



Delivering

materials with little friction

teach-shiny.rbind.io

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Goal

Set up an RStudio Cloud workspace

Two challenges

- ▶ Files (workshop materials) in a particular folder structure
- ▶ Computing environment

use

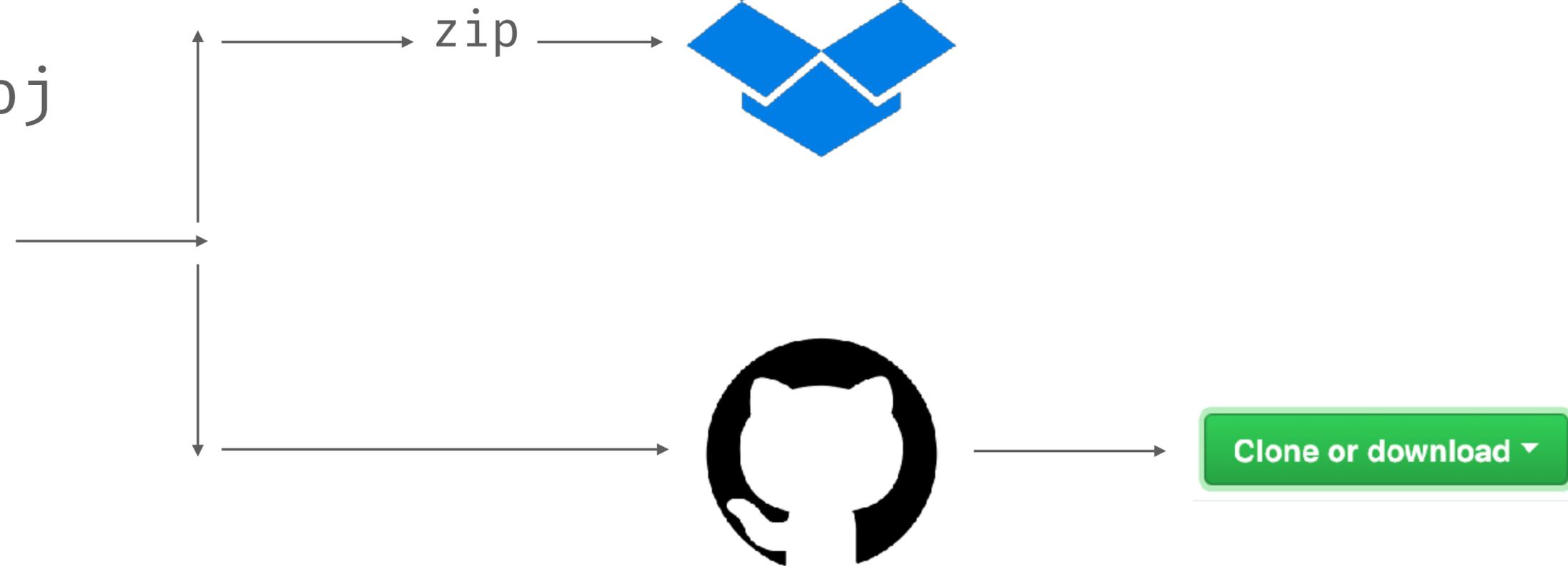
▶ RStudio

projects

Packaging things up



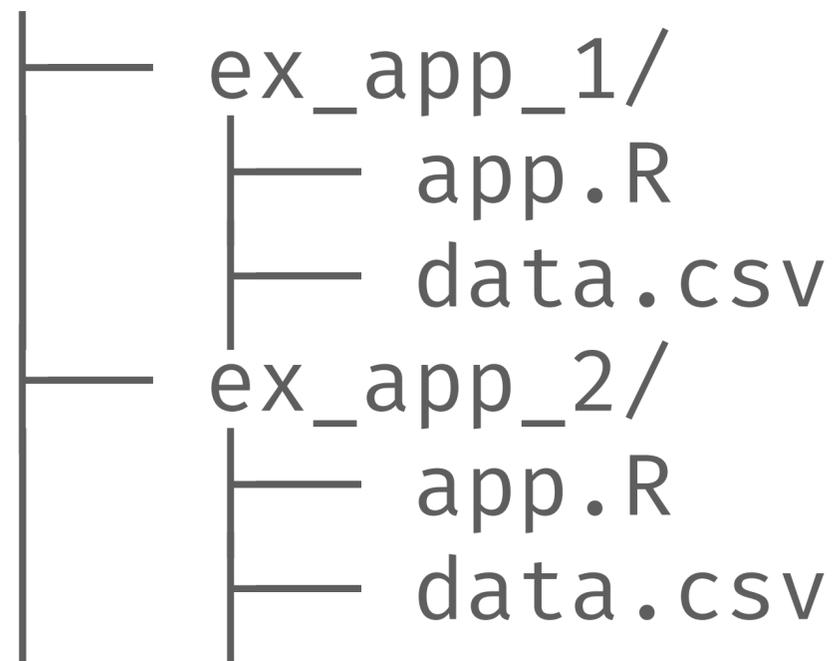
```
├── workshop.Rproj
├── ex_app_1/
│   └── app.R
└── ex_app_2/
    └── app.R
```



