

Using Git and Github in RStudio

R cafe showcase — Monday October 15th













What is Git?

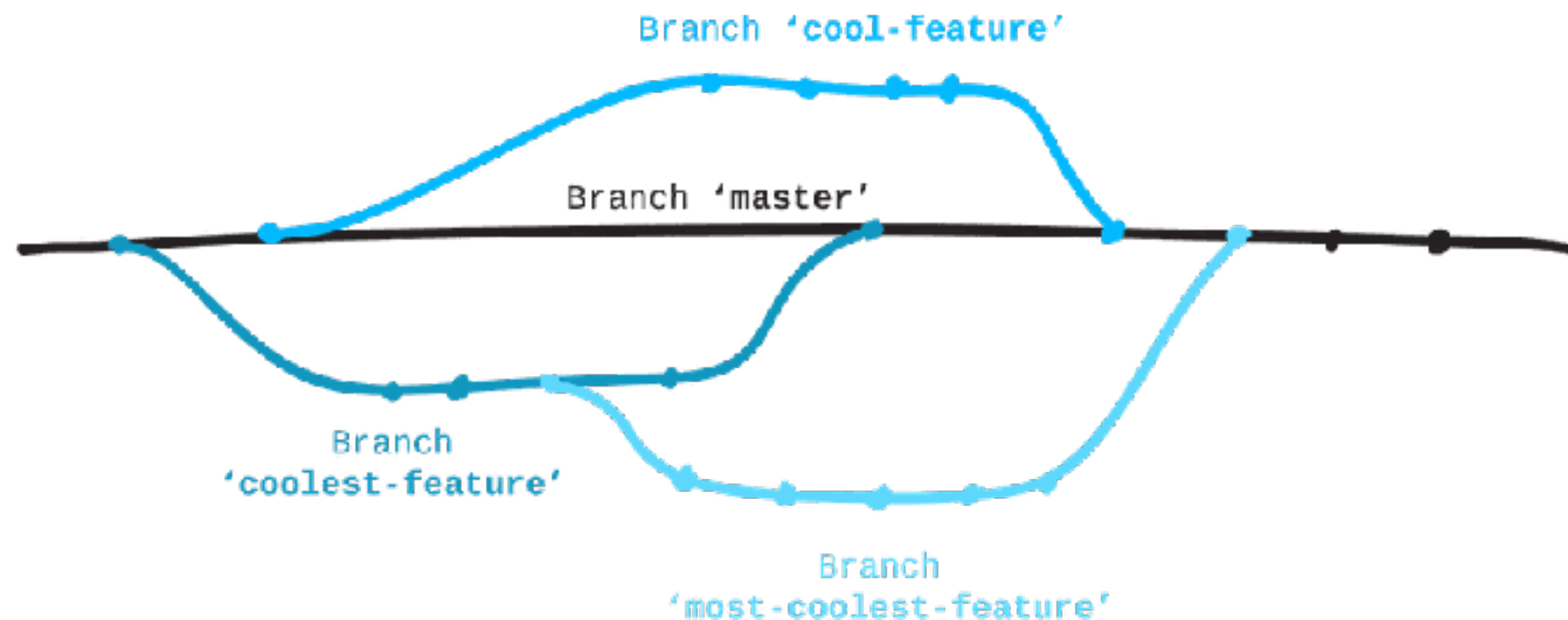
- Version control software
- Free, powerful, reliable, and increasingly popular! (Yes, there are others. There are more ways to skin a cat. But we like git!)

Why use version control?

