A Minimal Book Example with ARCA Template

A Handbook for ...

ARCA

2022-04-13
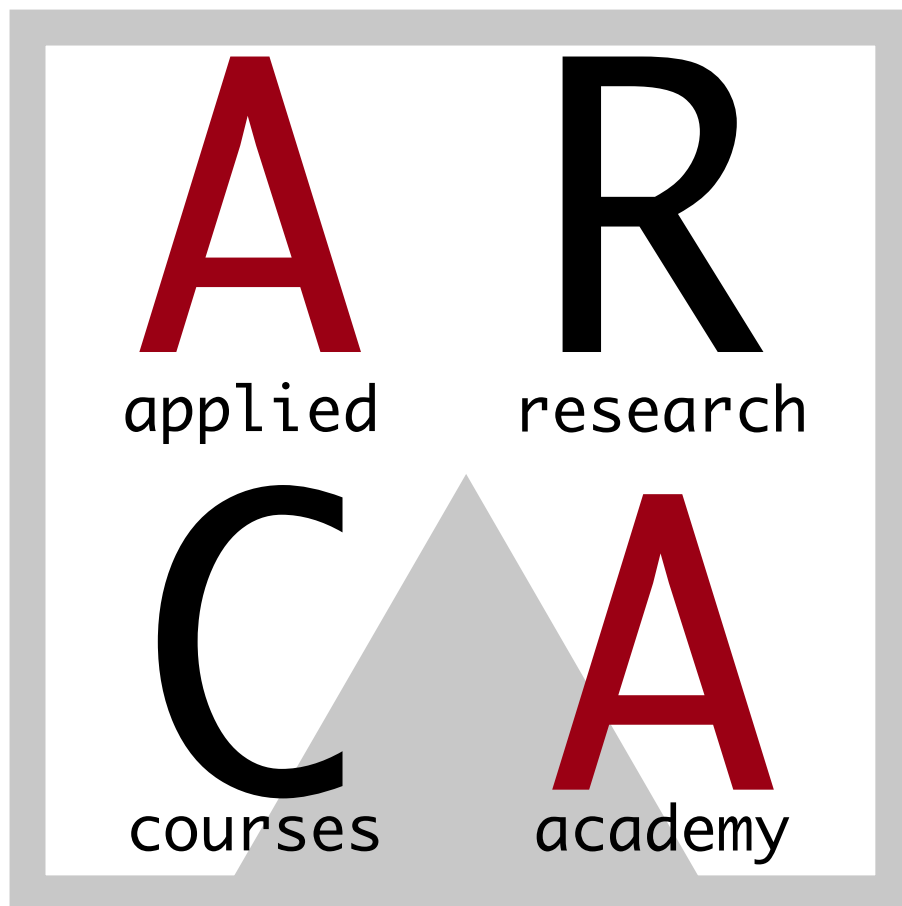
Contents

Prerequisites

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

The **bookdown** package can be installed from CRAN or Github:

```r
install.packages("bookdown")
# or the development version
# devtools::install_github("rstudio/bookdown")
```

Remember each Rmd file contains one and only one chapter, and a chapter is defined by the first-level heading `#`.

To compile this example to PDF, you need XeLaTeX. You are recommended to install TinyTeX (which includes XeLaTeX): https://yihui.name/tinytex/.

ARCA Template

ARCA Template is based on Rstudio Bookdown-demo released under CC BY-SA 4.0 License

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Deploy Github Actions

Follow tutorial at https://medium.com/@delucmat/how-to-publish-bookdown-projects-with-github-actions-on-github-pages-6e6aecc7331e but note that github action https://github.com/Cecilapp/GitHub-Pages-deploy is slightly changed so we adapted de code. In particular now we have as last action:

```
- name: Deploy to GitHub Pages
      uses: Cecilapp/GitHub-Pages-deploy@v3
      env:
        GITHUB_TOKEN: ${{ secrets.GITHUB_TOKEN }}
      with:
        email: ${{ secrets.EMAIL }}
        build_dir: _site/
```

Moreover, we also installed `tinytex` and specified `rmarkdown::render_site(encoding = "UTF-8")` in the first job to obtain pdf and epub available versions as well.

