



# Official Riven Manual

Write Markdown. Get a nice PDF. Have fun.

# 1. What is Riven?

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In one sentence: Riven is a command line tool, which converts a bunch of markdown files into a PDF file.

## The question is: Why would you do that?

There are several scenarios where the usage of a tool like riven would make a lot of sense for you. Let's take a look at some of them:

### 1.1 Scenario A: You want to write a book

You are a bit familiar with Linux or OSX. Maybe you even know what markdown is, but it's ok if you don't know markdown. And you want to write a book for some reason. Maybe a subject book, maybe a novel or maybe some fanfiction for whatever you like. But you have no idea of LaTeX and you don't want to write it in LibreOffice or some other kind of office suite for some reason. Maybe because you want to have full control over all formatings and you love a text editor like atom, sublime editor or vim. You also know HTML and CSS maybe, but you don't want to use it since it's too much code to write and you have to test it too often in your browser while writing.

What you want is just a very simple and lean tool chain, which lets you write a very minimalistic markup in your favorite text editor and compiles everything in a beautiful, readable and stylish PDF (and mobi, epub etc in the future). And if something doesn't fit your requirements, you just change it via CSS.

### 1.2 Scenario B: You are a coder and want to document your software

You have a software project, you're familiar with Linux or OSX, HTML, CSS, Markdown and others. And you want to document your software in a plain text readable format. But you also want a very simple and lean tool chain, which compiles everything in a beautiful, readable and stylish PDF (and mobi, epub etc in the future). And if something doesn't fit your requirements, you just change it via CSS. Also you want to use your favorite text editor like atom, sublime editor or vim but don't want to write the documentation in HTML and CSS since it's too much code to write and you have to test it too often in your browser while writing. And you don't want to write it in LibreOffice or some other kind of office suite for some reason. For example because you're working in a team and you're using some kind of version control system like git. Therefore a plain text format is much more beneficial than a binary blob.

### 1.3 What is Riven not?

Now you may have a clue what riven is. But it's maybe even more important to understand what riven actually is **not**. Well riven is neither an editor like atom nor a typesetting system like TeX nor a markup language like markdown or reStructuredText nor an office suite nor a webbased service like lit lift. It's just a command line tool which transforms markdown files into PDF documents.

Also riven doesn't run on windows machines. Sorry for that.

Additionally riven lacks some features you may know from sphinx. For example HTML site generation is not there (yet!) and riven is (yet!) not able to generate man pages, ePub and mobi formats. But those features are planned and will be added in the future. Also riven intentionally doesn't generate chapter numeration like you may know from sphinx. You have to do it on your own (and you can just omit it if you don't like it or even mix it up). But maybe there will be an option in the future which makes riven to auto generate chapter numbers for you.

## 1.4 Why was Riven created?

I've two hobbies. Ok I got more hobbies, but only two of them are relevant for riven.

One is programming. I code a lot. Additionally it's my job so I code even more. And a good programmer documents his software. In my company we're working on a high innovative CMS with a very versatile framework which allows us to implement nearly every kind of project. We had to document that framework in some way for the other developers which would use it and implement the customer projects based on CMS. One requirement to the documentation was protability. It should be viewable on the PC, Tablets and it should be printable. As we started to write the documentation, we used OpenOffice and saved it as a ODT file, which is basically a ZIP-File with some XML within. In order words: We had a binary file in our git repository. It doesn't took a long time until we had merge conflicts due the fact that up to three people have been working on the document at the same time. And merging a big binary blob doesn't make fun. So I wanted to switch to another toolchain to write the documentation. The obvious suggest was HTML of course. But to write HTML is much work, we didn't want to do that. We know HTML, since we're webdevelopers, but we wanted a solution which would be more lean. Of course we could have used our CMS, but we wanted to have the documentation in our git repository. However we wanted to use plain text to write your documentation and we wanted a PDF as a result. Unfortunately there wasn't any good comparable tool that time.

My second hobby is Pen and Paper. Dungeons and Dragons, you know (Cthulu, Aborea and Pathfinder to be exact). And I was writing a campaign. I was writing that campaign in markdown, because I love my editor and wanted to use git to manage everything and GitLab renders markdown nicely. Now I needed a build chain to produce a PDF in order to have one document which can be printed or sent via mail.

For these both use cases I hacked the initial proof of concept version of a md2pdf ruby script, which worked. But I wanted some additional features like styling of the PDF via CSS, a cover page, syntax highlighting and some other stuff. So the script started to grow to a bigger project. After some time I've renamed it to riven, since it sounds cool. And yes it's reference to the Myst series.

In order to keep even big documents structured and clear, riven 1.1.0 introduced the *include* syntax, which allows a better split up of the content over many files, subdirectories and allows an easier refactoring of the chapters.

Riven solved both use cases very well. I'm using riven to write both large Pen and Paper campaigns and some small documents. Either quickly or over week of hard work. Both cases produce a nice PDF. Today the CMS framework documentation of my company includes over 200 pages generated out of 9500 lines of markdown, which are changed on a weekly basis.

## **1.5 How can I support Riven?**

Riven is a MIT licensed Open Source project hosted on GitHub. Just visit <https://github.com/phortx/riven>. You'll find the issues section there containing all bugs and feature requests. Also you can fork the project to open pull requests. Feel free to contribute code, documentation or bugfixes!

If you find any bugs, please open a new issue in the issue tracker and I'll try to fix it.

## 2. Setup Riven

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In this chapter we'll tackle the setup of Riven. You'll learn everything you need to know. Especially the prerequisites and pitfalls.

### 2.1 Prerequisites

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Riven comes with some dependencies, which you have to satisfy before you can start to use. But no panic it's not that hard.

First of all you'll need [wkhtmltopdf](#) in order to generate PDFs, since that's the PDF generator backend of Riven. And you should use the QT patched version of `wkhtmltopdf` to get all the features of riven. You may also use the version without patched qt, but that will disable the following features of riven: Page numbers, table of contents and covers.

Let's go ...

- If you got Arch Linux, you can just install the packages `wkhtmltopdf-static` and `icu48` from the AUR and you're done. Pretty easy, isn't it?
- If you got another Linux Distribution (like Ubuntu) or OSX you have to compile `wkhtmltopdf` from the sources. See <http://natepinchot.com/2014/01/31/building-static-wkhtmltopdf/> for details. This may take some time: On my i7 it takes about 20 minutes.
- Otherwise, you can download `wkhtmltopdf` from the [official website](#).

I know, that part is somewhat uncomfortable and this will change in the future. Either `wkhtmltopdf` will be automatically installed with the gem or riven comes with a Docker container. However, the installation will be easier in the future.

After `wkhtml` is compiled, make sure you can execute the `wkhtmltopdf` command in your shell:

```
$ wkhtmltopdf -V
```

If it works, everything is nice and you may proceed with the next step. If not, please make sure, `wkhtmltopdf` is correctly installed and the executable is within your `PATH`.

In the second step, we need ruby. I'll recommend you to use [RVM](#) to install Ruby. It's pretty simple:

```
$ gpg --keyserver hkp://keys.gnupg.net --recv-keys 409B6B1796C275462A1703113804BB82D39DC0E3
$ \curl -sSL https://get.rvm.io | bash -s stable
$ rvm install 2.2.3
$ rvm --default use 2.2.3
```

After that you should be able to use ruby:

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```
$ ruby -v
```

If so, we're ready to install Riven!

## Install Riven

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The installation of Riven is pretty simple. Just run:

```
$ gem install riven
```

And you're done!

After that you should have a `riven` command:

```
$ riven -v
```