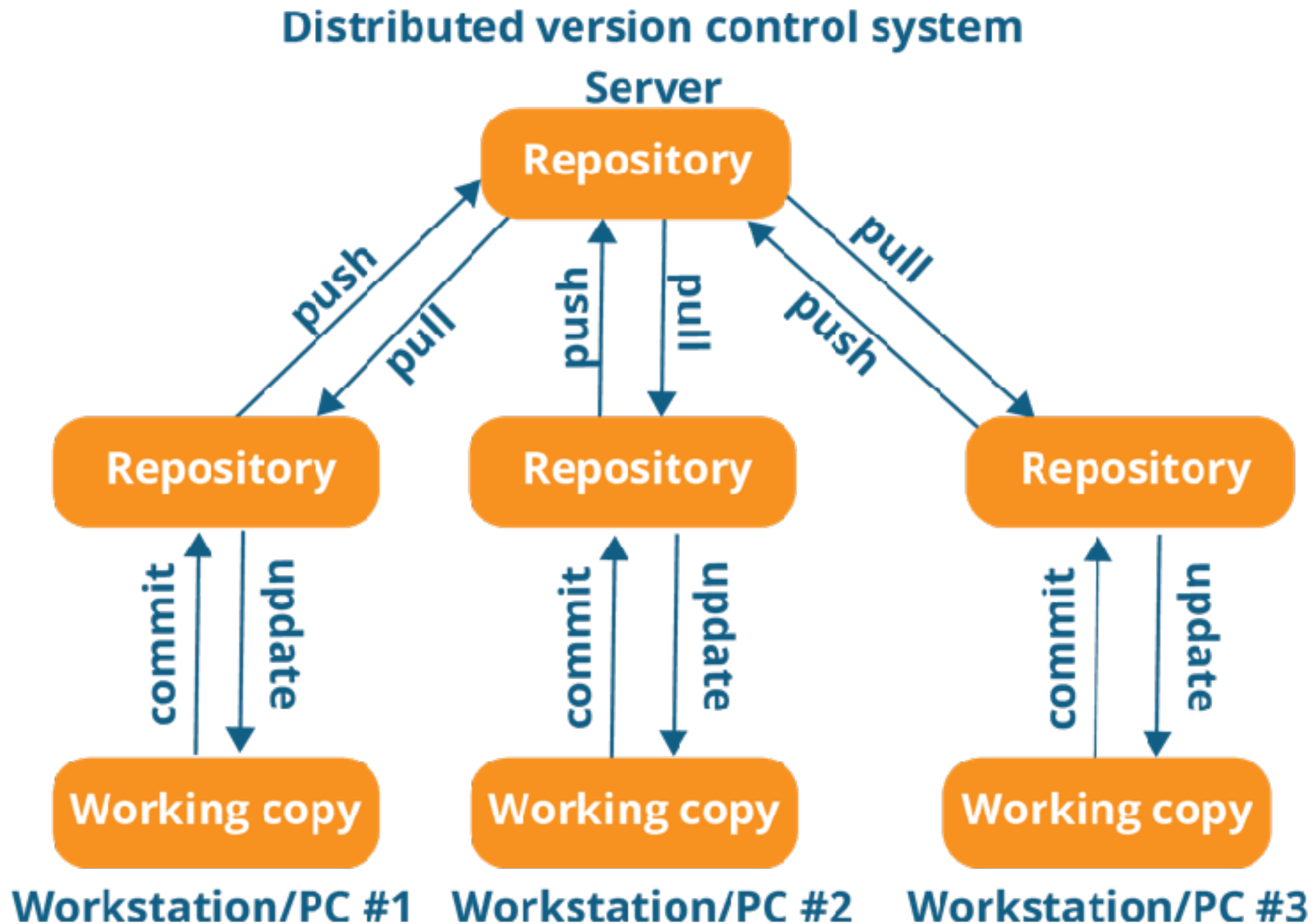
- Instead of this clusterf---k... 

Name
 mycode_20180928.py
 mycode_20180929-broken-notsurewhy.py
 mycode_20180929-copy.py
 mycode_20180929.py
 mycode_20181002_new.py
 mycode_20181010.py
 mycode_V01.1_20181012.py
 mycode_V01.2.py
 mycode_V01.py
 mycode.py

- ... you can update and experiment:



... and you can collaborate!



Do you have...

- Git installed on your computer?
 - **Windows:** gitforwindows.org
 - **Mac:** <http://git-scm.com/downloads>
 - **Linux:** `sudo apt-get install git-core`
- A GitHub account?
 - github.com
- (An updated version of R and Rstudio?)
- Let's get started!



Built for developers

GitHub is a development platform inspired by the way you work. From **open source** to **business**, you can host and review code, manage projects, and build software alongside 28 million developers.

Username

Email

Password

Make sure it's at least 7 characters, including a number, and a lowercase letter.

