each metadata `foo` that is set, Crowbook also inserts a `has_foo` bool set to true. This allows to use Mustache's section for some logic, e.g.:

```
{{{title}}}
{{#has_version}}, version {{{version}}}{{/has_version}}
```

will avoid rendering ", version" when `version` is not set.

Localisation strings

For all templates, Crowbook also exports some localisation strings `loc_foo`. They currently include:

Localisation key	Value in english
`loc_toc`	Table of contents
`loc_chapter`	Chapter
`loc_display_all`	Display all chapters
`loc_display_one`	Display one chapter

Template-dependent values

Crowbook also exports some additional fields for some templates, see below.

Mustache tag	
`content`	
`toc`	
`footer`	
`header`	
`script`	
`style`	The CSS
A variable whose whose name corresponds to `lang` in book options	
`chapter_title`	
`highlight_code`	
`highlight_css`	
`highlight_js`	
`common_script`	
`one_chapter`	
`book.svg`	T
`pages.svg`	The b
`menu_svg`	
`prev_chapter`	
`next_chapter`	
`class`	
`book`	
`tex_lang`	
`initials`	

ChangeLog

0.9.0 (2016-09-23)

The main objective of this release is to clean public interfaces, in order to limit breaking changes in the future. *Ideally*, all pre-1.0 releases should thus be 0.9.x. Concretely, this meant three things:

- reducing the surface of Crowbook's library API;
- cleaning options names
- cleaning the names exported in templates and document them, in order not to break user-defined templates in future (non-breaking) releases. More detailed changes for this release:
- **Breaking change for users**: removed `tex.short` option, replaced by a more generic `tex.class` (default being `book`). `html.crowbook_link` has also been removed.
- Renamed options. Using the old name will print a deprecation warning but will still work for a while.
  - `temp_dir` -> `crowbook.temp_dir`
  - `zip.command` -> `crowbook.zip.command`
  - `verbose` -> `crowbook.verbose`
  - `html.print_css` -> `html.css.print`
  - `html.display_chapter` -> `html_single.one_chapter`
  - `html.script` -> `html_single.js`
  - `numbering` -> `rendering.num_depth`
  - `numbering_template` -> `rendering.chapter_template`
  - `display_toc` -> `rendering.inline_toc`

  - `toc_name` -> `rendering.inline_toc.name`
  - `enable_yaml_blocks` -> `input.yaml_blocks`
  - `use_initials` -> `rendering.initials`
  - `autoclean` -> `input.autoclean`
  - `html_dir.css` -> `html.css` (not really renamed, `html_dir.css` isactually removed as there is no point in having different CSS for standalone and multifile HTML rendering, is it?)

- New options:
  - More metadata: `license`, `version` and `date`. These metadata are not treated by the renderers, but they are exported to the templates: `{{{metadata}}}` allows to access the content. If they are present, a `has_metadata` is also set to true, allowing to do something like `{{{title}}} {{#has_version}}version {{{version}}} {{/has_version}}`.
  - Yet more metadata: it is possible to add custom metadata by prefixing it with `metadata.`. They will then be accessible in the templates, with dots ('.') replaced by underscores ('_'). E.g., with `metadata.foo: bar` you can access it in your templates with `{{{metadata_foo}}}`.
  - `output.base_path` specifies a directory where the output files (set by `output.FORMAT` will be written.
  - `resources.base_path.templates` specifies where templates can be found.

- Rendering:
  - Metadata can now contain Markdown and will be rendered by the renderers. This might not be a good idea for common fields (e.g. "title"), though. Use with caution.
  - `rendering.inline_toc.name` can use `{{{loc_toc}}}` to specify a localized name.
  - HTML:
    * `html.top` and `hstml.footer` are now considered as templates, so you can use some `{{{metadata}}}` in it.
    * Improved the way footnotes are displayed.

        * In standalone HTML, footnotes are rendered at the end of the document instead of at the end of the chapter, unless `html_single.one_chapter` is true.
    - LaTeX:
        * If `tex.class` is set to `article`, chapters will be displayed as `\sections` since `article` class doesn't handle chapters.
        * Except if `tex.class` is set to `book`, margins are now symmetrical.
        * LaTex template now uses `version` and `date`.

- Bugfixes:
    - `import_config` only import options from another book file that are not equal to the default ones and that haven't already been set by the caller. E.g., `author: foo` then `import_config: bar.book` won't erase the author previously set.
    - `import_config` now correctly translates the imported book's paths.

- Crowbook program:
    - Still working to improve error messages.
    - `crowbook --list-options` uses colours. This might hurt your eyes.
    - Display an error message when mustache can't compile a template, instead of panicking.

