Day 1: Introducing RStudio

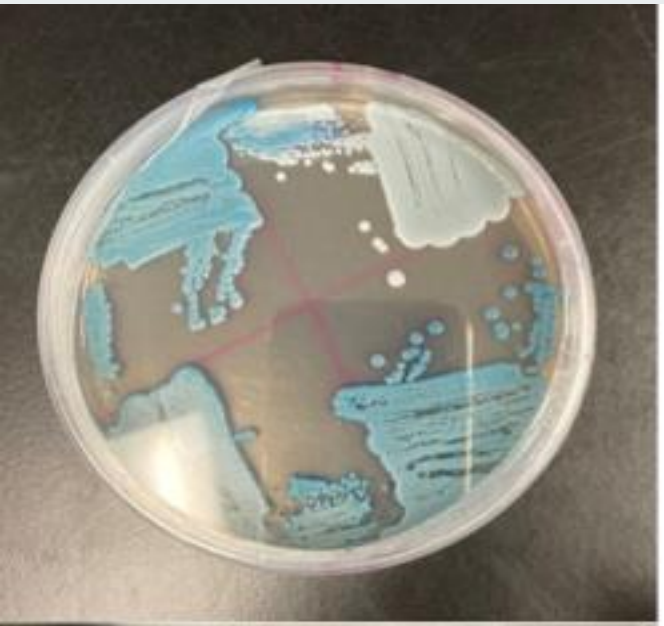
By Miranda McKibben

A little about me: My education

- I graduated from Olentangy Orange High School and the Delaware Area Career Center Zoo School program in 2018.
- I got a B.S. in Biology, specializing in Ecology and Evolution, from the University of Chicago in 2022.
- I am a third year PhD student at the University of Georgia.

THE UNIVERSITY OF CHICAGO

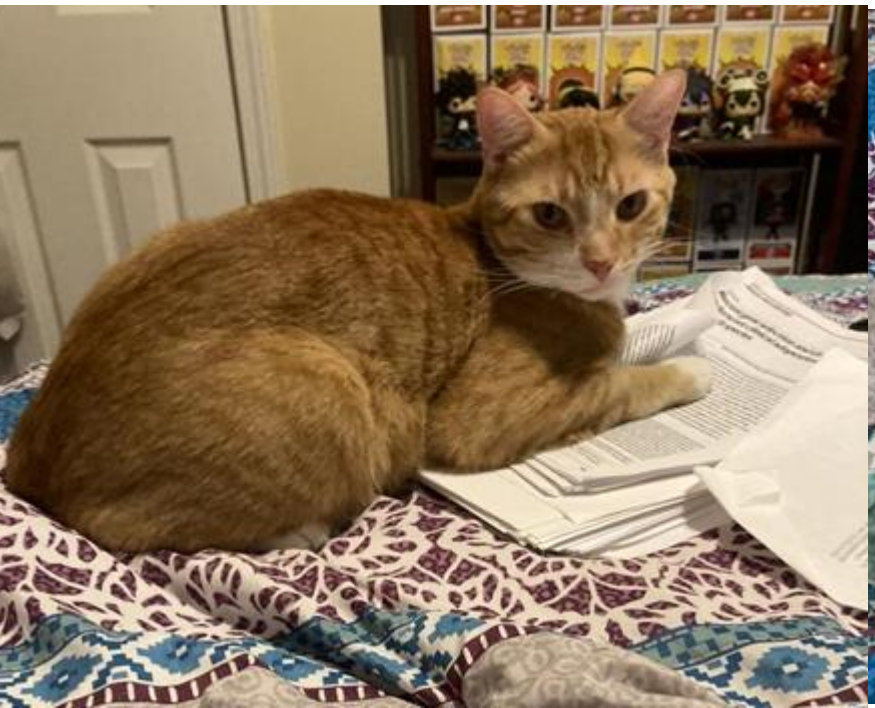
Department of Plant Biology
Franklin College of Arts and Sciences
UNIVERSITY OF GEORGIA



I study wild yeast

Follow me on Instagram,
@environmentalyeast

My interests outside academia: Spelunking and cuddling my cat, Toki Roki.



By the end of this course you will:

1. Develop computational thinking skills
2. Create RStudio code to analyze datasets
3. Dissect scientific papers
4. Formulate hypotheses
5. Defend your coding choices

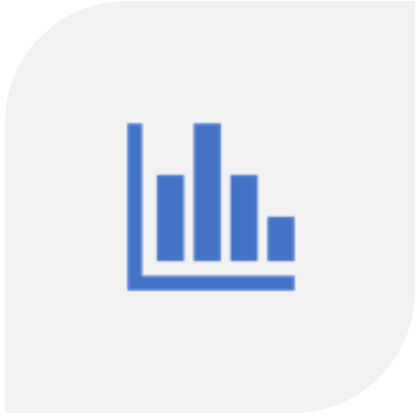
Question

What are some reasons to write code to analyze data?