Sign up for GitHub

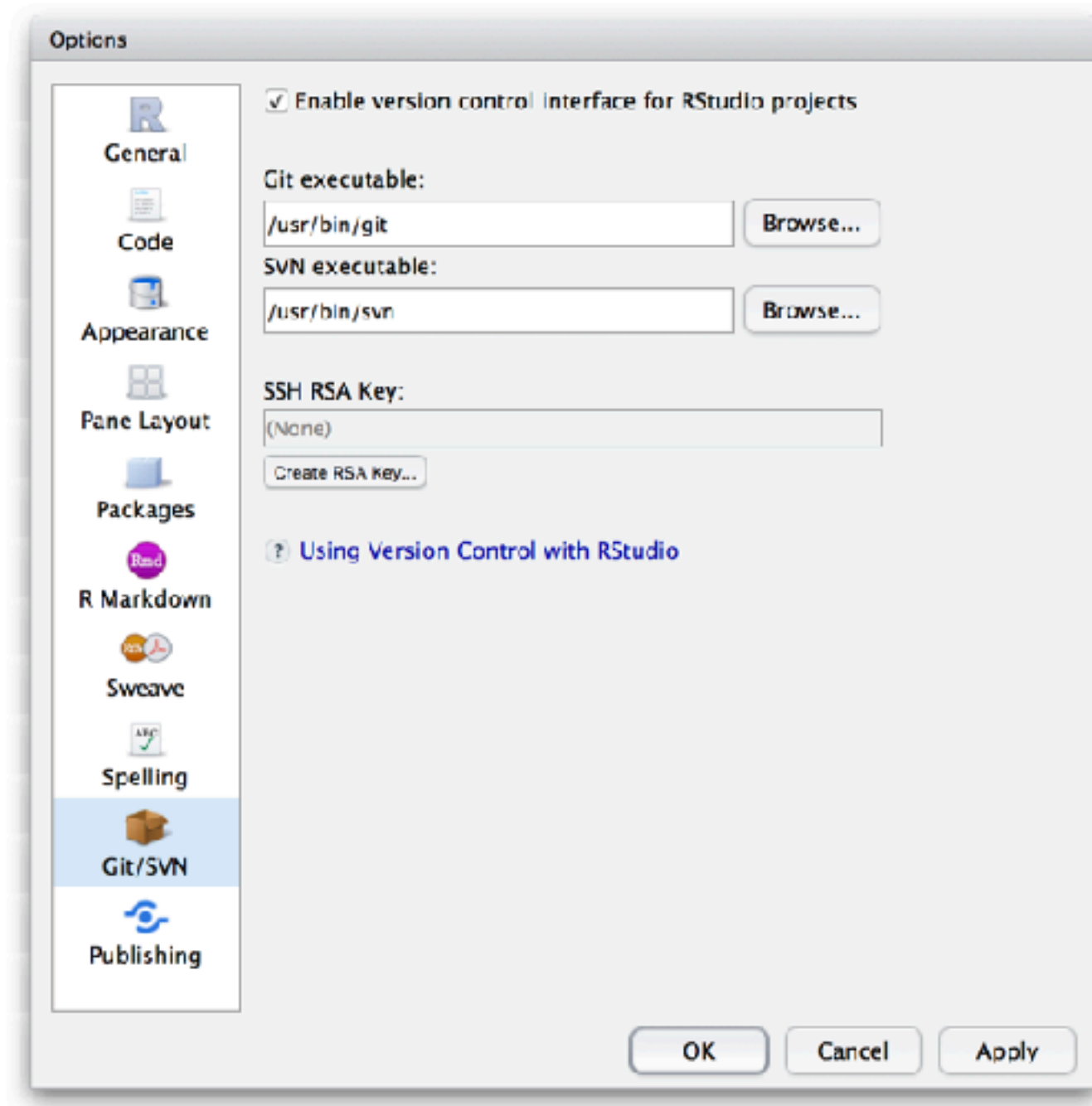
By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy statement](#). We'll occasionally send you account related emails.



GitHub Universe

Activate Git in RStudio

- Tools > Global Options > Git/SVN

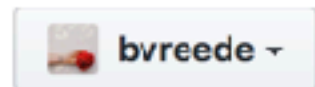


Create and initialize a new repository

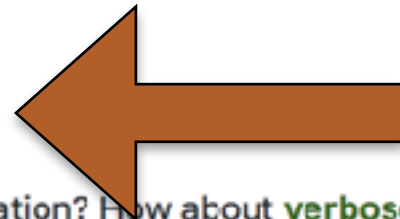
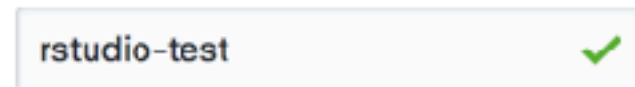
Create a new repository

A repository contains all the files for your project, including the revision history.

Owner



Repository name



Great repository names are short and memorable. Need inspiration? How about [verbose-memory](#).

Description (optional)

☒  **Public**

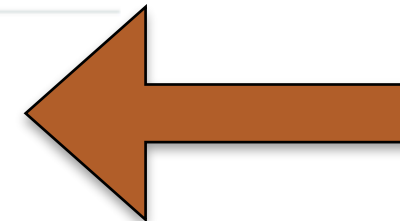
Anyone can see this repository. You choose who can commit.

☐  **Private**

You choose who can see and commit to this repository.

