Let's get reproducible!

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23.09.2021

GitHub Documents

This is an R Markdown format used for publishing markdown documents to GitHub. When you click the **Knit** button all R code chunks are run and a markdown file (.md) suitable for publishing to GitHub is generated.

The repository to this file can be found here.

Exercises

1. Edit the title of your header to change the title of your document. Add yourself as an author by adding 'author: "Your Name"' to the header in an extra line. Add today's date by adding 'date: "23.09.2021"' in an extra line. KNIT that document! What happens?

2. Change the output from "github_document" to "pdf_document", knit and see what happens. Change it back to github_document afterwards.

3. Rename the chunks you have to something that makes more sense than chunkname1, chunkname2 etc.

4. Have a look at the chunk named data – why doesn't it appear in the formatted file? How can we change that?

5. Add some text to your document and change the formatting using *single asterisk* for italic or **double asterisk** for bold text. Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Ctrl+Alt+I*.

6. Let's load some data about penguins! Now we are going to save that as a csv file.

7. Check out the knitted output for the plot chunk. Now add ', echo=FALSE' to the chunk producing the plot, knit it and see what changes.

Including a chunk

```r
# This is a code chunk. because we set the chunk options to include = FALSE, this chunk will not show up

knitr::opts_chunk$set(echo = TRUE)
# this option will set to show code and output for all chunks

a = 2 + 3
```

Including Text

You can include text just by writing in the file and using *RMarkdown* to edit the **formatting**.

You can also include inline code:

The mean speed of cars in the cars dataset is 15.4 and the mean distance is 42.98. The dataset has 50 observations.

Including Code

You can include R code in the document as follows:

```r
# change the chunkname above
a
```

```
## [1] 5
```

```r
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
```

Loading and displaying data

You can load some data about penguins.

Including Plots

You can also embed plots, for example:

```r
# change the chunkname above
# add ', echo=FALSE' to the chunk options above and see what changes in your output when you knit
plot(pressure)
```

Sources

More information Find some more information on RMarkdown and RNotebooks under this link.

Cheatsheets Some cheatsheets can be found here and here.