Ongoing Tasks

A thread for our class

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Last update: *March 15, 21:03*

Contents

About this document

This document is thread of the tasks that structure our class. Of course, not all of them will be documented here. It would be impossible to keep such a level of detail. But those below are certainly compulsory benchmarks.
Notice that the file will be updated in reverse chronological order (last section entries appear first; normal order *within* the section). That is meant to help follow the thread. The table of contents, specially on HTML-like formats, will be very useful to navigate the tasks.

1 Homework for March 22

1.1 Train the workflow

Play around with the example that we did in class to illustrate **reproducible research** (rr) and **dynamic documents** (dd).
The file is on GitHub, but I slightly modified the YAML in order to allow the illustration of cross-references of sections. This new format (`bookdown::pdf_document2`) requires a R package. Hence, you need to install it with `install.packages('bookdown')` or by using the menu *Tools> Install Packages...*.

2 Lecture on March 15

2.1 Check your R/Rstudio/Latex installation

Create a new Rmd file *File> New File> R Markdown*. And then click on Knitr, possibly by chosing the output format on the scroll down menu (i.e., Knit to...).

If needed, install required packages (e.g., `knitr`).

```
install.packages("knitr")
```

Notice that, in order to create a pdf document, you must have a Latex distribution installed; similarly for Word output, Microsoft Word is necessary.

2.2 Create own Rmd file

Notice that everytime such new file is created with the menu, it comes with pre-populated content. It can help, but it can also be annoying because you need first to erase it and start writing your stuff.

Your first Rmd can be a change in this default content or a copy from the class GitHub (or your very own).

2.3 Create class folders

In your machine, create a folder for this class. Within that folder, create a folder for your book. Members of the same group must have the **same name** for that book folder.
Put your first Rmd file into your book folder.

2.4 Create your project

File> New project> Existing Directory and chose that book folder.
Now, everytime you create content for your book, you must start a Rstudio session *File> Open Project...*
All the files of the project are the files of the folder, and vice versa.

3 Prior to the first Lecture

3.1 Install applications

Please download the following FREE applications, available on all platforms:

1. R (https://cran.uni-muenster.de/)
2. RStudio, free Desktop version (https://www.rstudio.com/products/rstudio/download/#download)
3. A Latex distribution (e.g., MacTex for Mac or MiKTeX for Windows machines)

The first two are easily and quickly installed. The last is a very large program (a few Gb) and needs time to install.

Planned tasks

This is a very incomplete list of tasks that will enter our workflow at some point. They are mentioned here for a reference.

Install a Git application

Another application needed in the class is a Git (https://git-scm.com/downloads) distribution. This is also a free software.

Set up GitHub

One member of the group must create a free GitHub (https://github.com/join) account. In that account, you will create a new repository (pronounced 'repo') whose name is exactly the same as your R project / book folder (e.g., 'myRbook').
The linking between GitHub and Rstudio will be explained later.

Include images

Referencing of sections/figures/equations...

Introduction to Latex

This is particularly important for writing math expressions.