☒ **Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

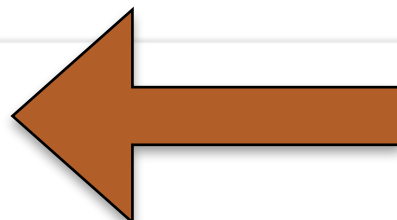


Add .gitignore: **None** ▾

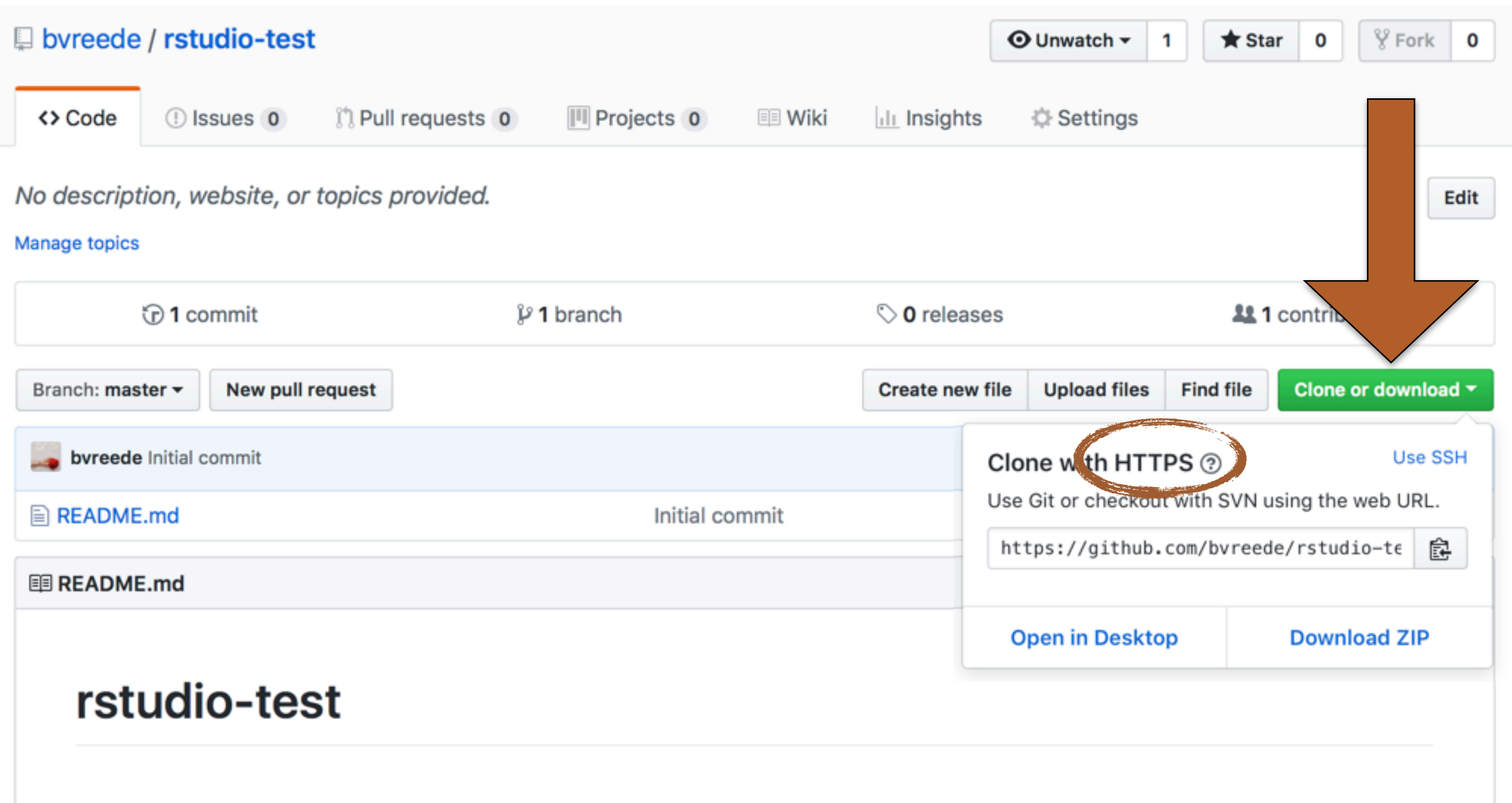
Add a license: **None** ▾



Create repository



Clone the repository



The screenshot shows the GitHub interface for the repository 'bvreede / rstudio-test'. At the top, there are buttons for 'Unwatch' (1), 'Star' (0), and 'Fork' (0). Below these are tabs for 'Code', 'Issues' (0), 'Pull requests' (0), 'Projects' (0), 'Wiki', 'Insights', and 'Settings'. A large orange arrow points from the 'Clone or download' button to the 'Clone with HTTPS' option in the dropdown menu.

Repository Information:

- Repository: `bvreede / rstudio-test`
- Unwatch: 1
- Star: 0
- Fork: 0

Navigation:

- Code
- Issues: 0
- Pull requests: 0
- Projects: 0
- Wiki
- Insights
- Settings

No description, website, or topics provided.