Getting materials off of GitHub

- ▶ Fork + Clone (if you know what that means)
- ▶ Download zip + click on .Rproj to launch
- ▶ `usethis::use_course()`

File structure for example apps



For teaching deployment



For avoiding redundancy

standardize

▶ **computing**

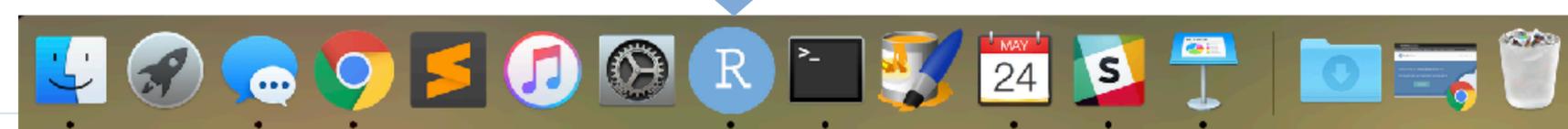
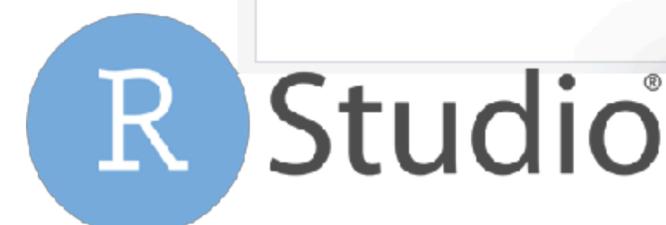
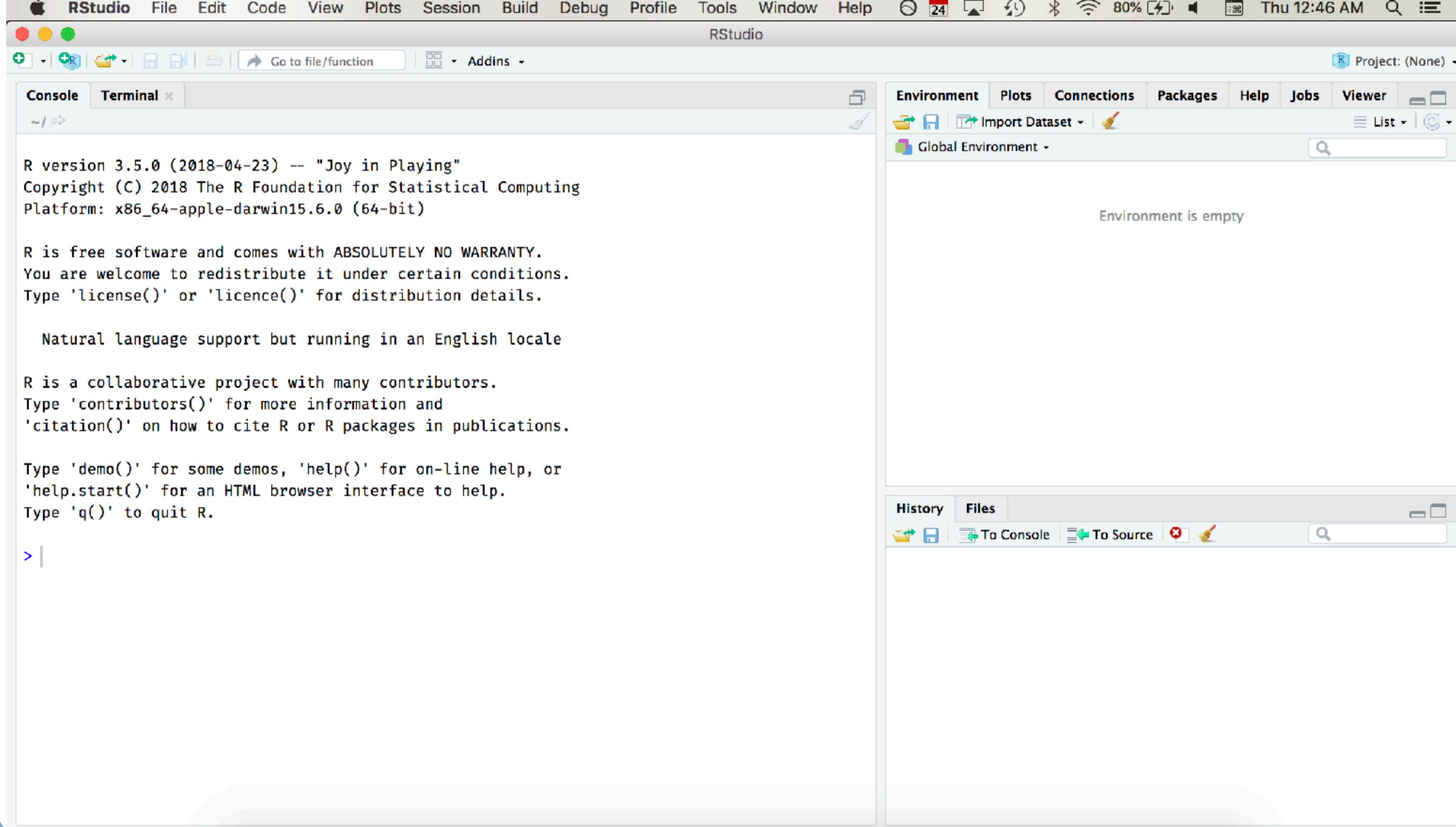
environment

