STS ST07 Programmation en R

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Introduction to SWIRL

What SWIRL is

an R package for teaching and learning R **interactively**

Lessons are a *dialogue* between swirl and the user

Each lesson takes **10-15 min**.

Lessons are mainly composed of:

- Informative text,
- and (most importantly) questions that **require the user to enter actual R code** at the prompt.

Responses are evaluated for correctness based on instructor-specified answer tests.

- Appropriate **feedback** is given **immediately** to the user.

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1. Install SWIRL package

You only need to do this once.

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

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2. Install the lessons

You only need to do this once (for now, until we find errors, or I add new lessons)

Lessons for STS_ST07 are on my GitHub page

You can acces github and download the lessons using a function provided in the swirl package. Therefore, you first need to load the package.

```
# load the swirl package into your current R session
# (No need for "")
library(swirl)
| Hi! Type swirl() when you are ready to begin.
```

If you haven't installed the lessons from my GitHub page on your computer, you aren't ready to begin yet!!

First install the lessons:

```
> install_course_github("rebdau", "STS_ST07_swirl")

 Downloading: 100 kB     >
# This command downloads the first set of lessons to your computer.
```

And now you're ready to begin, so type swirl(), and go to point **4. Choose a name**.

```
> swirl()

| Welcome to swirl! Please sign in. If you've been here before, use the same
| name as you did then. If you are new, call yourself something unique.

What shall I call you? jeanpaul
```

If you did type swirl() before installing the lessons, you get this:

```
...

| To begin, you must install a course. I can install a course for you from the
| internet, or I can send you to a web page
| (https://github.com/swirldev/swirl_courses) which will provide course options
| and directions for installing courses yourself. (If you are not connected to
| the internet, type 0 to exit.)

1: R Programming: The basics of programming in R
2: Regression Models: The basics of regression modeling in R
3: Statistical Inference: The basics of statistical inference in R
4: Exploratory Data Analysis: The basics of exploring data in R
5: Don't install anything for me. I'll do it myself.

Selection: 5
```

Select 5, don't install anything.

```
| OK. I'm opening the swirl course respository in your browser.
| Leaving swirl now. Type swirl() to resume.
```

And this time, you don't fall into the trap. You first install the lessons:

```
> install_course_github("rebdau", "STS_ST07_swirl")
```

```
 Downloading: 100 kB     >
```

...and then start swirl:

```
> swirl()
```

```
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```

3. Start swirl

You will need to do this every time you start R or want to continue an old lesson or start a new lesson.

```
# load the swirl package into your current R session
# (No need for "")
library(swirl)

| Hi! Type swirl() when you are ready to begin.

# start swirl ...
# (swirl is a function, so you need '()')
> swirl()

| Welcome to swirl! Please sign in. If you've been here before, use the same
| name as you did then. If you are new, call yourself something unique.

What shall I call you? jeanpaul
```

```
======================
```

4. Choose a name

```
> swirl()

| Welcome to swirl! Please sign in. If you've been here before, use the same
| name as you did then. If you are new, call yourself something unique.

What shall I call you? jeanpaul
```

Enter your name.

This name will also allow you to continue lessons if you stop them in the middle.

```
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```

5. Choose a course

```
What shall I call you? jeanpaul

| Please choose a course, or type 0 to exit swirl.

1: STS ST07 swirl
2: Take me to the swirl course repository!
```

```
Selection: 1
```

We will be working through the lessons in the ‘STS_ST07’ course.

Type: ‘1’

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6. Choose a lesson

```
| Please choose a lesson, or type 0 to return to course menu.

 1: Basic Building Blocks             2: Workspace Directories and Files
 3: Data classes                      4: Logic
 5: Sequences of Numbers              6: Subsetting Vectors
 7: Matrices and Data Frames          8: Lists
 9: Lists example                    10: lapply and sapply
11: vapply and tapply                12: Functions
13: Simulation
```

Choose the first lesson: Basic Building Blocks

Type: ‘1’

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7. Do the lesson!

```
| Attempting to load lesson dependencies...

| Package ‘base64enc’ loaded correctly!

  |                                                                      |
0%

| In this lesson, we will explore some basic building blocks of the R programming
language.

...
```

Hit ‘Enter’ to advance when presented with ‘...’

The screen also shows you how far through the lesson you are (0%).

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8. Completing the lesson

You will need to be connected to the internet to submit your lesson

When you are done, the last question will ask if you want to submit your answers to me to verify that your completed the lesson.

You should enter the number of your response (usually '1').

This will bring up a new web page, a Google form.

Scroll down, and click 'submit'.

This will send an excrypted response to the Google form so that I can verify you completed the lesson.

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Some useful commands for swirl

bye()

Exit swirl

play()

Leave swirl temporarily and gain access to the console again

nxt()

Return to swirl after playing

main()

Return to the main menu

info()

Display a list of these special commands