[Manage topics](#)

Repository Statistics:

- 1 commit
- 1 branch
- 0 releases
- 1 contributor

Actions:

- Branch: master ▼
- New pull request
- Create new file
- Upload files
- Find file
- Clone or download ▼

Clone Options:

- Clone with HTTPS (circled in orange)
- Use SSH

Clone URL:

`https://github.com/bvreede/rstudio-te`

Additional Options:

- Open in Desktop
- Download ZIP

Repository Content:

- Initial commit
- README.md

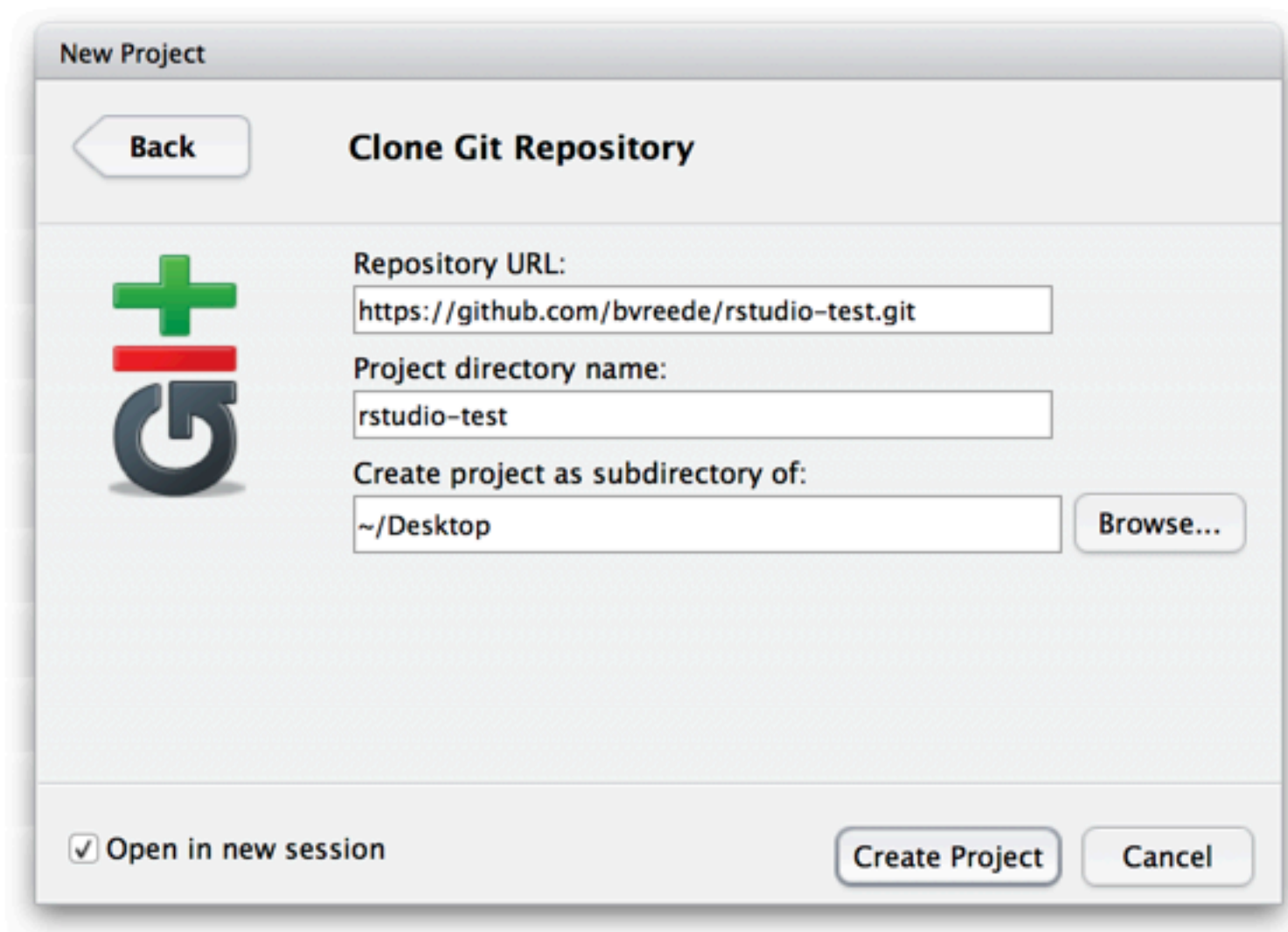
Repository Name:

