

# Ongoing Tasks

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This document is thread of the tasks that structure our class. Of course, not all them will be documented. 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 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 choosing 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 distribution. This is also a free software.

## **Set up GitHub**

One member of the group must create a free GitHub 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**

### **3.2 Referencing of sections/figures/equations...**

### **3.3 Introduction to Latex**

This is particularly important for writing math expressions.