A Minimal Book Example

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Contents

Chapter 1

About

This is a *sample* book written in **Markdown**. You can use anything that Pandoc's Markdown supports; for example, a math equation $a^2 + b^2 = c^2$.

1.1 Usage

Each **bookdown** chapter is an .Rmd file, and each .Rmd file can contain one (and only one) chapter. A chapter *must* start with a first-level heading: `# A good chapter`, and can contain one (and only one) first-level heading.

Use second-level and higher headings within chapters like: `## A short section` or `### An even shorter section`.

The `index.Rmd` file is required, and is also your first book chapter. It will be the homepage when you render the book.

1.2 Render book

You can render the HTML version of this example book without changing anything:

1. Find the **Build** pane in the RStudio IDE, and

2. Click on **Build Book**, then select your output format, or select "All formats" if you'd like to use multiple formats from the same book source files.

Or build the book from the R console:

```
bookdown::render_book()
```

To render this example to PDF as a `bookdown::pdf_book`, you'll need to install XeLaTeX. You are recommended to install TinyTeX (which includes XeLaTeX): https://yihui.org/tinytex/.

1.3 Preview book

As you work, you may start a local server to live preview this HTML book. This preview will update as you edit the book when you save individual .Rmd files. You can start the server in a work session by using the RStudio add-in "Preview book", or from the R console:

```
bookdown::serve_book()
```

Chapter 2

Learning R

This is notes about learning R.

Please build this simple boook!!!!! ahhhhhhhhhhhha

2.1 About stringr package

Stringr is more coherent than base R functions for strings treatments.
Stringr functions always begin with prefix **str_** ; the first argument is always the string you want to treat. And then comes the pattern you want to identify.

Most common and useful functions in Stringr :

- str_detect() -> returns a logical vector (a vector of TRUE and FALSE)
- str_subset()
- str_view()
- str_view_all()
- str_replace()
- str_replace_all()

2.2 About Regex in R

2.2.1 Special characters

- \\d stands for **one of any digit 0,1,2, up to 9**
- \\s stands for **one** charater whitespace
- The dot "." **matches any character**

- So, to match a literal dot “.” in regex, we need two backslashes then dot \\.
- The star “*” stands for **0 or more** instances of the previous character
- The plus sign “+” stands for **1 or more** instances of the previous character
- The question mark “?” stands for **0 or one** instance of the previous character
- () () “\\1” capture le groupe de la parenthèse 1 et “\\2” capture le groupe de la parenthèse 2

Chapter 3

Learning Python

Chapter 4

Learning Git/Github

Chapter 5

Footnotes and citations

5.1 Footnotes

Footnotes are put inside the square brackets after a caret `^[]`. Like this one [1].

5.2 Citations

Reference items in your bibliography file(s) using `@key`.

For example, we are using the **bookdown** package [Xie, 2023] (check out the last code chunk in index.Rmd to see how this citation key was added) in this sample book, which was built on top of R Markdown and **knitr** [Xie, 2015] (this citation was added manually in an external file book.bib). Note that the `.bib` files need to be listed in the index.Rmd with the YAML `bibliography` key.

The RStudio Visual Markdown Editor can also make it easier to insert citations: https://rstudio.github.io/visual-markdown-editing/#/citations

[1] This is a footnote.

Chapter 6

Learning Markdown

In markdown you need to escape twice the backslash in order to display two backslashes
So what you see here, I wrote it with **four** not just three : \\

To write a list, you must write a star * followed by a coma a the beginning of a line. Before the list starts you need a blankline and same at the end of the list otherwise Mardown won't recognize it.

To introduce a return to the ligne, you need not only to type return in Markdown, but also to make the line followed by two spaces.

Chapter 7

Learning linux commands

- git –version
- mkdir -> create a directory
- cat to read a file
- or less (type q in order to exit less viewer) why less? because previous version of less was more :)
- write in a file :
  echo toto et tata > toto.txt

echo toto et titi > titi.txt

- differences between two files:
  diff toto.txt titi.txt
  or diff -u toto.txt titi.txt
- diff -u is more readable than simple diff command.
- Create a diff file:
  diff -u toto.txt titi.txt > change.diff
- Patch the .diff file:
  patch titi.txt < change.diff
- Clear the console:
  just as in Rstudio ctrl+l or typing "clear" and then enter in the console. both works
- Content of a directory:
  dir or ls : both works.

- Content of a directory including hidden files:
  dir -a ls -a from the help of ls : " -a, –all do not ignore entries starting with."
- Add the options l to see rights on the files: ls -la
- Get the help in git bash on windows:
  function –help example: ls –help
-

Bibliography

Yihui Xie. *Dynamic Documents with R and knitr*. Chapman and Hall/CRC, Boca Raton, Florida, 2nd edition, 2015. URL http://yihui.org/knitr/. ISBN 978-1498716963.

Yihui Xie. *bookdown: Authoring Books and Technical Documents with R Markdown*, 2023. URL https://CRAN.R-project.org/package=bookdown. R package version 0.35.