`rstudio-test`

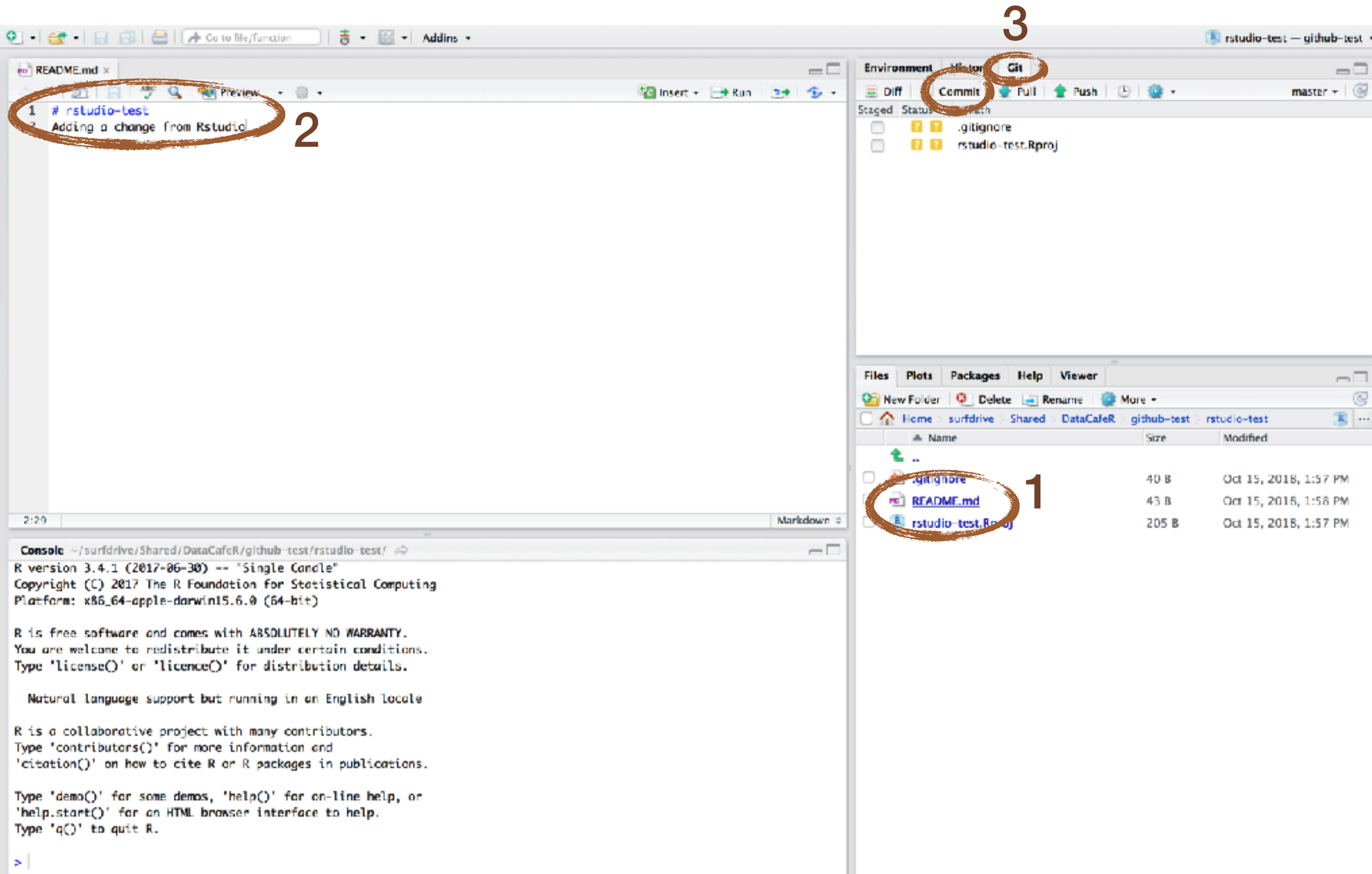


In Rstudio: start a new project

- File > New Project > Version Control > Git
- Paste the https: url of your repository



Select a file, make a change, save, commit...



Commit the edited file...

The screenshot shows the RStudio 'Review Changes' window. The 'Changes' tab is active, displaying a list of staged files: `.gitignore`, `README.md`, and `rstudio-test.Rproj`. The `README.md` file is selected and highlighted in blue, with a brown circle and the number '1' next to it. To the right, the 'Commit message' field contains the text 'First commit from Rstudio', which is also circled in brown with the number '2'. At the bottom right of the window, the 'Commit' button is circled in brown with the number '3'. Below the commit message field, there is a checkbox labeled 'Amend previous commit' which is currently unchecked. The bottom of the window shows a diff view of the selected file, with changes highlighted in red and green. The right side of the image shows a partial view of the RStudio file explorer, displaying the project structure and file sizes.

