

Tutorial: R Programming

In order to prepare you for the programming aspect of the course, we are requiring that each student **individually** complete the 21 modules contained within the R "swirl" package. We have augmented some of the lessons to better fit the R content that will be utilized throughout the program. Attached to this assignment page are two .zip files: "R tutorial.zip" & "R tutorial solutions.zip". Please download both files, **leave the R tutorial.zip file in your download folder**, and feel free to utilize the R tutorial solutions as needed.

Each Module should take about 20-30 minutes to complete.

Once you have completed all 21 modules, upload a folder called "**R-Tutorial-Username**", containing the Rhistory files for all 21 modules (see STEP 8), to this assignment page.

These are instructions on how to install R, RStudio, swirl(), use swirl(), and save swirl() history.

- Please, follow the instructions below to complete the tutorial.
- Read STEP 8 before starting STEP 7.
- You need to complete STEPS 1, 2, and 4 only ONCE

STEP 1: **Install R** from <https://cran.r-project.org/index.html>

STEP 2: **Install RStudio** from <https://www.rstudio.com/products/rstudio/download/>

STEP 3: **Start RStudio**

STEP 4: **Install the swirl library** from RStudio console:

```
install.packages("swirl")
```

STEP 5: **Load the swirl library** from RStudio console:

```
library(swirl)
```

STEP 6: **Install R Programming Tutorial** from RStudio Console

```
install_course_zip("path/to/file/here/R_tutorial.zip", multi=TRUE,  
which_course="R Programming")
```

```
# here is an example for my path:
```

```
install_course_zip("C:/Users/nagiza/Desktop/R_tutorial.zip", multi=TRUE,  
which_course="R_Programming")
```

STEP 7: **Start the tutorial** from RStudio:

swirl()

```
#Type in your name
#Press "Enter"
#Press "1"
#Press "Enter"
#Press "1" to choose "R Programming Course"
#Choose one lesson at a time (in the order listed 1-17) and save Rhistory file for each
lesson separately, as detailed below
```

STEP 8: IMPORTANT: After you finish each lesson, save the Rhistory for that lesson

(e.g., "**Rhistory.BildingBlocks**") (We recommend to study the lessons in the order listed in the swirl()'s menu.)

- If you look at the top-right side of the RStudio GUI you will see two tabs: **"Environment" & "History"**
 - Click the **"History"** tab- To Save your history for that lesson, click the **"Save"** icon and save it to a folder, you create, named **R-Tutorial-Username**
 - You will upload this zipped folder with **21 Rhistory files (for each swirl() lesson)** to the Course Assignment Submission Page for grading)
 - Clear the history after each lesson by clicking the **"Paint Brush"** icon under the **"History Tab"**.
 - PLEASE MAKE SURE THE HISTORY FILE SAVES BEFORE YOU MOVE ON TO THE NEXT MODULE
- If for some reason you find the Rhistory files not being saved:
- Completely exit out of swirl(), then save.
 - Restart RStudio then save.
 - Alternate the locations where you are saving the file to.