Possible Answers

1. Forces you to think about how you are analyzing the dataset
    a. What questions are you trying to answer?
    b. Are you performing the right tests/creating the right figures, or do the tests and figures you chose produce a biased result?
2. Reproducibility

RStudio



A SYSTEM TO ANALYZE AND VISUALIZE DATA

FREE, OPENSOURCE SOFTWARE THAT ALLOWS FOR REPRODUCIBILITY

A SYSTEM FOR LEARNING HOW TO CODE

Desktop

- Require download and installation, can be complicated depending on device.
- Does not require internet connection.
- Needs to be installed on any device you use, files need to be downloaded onto computer to save code.
- Fast runtime.
- Every time a new version is released needs to be redownloaded.
- Everything is free
- May be easier to upload and download data.

Browser

- Can be accessed through internet, no installation required.
- Does require internet access.
- Creates a user profile, code is saved on the Cloud in addition to the option of downloading to device.
- May lag depending on internet speed.
- Has every version of RStudio.
- Has a limited free version, more advanced projects and time spent coding costs money.
- Has tutorials for many types of data analysis.

posit cloud

Sign in

All Images Videos News Shopping Forums Web More Tools

Results for **Athens, GA 30605** · Choose area

Posit Cloud
https://posit.cloud

Posit Cloud

Get to know Cloud. Do, share, teach and learn data science using the RStudio IDE or Jupyter Notebooks, directly from your browser. You can share projects with ...

Log In
Log InSign Up · TermsStatus. © 2022 Posit Software, PBC.

Free - Plans
If you make limited, occasional use of Posit Cloud, have access to ...

Plans
$0 · $25 · $75 · $15 · $5 / month. Learn more · Learn more ...

Posit Recipes
Model Data · Make a table of metrics related to a model's ...

Posit Connect Cloud
Publish your Python applications, R applications, and documents ...

More results from posit.cloud »

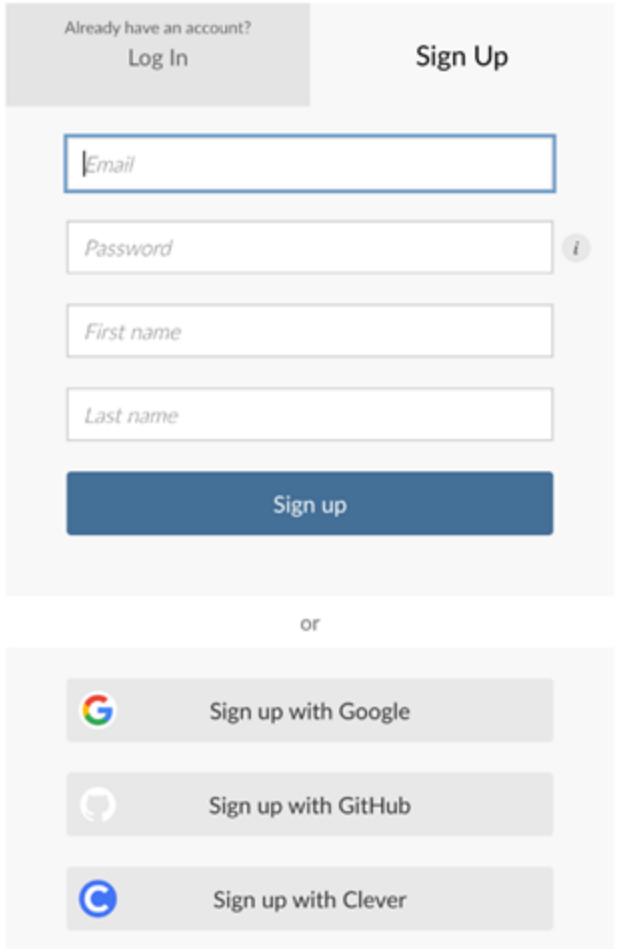
posit Cloud

All Plans | Free | Basic | Standard | Instructor | Student

Log In | Sign Up

FOR QUALIFYING EDUCATORS AND STUDENTS

	Cloud Free	Cloud Basic	Cloud Standard	Cloud Instructor	Cloud Student
	$0 / forever	$25 / month	$75 / month	$15 / month With three options available for covering student costs	$5 / month
	Learn more	Learn more	Learn more	Learn more	Learn more
SHARED SPACES	1 (with member & project limits)	**Unlimited**	**Unlimited**	**Unlimited**	1 (with member & project limits)
PROJECTS	25	**Unlimited**	**Unlimited**	**Unlimited**	25
OUTPUTS	25	**50**	**100**	**100**	25
COMPUTE HOURS	25 hours per month	**150 hours** included per month additional @ 10¢ per hour	**500 hours** included per month additional @ 10¢ per hour	**300 hours** included per month additional @ 10¢ per hour Unlimited hours with a fixed price per user plans are also available	**75 hours** included per month additional @ 10¢ per hour
MAX RAM	1 GB	**8 GB**	**32 GB**	**16 GB**	1 GB


Already have an account?
Log In
Sign Up
Email
Password
First name
Last name
Sign up
or
Sign up with Google
Sign up with GitHub
Sign up with Clever

Welcome, Miranda McKibben!