Changes History master Pull Push

Staged Status Path

- `.gitignore`
- `README.md`
- `rstudio-test.Rproj`

Commit message

First commit from Rstudio

☐ Amend previous commit

Commit

Show Staged Unstaged Context 5 line Unstage All

@@ -1,2 +1,2 @@

```
1 # rstudio-test"local change"
2 another local change
```

```
1 # rstudio-test
2 Adding a change from Rstudio
   No newline at end of file
```

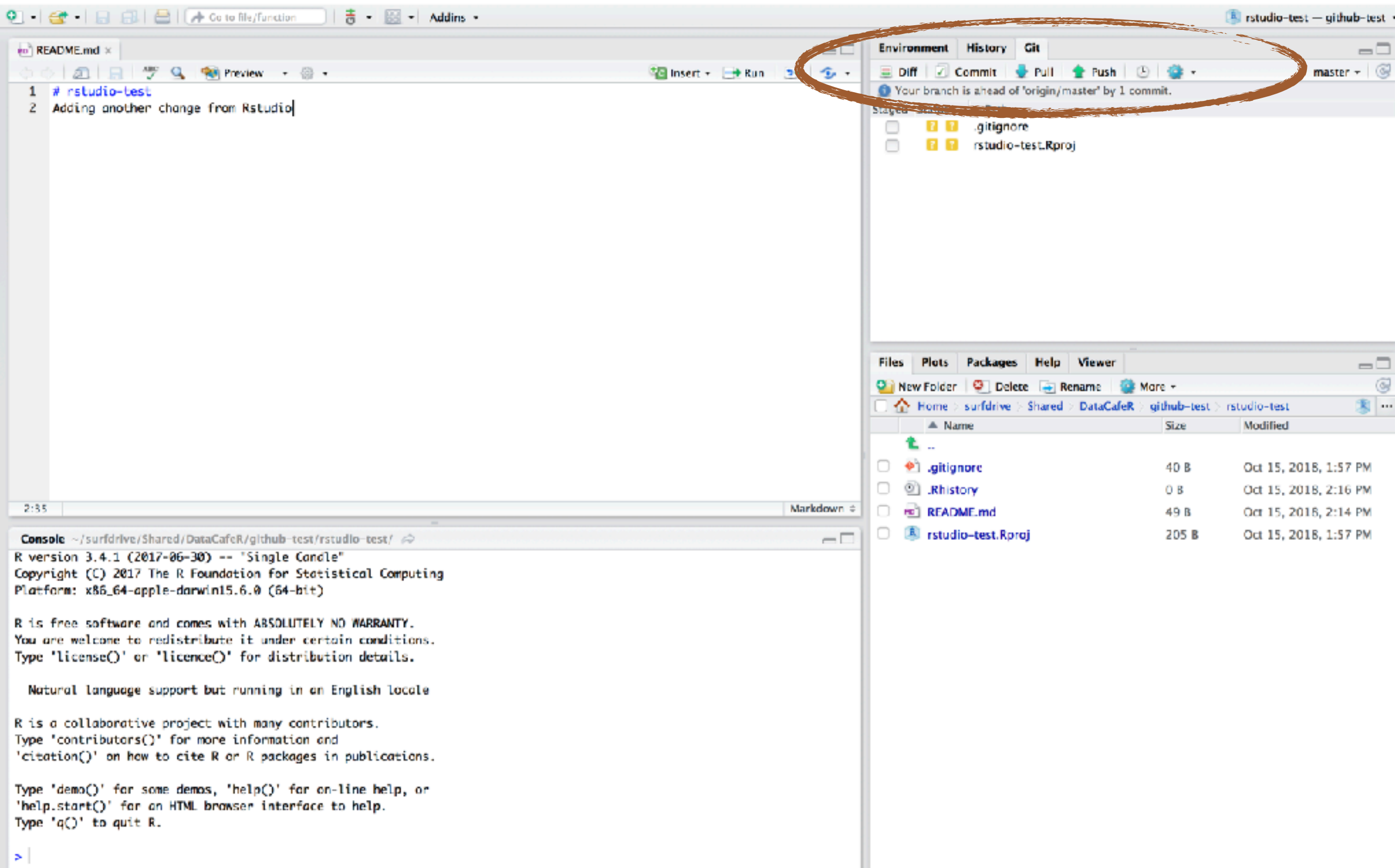
Unstage chunk

File Explorer: rstudio-test — github-test

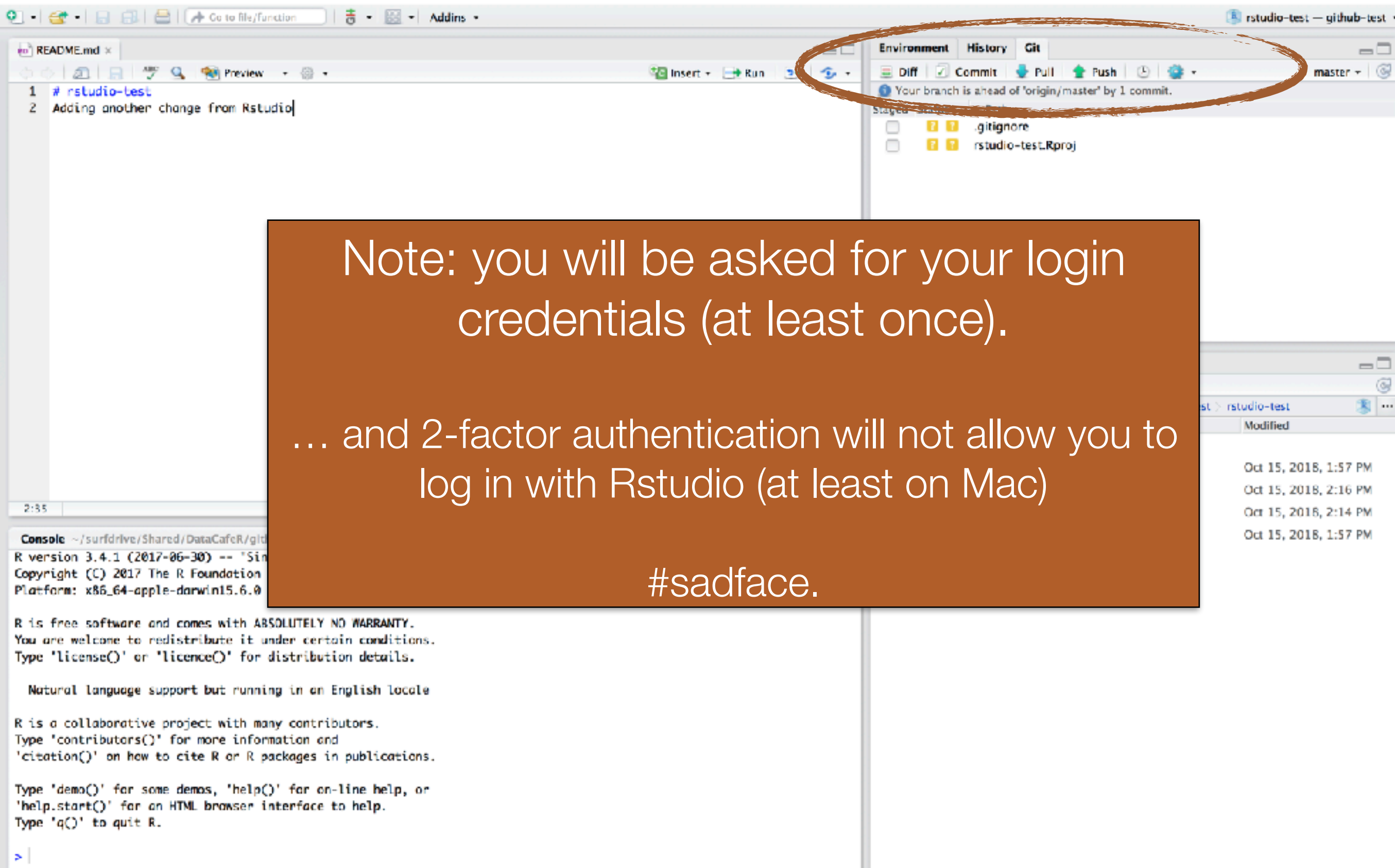
Files:

- `.gitignore` 40 B Oct 15, 2018, 1:57 PM
- `README.md` 43 B Oct 15, 2018, 1:58 PM
- `rstudio-test.Rproj` 205 B Oct 15, 2018, 1:57 PM

Push the commit to the repository...



Push the commit to the repository...



The screenshot shows the RStudio IDE with a file editor on the left containing a README.md file with two lines of text: `# rstudio-test` and `Adding another change from Rstudio`. The bottom-left pane shows the R console with the R version 3.4.1 (2017-06-30) and various help messages. The bottom-right pane shows a file explorer with a table of modified files. The top-right pane shows the Git interface with a message: "Your branch is ahead of 'origin/master' by 1 commit." and a list of staged files: `.gitignore` and `rstudio-test.Rproj`. A brown oval highlights the Git interface, and a brown box with white text is overlaid on the center of the image.

Note: you will be asked for your login credentials (at least once).

... and 2-factor authentication will not allow you to log in with Rstudio (at least on Mac)

#sadface.

Modified
Oct 15, 2018, 1:57 PM
Oct 15, 2018, 2:16 PM
Oct 15, 2018, 2:14 PM
Oct 15, 2018, 1:57 PM

The other way around...

- File > New Project > New Directory > Empty...
- DEMO!

More info?

Check out happygitwithr.com (and particularly chapter 13!)