

Installing R, RStudio, and Quarto

Note: If you already have R and RStudio on your computer, please ensure you have the latest versions.

Base R

Go to the CRAN website (<https://www.r-project.org/>) to download and install the latest version of R for your operating system. The most recent version of R is *4.4.1 Race for Your Life* – All versions of R are named after “Peanuts” comics.

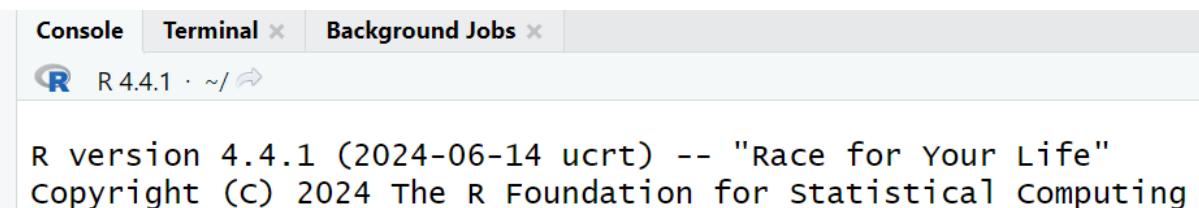
RStudio

In our class, we will use RStudio (from Posit) as our main scripting environment (i.e., this is the application we will work from when writing and running R code). You can download the free version of RStudio Desktop from Posit here: <https://posit.co/download/rstudio-desktop/>.

Select the correct version based on your operating system.

Mac users: Open the .dmg file and drag the RStudio icon into your Applications folder.

Now, open RStudio. This will allow you to check if R was installed correctly. In the console, you should be able to see which version of R you’re running.



```
Console Terminal x Background Jobs x
R 4.4.1 · ~/
R version 4.4.1 (2024-06-14 ucrt) -- "Race for Your Life"
Copyright (C) 2024 The R Foundation for Statistical Computing
```

Packages

We will use many functions from open-source R packages for data wrangling and analysis. Install them now so we can use it later.

If RStudio prompts you to select a “mirror” for use, choose the IN, IA, or MI mirror.

Next, run the following command in the console (you can just copy-paste the text into the console, then run the command by pressing ‘Enter’):

```
install.packages(c("tidyverse", "here"))
```

If prompted, Windows users should install their packages in a personal library. If you do not install your packages to a personal library, you will not be able to update packages when new releases come out.

Remember, do NOT install packages to the Cloud or OneDrive. R often fails to load packages from anything saved on MyCloud, OneDrive, or any variant of these. Instead, make sure all files are downloaded and installed onto your local device.

Quarto

This year, we will use the Quarto notebook format to produce readable and easily sharable code. Go to <https://quarto.org/docs/get-started/>. Follow Step 1 to download and install Quarto for your operating system.

To learn more about Quarto notebooks, go to Step 2 and click on the RStudio icon. You should now see a brief explanation of how Quarto works. There is also a video introduction and an example .qmd file you can download.

3. Download the Quarto document (.qmd) below, open it in RStudio, and click on  Render.

 [Download hello.qmd](#)

But don't worry! We will go over how to use Quarto together in lab.

Workflow for 610

Naming Conventions

We will stick with snake case for naming convention. Briefly, name files and folders with all lower-case letters and separate words with underscores (e.g., *psych_610*). Note that spaces in file names can cause issues when reading them into R. Additionally, snake case is “tidy” format, and we will be using the tidy style guide throughout the course for coding consistency.

Directory Structure

To keep things organized, you will need a directory (i.e. folder) on your computer dedicated to this course, where you save all the data files, Quarto notebooks, etc.

Create a folder called *psych_610* somewhere on your computer. Inside the *psych_610* folder, create two additional folders named *homework* and *lab*. Lastly, create a folder named *data* inside the *homework* and the *lab* folder.

Project

Finally, we are going to create an R project at the root of our *psych_610* directory. Anytime we use R for the purpose of this class, we will boot R by opening this project. It will allow for consistency with file paths across students (even if people save their folders in different places) and it is considered as a best practice when working in R.

In RStudio, go to the File menu -> New Project. Select Existing Directory and select your *psych_610* folder as the project working directory. Then, click Create Directory.

Once you are done, a new R session should pop-up. You will also see in your *psych_610* directory a new R project file. In the future, you can start your R session by double-clicking this project.