- Internal/API:
    - Added static methods to `Logger` to allows displaying messages more easily/prettily.
    - Reduce pubic API's surface so less changes will need to be considered breaking in the future.

0.8.0 (2016-09-19)

This release adds support for syntax higlighting in code blocks, customized top and footer blocks for HTML rendering, and the special `import_config` option that allows to import options from another book file. It also provides (hopefully) better error messages.

- New options:
  - `import_config`is not really an option, but allows to import another configuration file, useful if you share a same set of options between multiple books.
  - `use_initials` (set to false by default) makes Crowbook use initials ("lettrines") at start of each chapter. Support is still experimental.
  - `html.highlight_code` (set to true by default) allows syntax highlighting for code blocks, using highlight.js.
  - `html.higlight.css` and `html.highlight.js` can be used to provide other themes (default is default.css) and an highlight.js build that support other languages.
  - `html.footer` allows to specify custom footer. If not set, `html.crowbook_link` allows to disable "Generated by Crowbook" message.
  - `html.top` allows to specify a custom header that will be displayed at the top of HTML file(s).
- Deprecated options:
  - `side_notes` has been renamed `html.side_notes`.
- Crowbook program:
  - All output formats are now rendered concurrently.
  - Better error messages. Crowbook now tries to give more information when displaying an error, with the file name where a problem was found, and, in some cases, the line. It also tries to detect errors (such as files not found) sooner.
  - Some "warning" messages have also been "moved" to error messages, to make sure they are displayed even when crowbook isn't runned with `--verbose`.
- Rendering:
  - Hidden chapter now produce empty `\chapter*{}` and `<h1>` in LaTeX and HTML. This allow to delimit a chapter break even if nothing is displayed.
- Bugfixes:

  - Navigation menu of standalone HTML didn't include a call to javascript when `html.display_chapter` was set to true, meaning it didn't display the chapter correctly.
  - Implementations of `Image` and `StandaloneImage` were reversed in LaTeX.
  - `StandaloneImage` urls were not adjusted (meanning that running `crowbook` from another directory failed).
  - Image paths are now found correctly in HtmlDir rendering even if `crowbook` is called from another directory (same fix as 0.6's for Epub and LaTeX, which was forgotten for HtmlDir).

- Internal/API:

  - In order to have better error messages, there was a need to refactor the `Error` type, and make more methods return `Result<X>` instead of `X`. The API is, therefore, quite modified.
  - Added a `Renderer` trait used by the various renderers.
  - Removed some methods from public API.

0.7.0 (2016-09-11)

This releases renders images differently when they are on a standalone paragraph or inside a paragraph.

- Internal/API:

  - `Token` has a new variant, `StandaloneImage`. This is used to distinguish an image that is alone in a paragraph of an image that is inlined alongside text.
  - `Parser.parse` method now distingues between `Image` and `StandaloneImage`. Currently, an image is considered "standalone" if it is the sole element of a paragraph, even if it is among a link.
  - `Token` has a new `is_image` method.

- Rendering:

  - Standalone images are now rendered differently than inline images (80% of width VS original size) in HTML/EPUB and LaTeX.

0.6.0 (2016-09-09)

- Deprecated options:
  - `nb_char`: since it was only used for french cleaner and for typography reasons it's better to use different non breaking spaces according to context, this option was not really useful anymore.
- Rendering:
  - Images are now displayed at 80% width of the page.
- Bugfixes:
  - Image paths are now found correctly in LaTeX and EPUB rendering even if `crowbook` is called from another directory.
  - Fixed a bug in `French` cleaner when a string to clean ended by a non-breaking space (space was doubled with a breaking one).
  - LaTeX/PDF:
    * "Autocleaning" is now also activated (for french at least) for LaTeX rendering, since it doesn't correctly insert non-breaking spaces for e.g. '«' or '»'.
    * Fixed escaping of `--` to `-{}-` to avoid tex ligatures.
  - HTML/EPUB:
    * `html.display_chapter` now defaults to `false` (e.g., by default the HTML displays the entirety of a book).
    * Fixed rendering of lists when `lang` is set to `fr`.
    * Links are now HTML-escaped, fixing errors in XHTML (for EPUB rendering) when links contained '&' character.

0.5.1 (2016-04-14)

Mostly rendering fixes:

- Epub:
  - Fix a validation problem when book contained hidden chapters.

