

{swirl}

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What is Swirl?

- Swirl is a package for **learning R**.
- Similar to **Datacamp** (learn coding by coding).
- Runs in the **R interface** instead of web browser.

The screenshot shows the DataCamp R interface. At the top, there's a navigation bar with the DataCamp logo, a course outline, and a progress indicator of 100xp. Below it, a section titled "Variable assignment" is displayed. This section contains a brief explanation: "A basic concept in (statistical) programming is called a **variable**. A variable allows you to store a value (e.g. 4) or an object (e.g. a function description) in R. You can then later use this variable's name to easily access the value or the object that is stored within this variable." It also includes a code editor with the following R script:

```
script.R
1 # Assign the value 42 to x
2 x <- 42
3
4 # Print out the value of the variable x
5 x
```

Below the code editor is an "R Console" window showing the output of the script:

```
R Console
> x <- 42
> x
[1] 42
```

At the bottom left, there's an "Instructions" box with the following text: "Over to you: complete the code in the editor such that it assigns the value 42 to the variable `x` in the editor. Click 'Submit Answer'. Notice that when you ask R to print `x`, the value 42 appears." A "Take Hint (-30xp)" button is also present.

The screenshot shows the R interface with a "Console" window. The console history is as follows:

```
Console ~/ ~
=====
| =====
1 Think of the assignment operator as an arrow. You are assigning
1 the value on the right side of the arrow to the variable name on
1 the left side of the arrow.
...
| =====
1 To assign the result of 5 + 7 to a new variable called x, you
1 type x <- 5 + 7. This can be read as 'x gets 5 plus 7'. Give it a
1 try now.
> x <- 5 + 7 |
```

Red annotations are overlaid on the console text:

- A red box highlights the first line of the console output: "Think of the assignment operator as an arrow. You are assigning".
- A red box highlights the second line: "the value on the right side of the arrow to the variable name on".
- A red box highlights the third line: "the left side of the arrow."
- A red box highlights the first line of the next block of text: "To assign the result of 5 + 7 to a new variable called x, you".
- A red box highlights the second line: "type x <- 5 + 7. This can be read as 'x gets 5 plus 7'. Give it a".
- A red box highlights the third line: "try now."

History of Swirl

- Developed by **grad student** Nick Carchedi as summer project.
- **Under supervision** of Brian Caffo, Jeff Leek and Roger Peng.
- **Currently maintained** by Sean Kross.



Getting Started with Swirl

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

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

What shall I call you? |

Installing Swirl Courses

- **From local file:** > `install_course()`
- **From course repository:** > `install_course("R_Programming")`
- **Course repository:** https://github.com/swirldev/swirl_courses

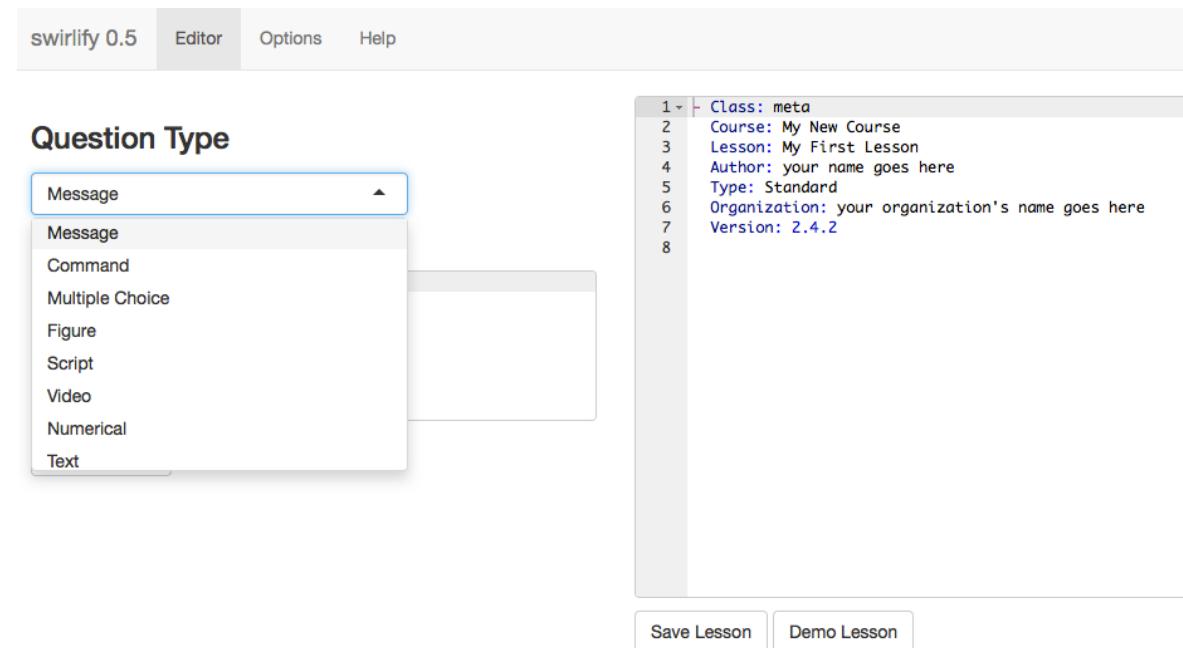
seankross removed unlink		Latest commit 4e27711 16 days ago
 Data_Analysis	Update lesson.yaml	2 years ago
 ErrFind	minor clarifications, changed some omnitests to any_of_exprs to allow...	2 years ago
 Exploratory_Data_Analysis	Merge branch 'master' of https://github.com/swirldev/swirl_courses	2 months ago
 Getting_and_Cleaning_Data	fixed comments	4 months ago
 Mathematical_Biostatistics_Boot_Camp...	Update lesson.yaml	2 years ago
 Open_Intro/Overview_of_Statistics	Added missing semicolon	a year ago
 R_Programming	removed unlink	16 days ago
 R_Programming_Alt	Update MANIFEST	a year ago
 Regression_Models	Merge pull request #354 from nish10/MultiVar_Typo	a month ago
 Statistical_Inference	Added missing word 'to'	2 months ago
 Writing_swirl_Courses	fixed typos and corrected choice in gotcha lesson	2 years ago
 .gitignore	fixing swirldev/swirl#400 (again 😊)	11 months ago
 LICENSE	Update LICENSE	3 years ago
 README.md	Replaced invalid download instruction with a link	a month ago