don't start like this

- Install R
- Install RStudio
- Install the following packages:
 - shiny
 - tidyverse
 - ...
- Load these packages
- Install git

start like this

- Go to rstudio.cloud
 - Log in
- > hello R!



Chrome File Edit View History Bookmarks People Window Help

RStudio Cloud

Secure | <https://rstudio.cloud/project/38096>

Your Workspace / Untitled Project *Click to name your project*

Mine Çetinkaya-Rundel

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins R 3.4.4

Console Terminal

```

/cloud/project/

R version 3.4.4 (2018-03-15) -- "Someone to Lean On"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-pc-linux-gnu (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>

```

Environment History Connections

Import Dataset

Global Environment

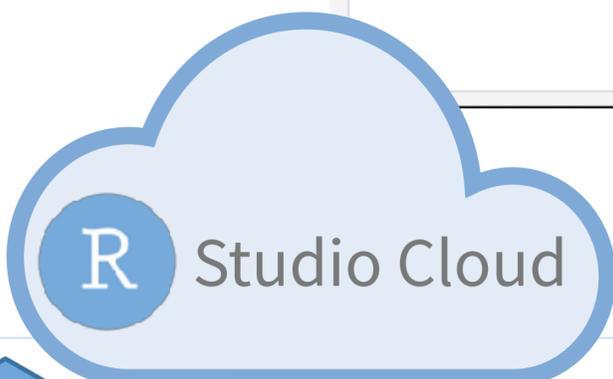
Environment is empty

Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

/ > / > cloud > project

	Name	Size	Modified
	..		
<input type="checkbox"/>	.Rhistory	0 B	May 24, 2018, 12:40 AM
<input type="checkbox"/>	project.Rproj	205 B	May 24, 2018, 12:40 AM



Why cloud?

Why not local IDE?

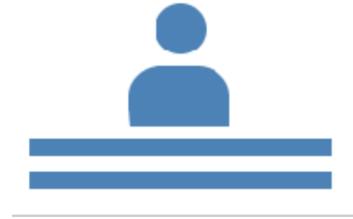
- ▶ Reduce friction at the beginning of a workshop
- ▶ Avoid local installation
- ▶ Standardize computing environment for all participants

Why RStudio Cloud?