- French cleaner:
  - Use semi-cadratine space instead of cadratine space for dialogs.
  - Use non-narrow non-breaking spapce instead of narrow one for ':', '«' and '»' (following https://fr.wikipedia.org/wiki/Espace_ins%C3%A9cable#En_France
- HTML:
  - Add viewport meta tags.
  - Standalone HTML:
    * Don't display the button to display chapter and the previous/next chapter link if `html.display_chapter` is set to `false`.
    * Fix chapter displaying when some chapters are not numbered.
  - Multi-files HTML:
    * Fix previous/next chapter display to make it consistent with standalone HTML.

0.5.0 (2016-04-02)

- Crowbook now requires Rustc 1.7.0.
- It is now possible to render HTML in multiple files:
  - `output.html_dir` will activate this renderer, and specify in which directory to render these files;
  - `html_dir.css` allows to override the CSS for this rendering;
  - `html_dir.index.html` allows to specify a template for the `index.html` page;
  - `html_dir.chapter.html` allows to specify a template for the chapters pages.
- New book options:
  - `tex.short`: if set to true, the LaTeX renderer will use `article` instead of `book` as document class, and will use the default `\maketitle` command for article. This option is by default set to false, except when Crowbook is called with `--single`.

  - `enable_yaml_blocks`: parsing YAML blocks is no longer activated by default, except when using `--single`. This is because you might want to have e.g. multiple short stories using YAML blocks to set their titles and so on, *and* a separate `.book` file to render a book as a collection of short stories. In this case, you wouldn't want the displayed title or the output.pdf/html/epub files be redefined by the short stories .md files.
  - `html.print_css`: allows to specify a stylesheet for media print
  - `html.display_chapter`: displays one chapter at a time in standalone HTML
  - `html.script`: allows to specify a custom javascript file for standalone HTML
  - `html_dir.script`: same thing for multipage HTML
  - `resources.base_path`: by default, Crowbook resolves local links in markdown files relatively to the markdown file. This option allows to resolve them relatively to a base path. This option comes with two variants, `resources.base_path.images` and `resources.base_path.links`, which only activate it for respectively images tags and links tags. These two options are ignored when `base_path` is set. There is also `resources.base_path.files` which specify where additional files (see below) should be read, but this is one is set to `.` (i.e., the directory where the `.book` file is) by default.
  - `resources.files`: indicate a (whitespace-separated) list of files that should be embedded. Currently only used with the EPUB renderer.
  - `resources.out_path`: indicate where `resources.files` should be copied in the final document. Default to `data`, meaning that files will be placed in a `data` directory in the EPUB.

- Rendering:
  - Templates can now use localized strings according to the `lang` option
  - Standalone HTML now includes locale files using base64.

  - Standalone HTML displays one chapter at a time, thouht it can be changed via a button in the menu.
  - HTML/EPUB: default CSS now uses the `lang` value do determine how to display lists (currently the only difference is it uses "–" when `lang` is set to "fr" and standard bullets for other languages).

- Bugfixes:
  - Fixed a bug of filename "resolution" when Crowbook was called with `--single` (e.g., `crowbook -s tests/test.md` would previously try to load ‘tests/tests/test.md).
  - Epub renderer now uses the `mime_guess` library to guess the mime type based on extension, which should fix the mime type guessed for a wide range of extensions (e.g., svg).

- Internal/API:
  - The `Book::new`, `new_from_file`, and `new_from_markdown_file` take an additional `options` parameter. To create a book with default options, set it to `&[]`.

0.4.0 (2016-03-01)

- Crowbook now internally uses a true YAML parser, `yaml_rust`, for its options. Since the "old" Crowbooks's config format was similar, but had some subtle differences, this is somewhat of a breaking change:
  - strings should now be escaped with "" in some cases (e.g. if it contains special characters). On the other hand, it *allows* to optionally escape a string with these quotes, which wasn't possible until then and might be useful in some cases.
  - multiline strings now follow the YAML format, instead of the previous "YAML-ish" format. This can impact the way newlines are added at the end of a multiline string. See e.g. this link for the various ways to include mulitiline strings in Yaml.

- Crowbook now parses YAML blocks (delimited by two lines with "---") in Markdown files, ignoring keys that it doesn't recognize.

This allows crowbook to be compatible(-ish) with Markdown that contains YAML blocks for Jekyll or Pandoc.

- New option `--single` allows to give Crowbook a single Markdown file (which can contain options within an inline YAML block) instead of a book configuration file. This is useful for e.g. short stories.
- Enhanced the way debugging/warning/info messages are handled and displayed:
  - Added a `--debug` option to the binary.
  - Internal: added a `Logger` struct.
  - Different levels of information (debug/warning/info/error) get different colours.
- Bugfixes:
  - Crowbook no longer crashes when called with the `--to` argument if it can't create a file.

