

DUE DATE: FRIDAY, September 10, 2021 by 11:59 PM on Gradescope
LATE DUE DATE: WEDNESDAY, September 15 by 11:59 PM on Gradescope
with penalty of 5 percentage points per day late

Introduction to R

1. Download and install R from the Comprehensive R Archive Network.

- Go to <https://cran.r-project.org/>
- Windows Users:
 - Click on “Download R for Windows”
 - Click on “Install R for the first time”
 - Click on “Download R 4.1.0”
- Mac Users:
 - Click on “Download R for (Mac) OS X”
 - Click on “R-4.1.0.pkg (notarized and signed)” link.

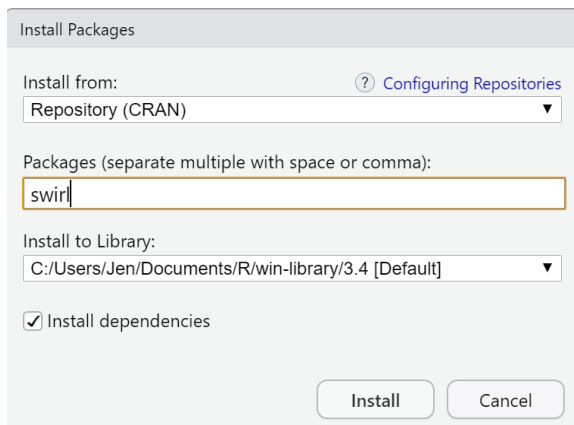
2. Download and install R Studio Desktop. The current version is 1.4.1717. This is an integrated development environment for R which includes a console, syntax-highlighting editor that supports direct code execution, as well as tools for plotting, history, debugging, and workspace management. <https://rstudio.com/products/rstudio/download>.

Two videos on how to download R and R Studio on your PC:

- Windows Users: <https://www.youtube.com/watch?v=NZxSA801F1I>
- Mac Users: <https://www.youtube.com/watch?v=by5HyJX6H1I>

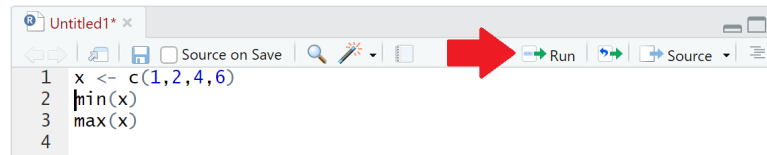
3. Install `swirl()`. This package allows for interactive learning of R.

- (a) Install the package within R Studio. Go to Tools / Install Packages.
- (b) In the box underneath where it says “Packages”, type “swirl”. Make sure “Install dependencies” *IS* checked.



4. There are two different ways to run code in R Studio.

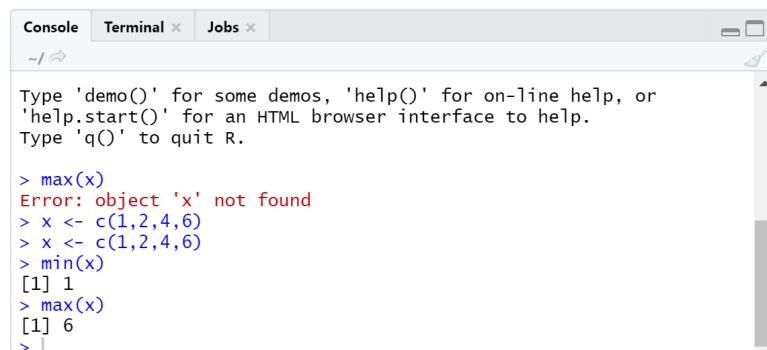
- (a) In R Studio, to open up a screen to type in a new program, go to File / New File / R Script. This is where you will type all of your code. To run a specific line of your code, make sure your cursor is on the appropriate line, and select “Run”.



To run an entire selection of code, highlight all the code you want to run, and select “Run”.

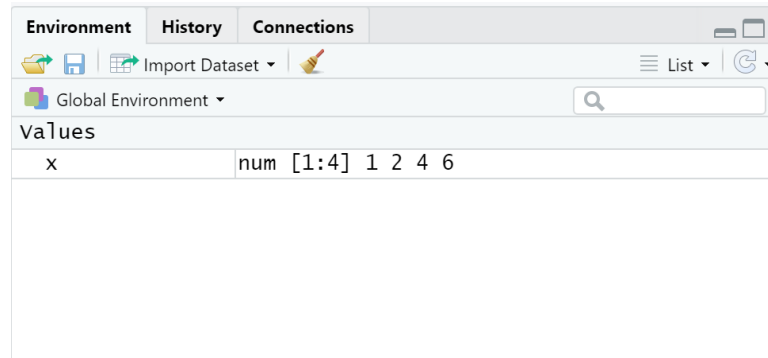
If you run code in this window, you may SAVE it and open / close the file as needed. **This is where you will run code for R projects that are NOT Swirl modules.**

- (b) In the console window, you see what code was run, along with the results from running the code. Errors display as red text. You can also run code directly in this window, however, it will NOT be saved when you exit the program. **This is where you will run code for the SWIRL modules.**



5. Other Windows in R Studio.

- (a) (Environment Box) In the top right hand corner, you see your data and the name you gave to specific datasets. It displays the applicable data type as well as some information about the dataset.