HTML and LaTeX

Remember that as the output is compiled to create a website and a PDF you have to take care of defining options and environments in both cases. See official documeentation https://bookdown.org/yihui/bookdown/

1

Introduction

You can label chapter and section titles using `{#label}` after them, e.g., we can reference
Chapter 1. If you do not manually label them, there will be automatic labels anyway, e.g.,
Chapter 3.

Figures and tables with captions will be placed in `figure` and `table` environments, respectively.

```
par(mar = c(4, 4, .1, .1))
plot(pressure, type = 'b', pch = 19)
```

Reference a figure by its code chunk label with the `fig:` prefix, e.g., see Figure 1.1.
Similarly, you can reference tables generated from `knitr::kable()`, e.g., see Table 1.1.

```
kable(
  head(iris, 5), caption = 'Here is a nice table!',
  booktabs = TRUE
) %>%
  kable_styling(bootstrap_options = c("striped", "hover"),
                full_width = FALSE)
```

You can write citations, too. For example, we are using the **bookdown** package (Xie,
2022) in this sample book, which was built on top of R Markdown and **knitr** (Xie, 2015).
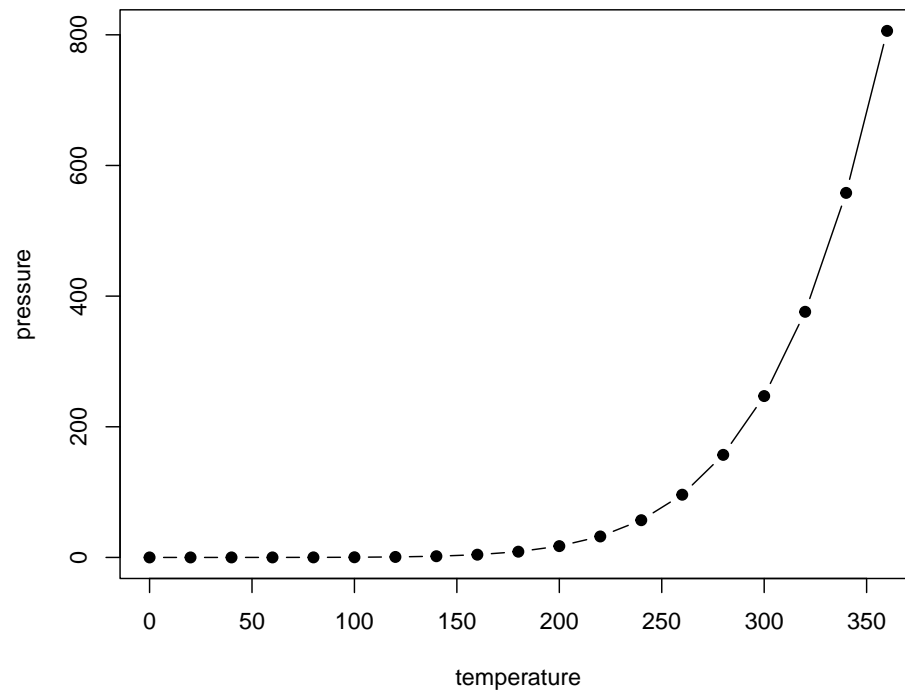
Figure 1.1: Here is a nice figure!

1.1 R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

Table 1.1: Here is a nice table!