0.3.0 (2016-02-27)

- Crowbook now tries to convert local links. That is, if you link to a Markdown file that is used in the book. (e.g. README.md), it *should* link to an appropriate inner reference inside the book.
- Latex renderer now supports (local) images.
- Epub renderer now embed (local) images in the EPUB file.
- Some changes to the HTML/Epub stylesheets.
- Internal (or usage as a library):
  - Crowbook no longer changes current directory, which worked in the binary but could cause problem if library was used in multithreaded environment (e.g. in `cargo test`).
  - More modules and methods are now private.
  - Improved documentation.
  - Added more unit tests.
- Bugfixes:
  - Epub renderer now correctly renders unnumbered chapter without a number in its toc.ncx file

0.2.2 (2016-02-25)

- Bugfixes:
  - French cleaner now correctly replaces space after — (in e.g. dialogs) with "em space".

0.2.1 (2016-02-25)

- Bugfixes:
  - HTML/Epub rendering no longer incorrectly increment chapter count for unnumbered chapters.
  - Latex: makes what is possible to avoid orverflowing the page.
- Minor changes:
  - Latex: improvement of the default way URLs are displayed.

0.2.0 (2016-02-25)

- Command line arguments:
  - New argument `--print-template` now allows to print a built-in template to stdout.
  - New argument `--list-options` prints out all valid options in a config file (or in `set`), their type and default value.
  - New argument `--set` allows to define or override whatever option set in a book configuration.
  - `--create` can now be used without specifying a `BOOK`, printing its result on `stdout`.
- Configuration file:
  - Added support for multiline strings in `.book` files, with either '|' (preserving line returns) or '>' (transforming line returns in spaces)
  - New option `display_toc` allows to display the table of contents (whose name, at least for HTML, is specified by `toc_name`) in HTML and PDF documents.

  - Option `numbering` now takes an int instead of a boolean, allowing to specify the maximum level to number (e.g. `1`: chapters only, `2`: chapters and sectino, ..., `6`: everything).

- Rendering:
  - Added support for numbering all headers, not just level-1 (e.g., having a subsection numbered `2.3.1`).
  - Tables and Footnotes are now implemented for HTML/Epub and LaTeX output.

- Internal:
  - Refactored `Book` to use an HashMap of `BookOption`s instead of having like 42 fields.

0.1.0 (2016-02-21)

- initial release

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Version 2.1, February 1999

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

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notices
stating that you changed the files and the date of any
change.

c) You must cause the whole of the work to be licensed at
no
charge to all third parties under the terms of this
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table of data to be supplied by an application program
that uses
the facility, other than as an argument passed when the
facility
is invoked, then you must make a good faith effort to
ensure that,
in the event an application does not supply such function
or
table, the facility still operates, and performs whatever
part of
its purpose remains meaningful.

(For example, a function in a library to compute square
roots has
a purpose that is entirely well-defined independent of the
application.  Therefore, Subsection 2d requires that any
application-supplied function or table used by this
function must
be optional: if the application does not supply it, the
square
root function must still compute square roots.)
```

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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```
a) Accompany the work with the complete corresponding
machine-readable source code for the Library including
whatever
changes were used in the work (which must be distributed
under
Sections 1 and 2 above); and, if the work is an executable
linked
with the Library, with the complete machine-readable "work
that
uses the Library", as object code and/or source code, so
that the
user can modify the Library and then relink to produce a
modified
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executable containing the modified Library.  (It is
understood
that the user who changes the contents of definitions
files in the
Library will not necessarily be able to recompile the
application
to use the modified definitions.)

b) Use a suitable shared library mechanism for linking
with the
Library.  A suitable mechanism is one that (1) uses at run
time a
copy of the library already present on the user's computer
system,
rather than copying library functions into the executable,
and (2)
will operate properly with a modified version of the
library, if
the user installs one, as long as the modified version is
interface-compatible with the version that the work was
made with.

c) Accompany the work with a written offer, valid for at
least three years, to give the same user the materials
specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

d) If distribution of the work is made by offering access
to copy
from a designated place, offer equivalent access to copy
the above
specified materials from the same place.

e) Verify that the user has already received a copy of
these
materials or that you have already sent this user a copy.
```

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```
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based on the Library, uncombined with any other library
facilities.  This must be distributed under the terms of
the
Sections above.

b) Give prominent notice with the combined library of the
fact
that part of it is a work based on the Library, and
explaining
where to find the accompanying uncombined form of the same
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