Homework #1

Tracie-Lynn Lamoreux

This homework is more or less a tutorial that helps you set up the environment we use in this course. *You will not be able to continue in this class if you do not finish this assignment.* As a pre-requisite, first install R, and then the RStudio (the free version of Rstudio Desktop).

Please respond to all questions. If the question asks you to do something on your machine and you have finished that, just answer "Done".

1. Create a folder named `hw1`, and move the provided template into this folder and rename it to `hw1_FirstName_LastName.Rmd`. Replace `FirstName` and `LastName` with your first and last name. `hw1_FirstName_LastName.Rmd` will include your solutions. The file and folder names are *case-sensitive*, which means `hw1.Rmd` and `HW1.rmd` are different. *It is crucial to follow the exact folder structure and file names* in this course, so that your homework can be reproduced. The correct folder structure is

   ```
   hw1
   |-- hw1_FirstName_LastName.Rmd
   |-- hw1_FirstName_LastName.html (generated after knitting)
   ```

   Answer: Done

2. Write your name in the YAML of your homework `Rmd` file.

   Answer: Done

3. Create a new section in your `Rmd` named Introduction

   Answer: Done

Introduction

3. Write a paragraph to introduce yourself. Set your name in bold font, and your major and seniority in italic.

   Answer: My name is **Tracie-Lynn Lamoreux**. I am a *statistics* major as well as a *psychology* major. I am excited to take this course, and learn how to use R. I also have a cat named Artemis.

4. Write a few sentences to describe what you want to do after graduation. Include a hyperlink and an image for illustration. Make sure your answer is in a nice format to read.

   Answer: After graduation I would like to pursue a PhD and hopefully do research in positive psychology.

5. Write down the logarithm of the Gamma distribution density. Here is a quick guide on how to type math in RMarkdown (which applies more generally, e.g. on Piazza and for writing documents using LaTex).

   Answer: $\Gamma\alpha \int_0^\infty x^{alpha-1}\epsilon^{-x}dx for \alpha > 0.$

6. Create a second section named Programming Environment

Programming Enviroment

```
Answer: Done
```

6. To check that your R and Rstudio installation is correct, find the version of R by entering `version` into the R console. *Include this command into an R code trunk* so your R version is automatically printed in the knitted html file.

   Answer:

```
version
```

```
##                _
## platform       x86_64-apple-darwin17.0
## arch           x86_64
## os             darwin17.0
## system         x86_64, darwin17.0
## status
## major          4
## minor          1.2
## year           2021
## month          11
## day            01
## svn rev        81115
## language       R
## version.string R version 4.1.2 (2021-11-01)
## nickname       Bird Hippie
```

7. Install git.

   - If you are on Windows:
     a. Install Git for Windows. In the coming weeks we will use the Git Bash (but not the Git GUI).
     b. After installation, set up Rstudio to use Git bash as the shell for the Terminal: Open RStudio, click Tools–Global Options–Terminal; under **Shells**, select Git Bash; click OK.
     c. In the main menu of RStudio: click Tools–Terminal–New Terminal. If you have a `$` before your prompt, then you should be good to go.
     d. If you don't see a `$` before your prompt, try restarting RStudio.
   - If you are on Linux or macOS, Git has probably been installed by default, so you do not need to install anything. Just click the Terminal tab (above the R Console). Answer: done

8. What is the version of your Git? To find out, go to the Terminal tab in RStudio (right to the Console tab), and type in the following command. If it works, this shows that the setup of your terminal and Git is correct.

   ```
   git version 2.30.1 (Apple Git-130)
   ```

9. Configure your git username and user email by modifying and entering the following commands into the terminal

   ```
   git config --global user.name "your first and last name"
   git config --global user.email "your email"
   ```

   Answer:done

10. Initiate a git repository within the `hw1` folder (the folder containing the current homework). Add your homework files and create a commit. Show what does `git log` tell you.

    Answer: done