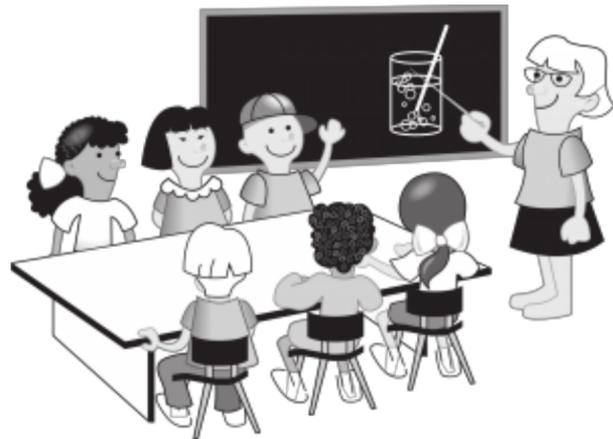
- ▶ Does not require server setup
- ▶ Features designed specifically for teaching



Workspaces



when you create an account on RStudio Cloud you get a workspace of your own - projects you create here are public



you can add a new workspace and control its permissions - projects you create here can be public or private

Getting students in

Access

Invitation required
Add specific members to the space by sending invitations.

Shared
Anyone with the sharing link can access the space.

Initial Role (i)

Contributor

 Copy Sharing Link

take this link
(and optionally make it into a short link)

Permissions

Contributors can see the members list

Contributors can make their projects visible to all members

Viewers can see the members list

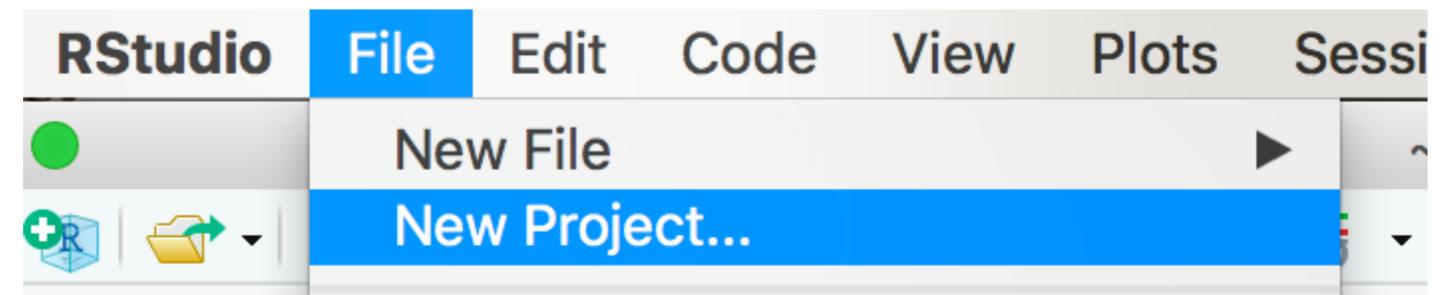
evaluate whether students should be able to see each others' names or not