Swirl Demonstration

Statistics / Scatterplots

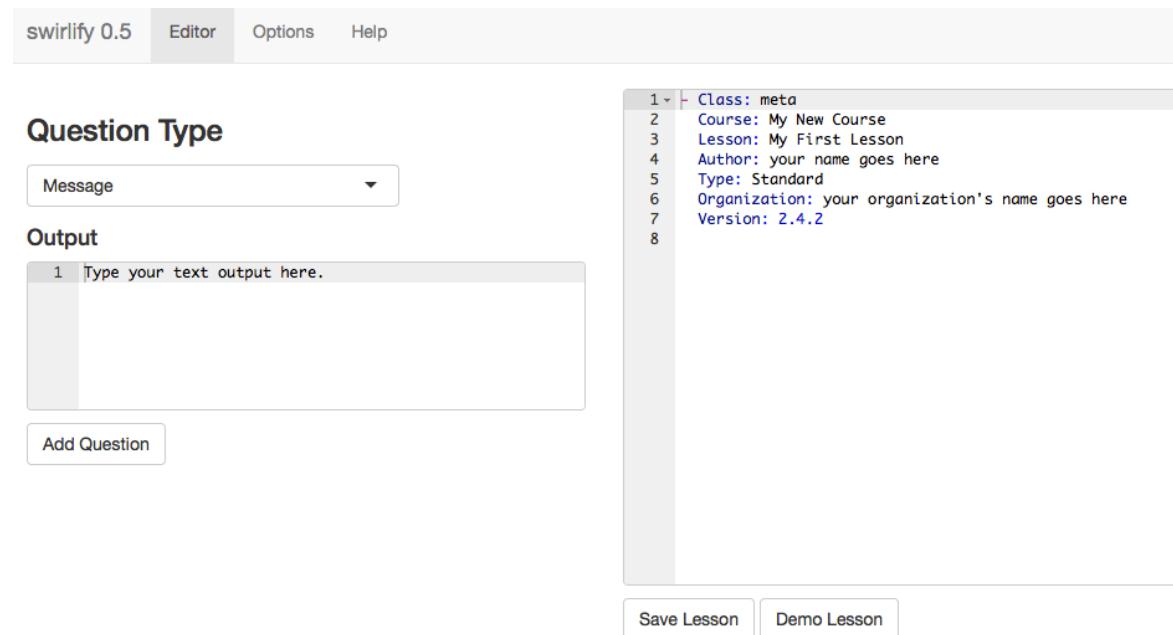
How To Make a Swirl Course?

- **Swirlify!**
- Swirlify is a package for **creating Swirl lessons**.
- Swirlify uses a **Shiny app** (no coding required).



Getting Started with Swirlify

```
> install.packages("swirlify")
> library(swirlify)
> swirlify("Lesson Name", "Course Name")
```



Loading Lessons

- To **load** an old lesson: `set_lesson("Lesson Name")`
- To **work** on the set lesson: `swirlify()`

Swirlify Demonstration

Statistics / Descriptive Statistics