

(R)MARKDOWN

- ▶ Mix ideas, code and create documents seamlessly
- ▶ Easy to learn and use
- ▶ Focus is on **content**, not coding and debugging
- ▶ Easy to publish and read on web
 - ▶ Remember that cool friend with a cool website??
 - ▶ And many other formats (word, pdf)
- ▶ Enables Reproducibility ! → **Week 6**

Part 1: Setup

Part 2: Exploring Data Structure

Part 3: Subsetting a data frame

"The only difference between a mob and a trained army is organization" - *Calvin Coolidge*

Just like all aspects of life, organizing your files in R can maximize effectiveness and reduce frustration. One way to achieve that is to organize all the bits and pieces of your data analysis into a folder on your computer that holds all files relevant to the particular piece of your assignment or data analysis. Fortunately, R studio provides a very simple method to create a self-contained **Project** that helps achieve that functionality. Most importantly, storing all your files in a project also ensures your code to work, even if you move your files around your computer or onto other computers.

Not Convinced? Let's try out an example:

Without organizing files in an R project

(Please Follow all Directions carefully)

- Create a folder named `lab1` in any location where you are **NOT** planning to store your labs. (Note: we will delete this folder later)
- Create two folders inside the `lab1` folder: `data` and `scripts`.
- Download and unzip the data files from https://geog215-spds.rbind.io/labs/lab1/data/lab1_data.zip and save them (the unzipped files) in the `data` folder.
- Open Rstudio
- Set your working directory to the `lab1` folder. This is going to be your "parent" directory for the analysis (Hint: You can either do this by writing a command in the console, or you can use a command from the RStudio menubar). If you do not know how to do this you can check the "Set/change working directory" section in <http://www.sthda.com/english/wiki/running-rstudio-and-setting-up-your-working-directory-easy-r-programming>
- You are now going to save all your commands in an R script. Create a new R script called `lab01_01_YOURLASTNAME.R` and store it in the `scripts` folder. (You can either do this writing a command in the console, or you can use a command from the RStudio menubar). If you choose to write a command in the console, open the script in Rstudio. (Note: The script will automatically open if you choose to create it through Rstudio's menu bar.)
- To ensure that you are in the right directory everytime you run your R script, copy the executed command to set your working directory in your console to set your working directory into your script. Notice the file path, it is called an **Absolute** path because it contains all the sub-directories on your computer required to locate the file

```
# Hint: In mac OSX it may look like
setwd("~/path/to/my/directory")
For Windows, the command might look like :
setwd("c:/Documents/my/working/directory")
```

- Now type the following command in your script to read the `wdi_2018.csv` data file.