Projects

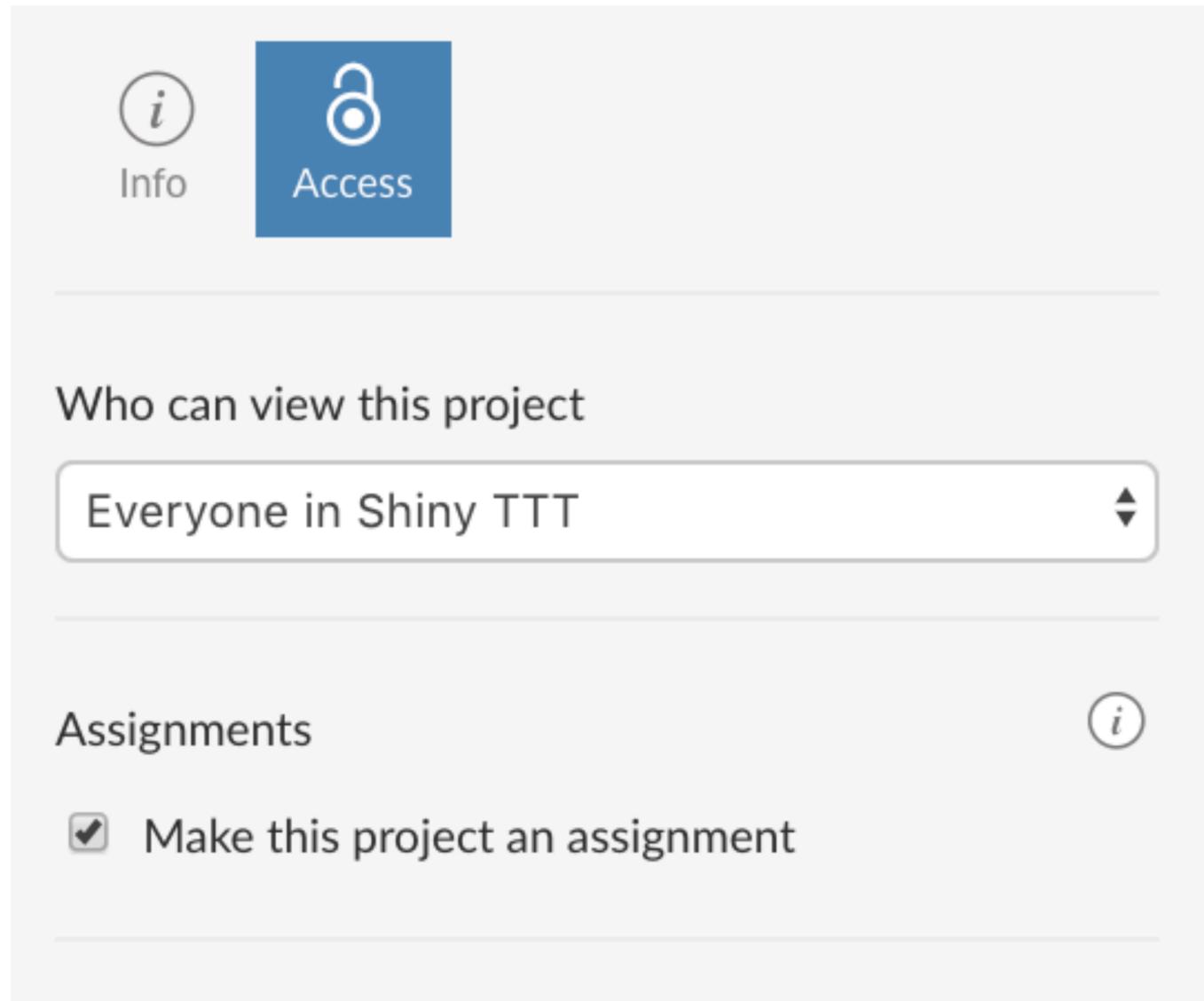
a new project in RStudio Cloud



is a new project in RStudio



Sharing projects

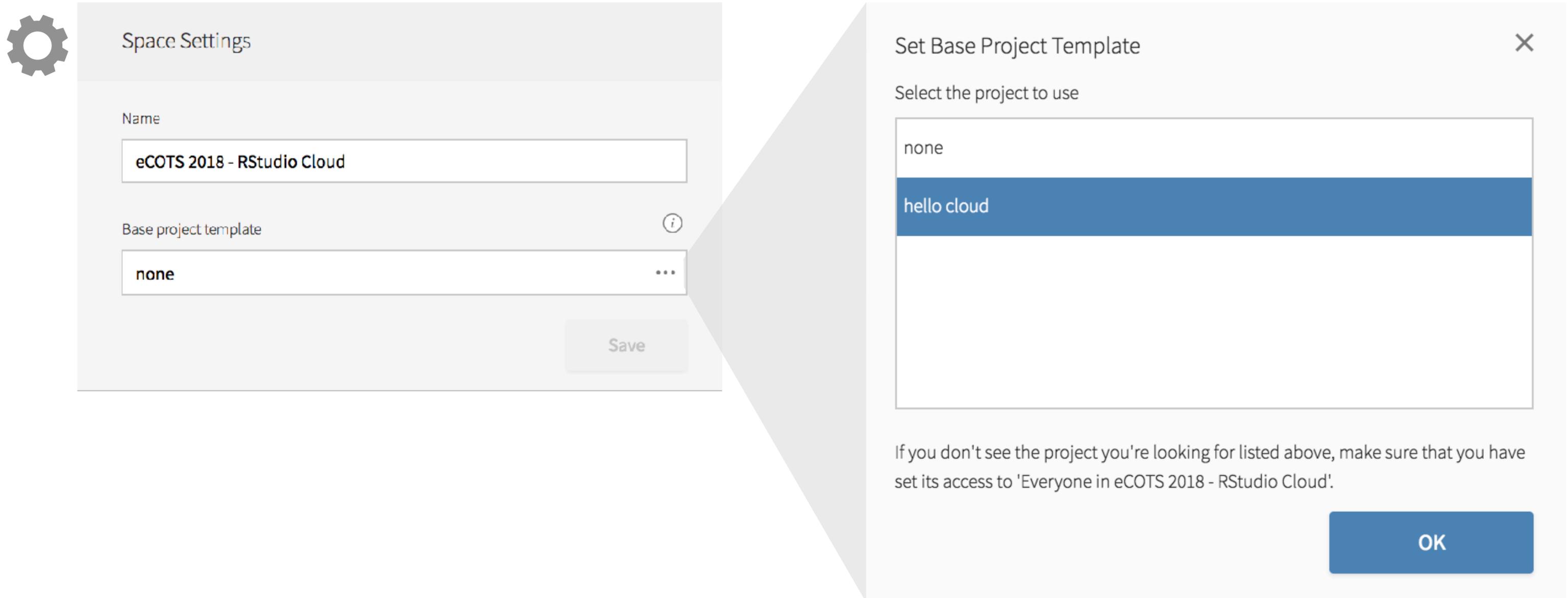


The screenshot shows the 'Access' settings for a Shiny project. At the top, there are two tabs: 'Info' (with an 'i' icon) and 'Access' (with a lock icon). Below the tabs, the section 'Who can view this project' is visible, with a dropdown menu currently set to 'Everyone in Shiny TTT'. Further down, the 'Assignments' section is shown, featuring a checkbox labeled 'Make this project an assignment' which is checked. An information icon is present to the right of the 'Assignments' header.

by default, projects in a workspace are visible to you (+ admins and moderators only)

use assignments to create projects that will make a copy for the student when they click on it

Base project