- (b) In the bottom right corner is where you can see graphs, help files, etc.

6. In the area where you can type in R code, type the following to load **swirl**:

```
library(swirl)
```

The first time you do this, you will need to install a course. Type the following:

```
install_course("R Programming")
```

NOTE: R is CASE SENSITIVE!

After it is installed and the next times you need to reference this course, type:

```
swirl()
```

7. R will ask you for your name. Type your name. Follow the prompts on the screen. To exist swirl, press the Esc key. If you are already at the prompt, type `bye()` to exit and save your progress. When you exit properly, you'll see a short message letting you know you've done so.

Make sure you are using the “R Programming” course.

8. Complete R Programming Module 1: Basic Building Blocks.

After completion

- When they ask “Would you like to receive credit for completing this course on Coursera.org?”, type YOUR NAME (FIRST AND LAST).
- Hit enter.
- Print the screen (including the date / time on your computer). This shows that you have completed the assignment.
- Then for selection, type “0” to exit.

9. Complete R Programming Module 2: Workspace and Files.

After completion

- When they ask “Would you like to receive credit for completing this course on Coursera.org?”, type YOUR NAME (FIRST AND LAST).
- Hit enter.
- Print the screen (including the date / time on your computer). This shows that you have completed the assignment.
- Then for selection, type “0” to exit.

10. Complete R Programming Module 3: Sequences of Numbers.

After completion

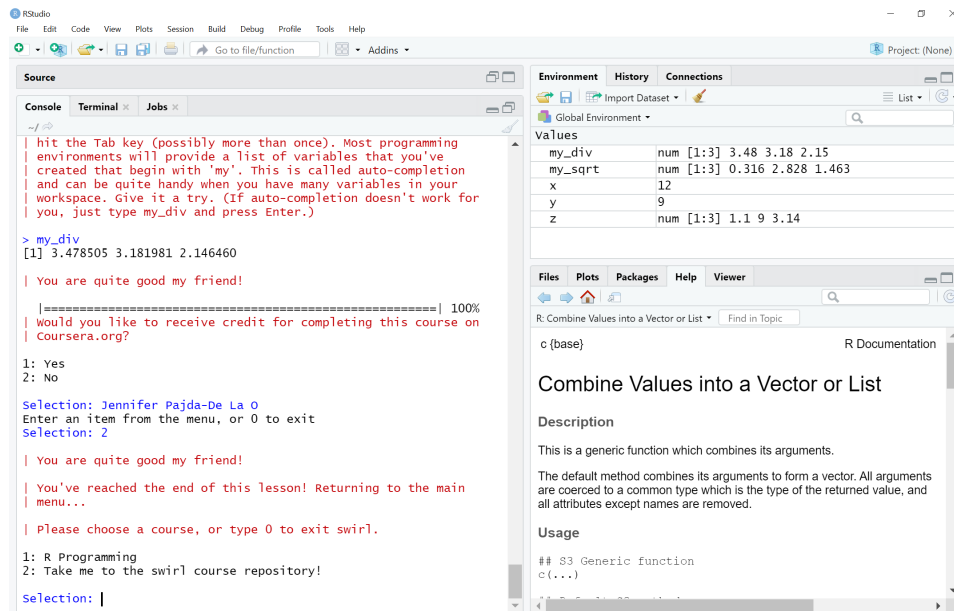
- When they ask “Would you like to receive credit for completing this course on Coursera.org?”, type YOUR NAME (FIRST AND LAST).
- Hit enter.
- Print the screen (including the date / time on your computer). This shows that you have completed the assignment.
- Then for selection, type “0” to exit.

11. Complete R Programming Module 4: Vectors.

After completion

- When they ask “Would you like to receive credit for completing this course on Coursera.org?”, type YOUR NAME (FIRST AND LAST).
- Hit enter.
- Print the screen (including the date / time on your computer). This shows that you have completed the assignment.
- Then for selection, type “0” to exit.

12. Upload your screenshots to Gradescope under R Project 1. For example for Module 1:



Make sure we can see:

- The line that states `|=====| 100%`.
- The line that states your name.
- The Environment box in the top right hand corner.