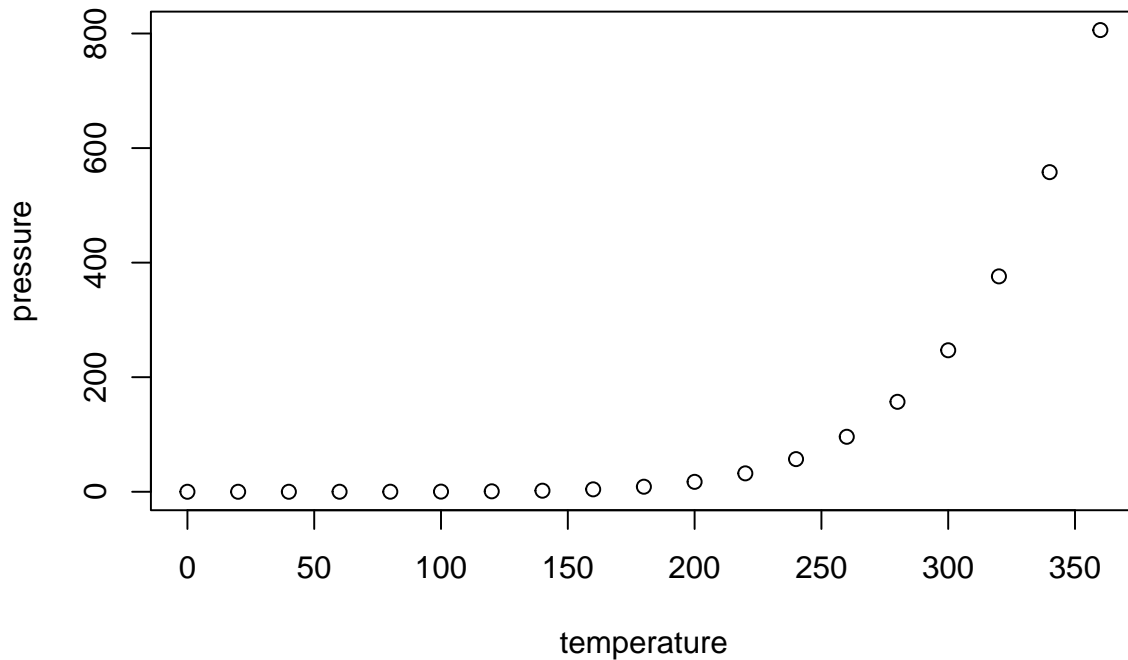| Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa

```
summary(cars)
```

```
##      speed           dist
##   Min.   : 4.0   Min.   :  2.00
##   1st Qu.:12.0   1st Qu.: 26.00
##   Median :15.0   Median : 36.00
##   Mean   :15.4   Mean   : 42.98
##   3rd Qu.:19.0   3rd Qu.: 56.00
##   Max.   :25.0   Max.   :120.00
```

1.1.1 Including Plots

You can also embed plots, for example:

Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.

1.2 Content Hyperlinks

1.2.1 Sections

See Section 1.2.1

1.2.2 Figures

1.2.2.1   Pictures

See Figure 1.2.   Note: in chunks name do not use "_" but use "-" instead. `\@ref(fig:arca_logo)` do not work, `\@ref(fig:arca-logo)` works properly.

Figure 1.2: Logo ARCA

1.2.2.2   Plots
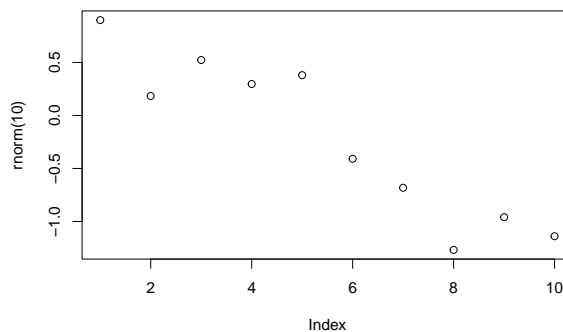
See Figure 1.3

Figure 1.3: Random numbers

1.2.3   Tables

See r-package `kableExtra` documentation (link).

See Tabele 1.2

1.3   APA cls

We are using apa 7 cls format. Citation Syntax (link).

Table 1.2: Here is a nice table!

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa

1.4 Infobox

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💡 Tip-Box: My title

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⚙ Definition-Box: My title

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⬤ Design-Box: My title

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◆ Trick-Box: My title

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2
Literature

Here is a review of existing methods.

3

Methods

We describe our methods in this chapter.

4

Applications

Some *significant* applications are demonstrated in this chapter.

4.1   Example one

4.2   Example two

Part I

Conclusions

5
Final Words

We have finished a nice book.

References

Xie, Y. (2015). *Dynamic documents with R and knitr* (2nd ed.). Chapman; Hall/CRC. http://yihui.name/knitr/

Xie, Y. (2022). *Bookdown: Authoring books and technical documents with r markdown.* https://CRAN.R-project.org/package=bookdown