The image shows two overlapping screenshots from RStudio. The left screenshot is the 'Space Settings' dialog, which has a gear icon in the top left. It contains a 'Name' field with the text 'eCOTS 2018 - RStudio Cloud' and a 'Base project template' dropdown menu currently set to 'none'. An information icon is visible to the right of the dropdown. A 'Save' button is at the bottom right. The right screenshot is the 'Set Base Project Template' dialog, which has a close button (X) in the top right. It prompts the user to 'Select the project to use' and shows a list with 'none' and 'hello cloud'. The 'hello cloud' option is highlighted with a blue background. Below the list, there is a note: 'If you don't see the project you're looking for listed above, make sure that you have set its access to 'Everyone in eCOTS 2018 - RStudio Cloud''. An 'OK' button is at the bottom right.

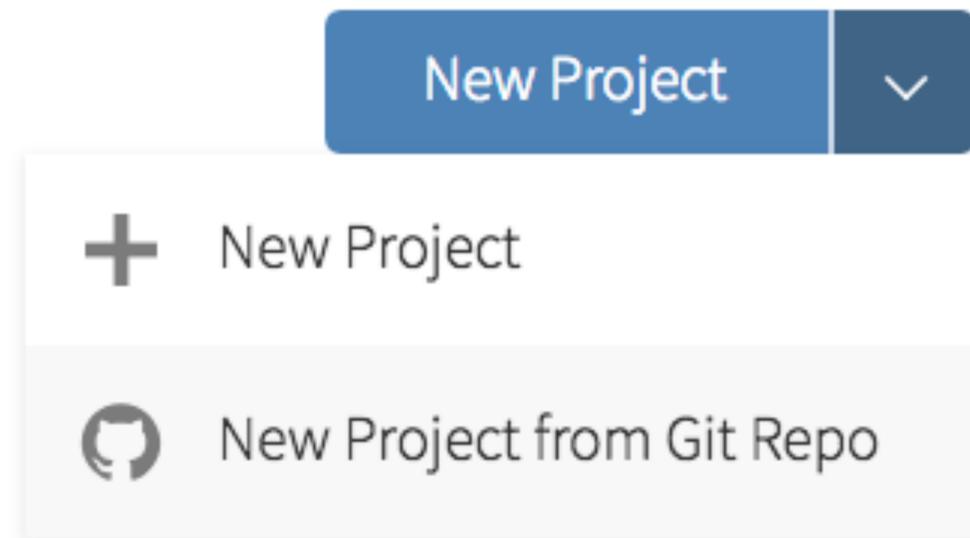
Your turn

Create an RStudio Cloud workspace, set a base project with any projects you need installed, add an app.

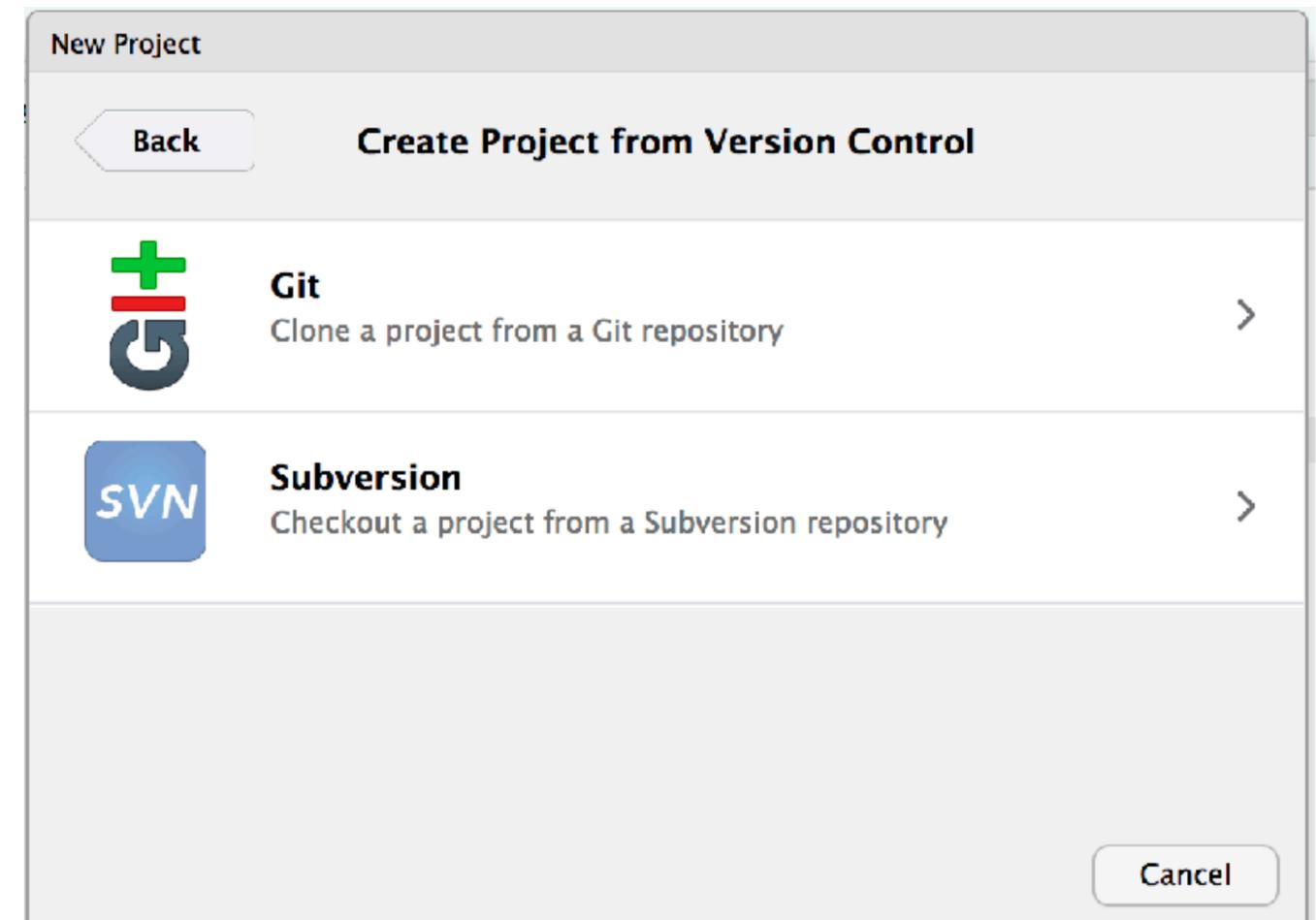
Then, invite a classmate like a student and confirm they can copy your project and edit it.

Git integration

a new project from Git Repo
in RStudio Cloud



is creating (cloning) a project
from a Git repository RStudio



+ base project template is used, so new
project from git also has the right
packages installed!

Teaching tip

SM Student Mine



make a second account for yourself and add as contributor (student) to see what your students see



Mine's testing agent
minebotmine

 **use RStudio projects**

 **standardize computing**

environment

Parting remark

A large, bold, orange lowercase alpha symbol (α) is positioned on the left side of the slide, indicating the alpha stage of development.

WORK IN PROGRESS

We're in alpha and still adding important features and improving performance, reliability and availability. Please reach out with any questions or feedback at <https://community.rstudio.com/c/rstudio-cloud>.