You are logged in to Posit. Please select your destination.

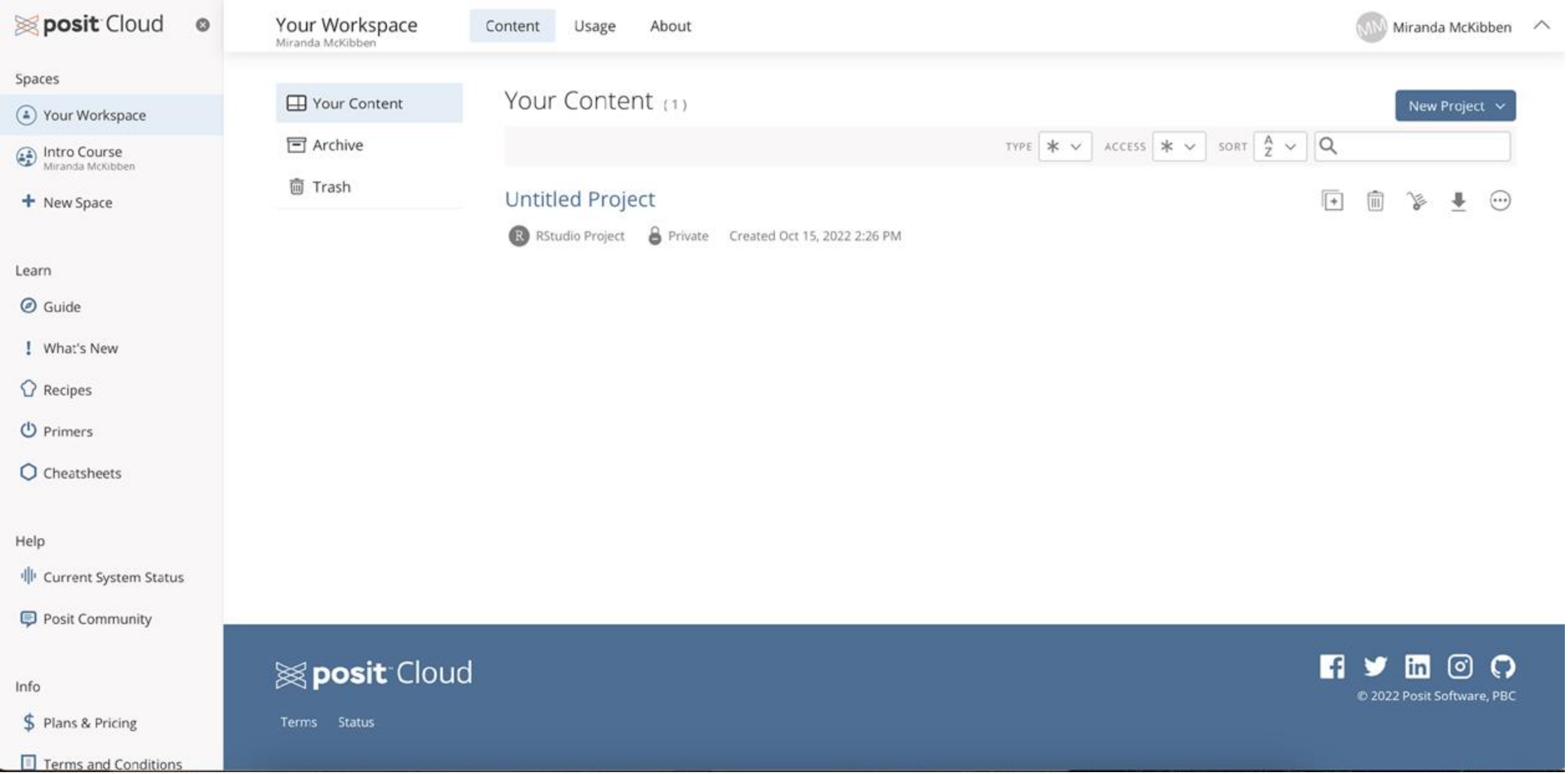
Posit Cloud

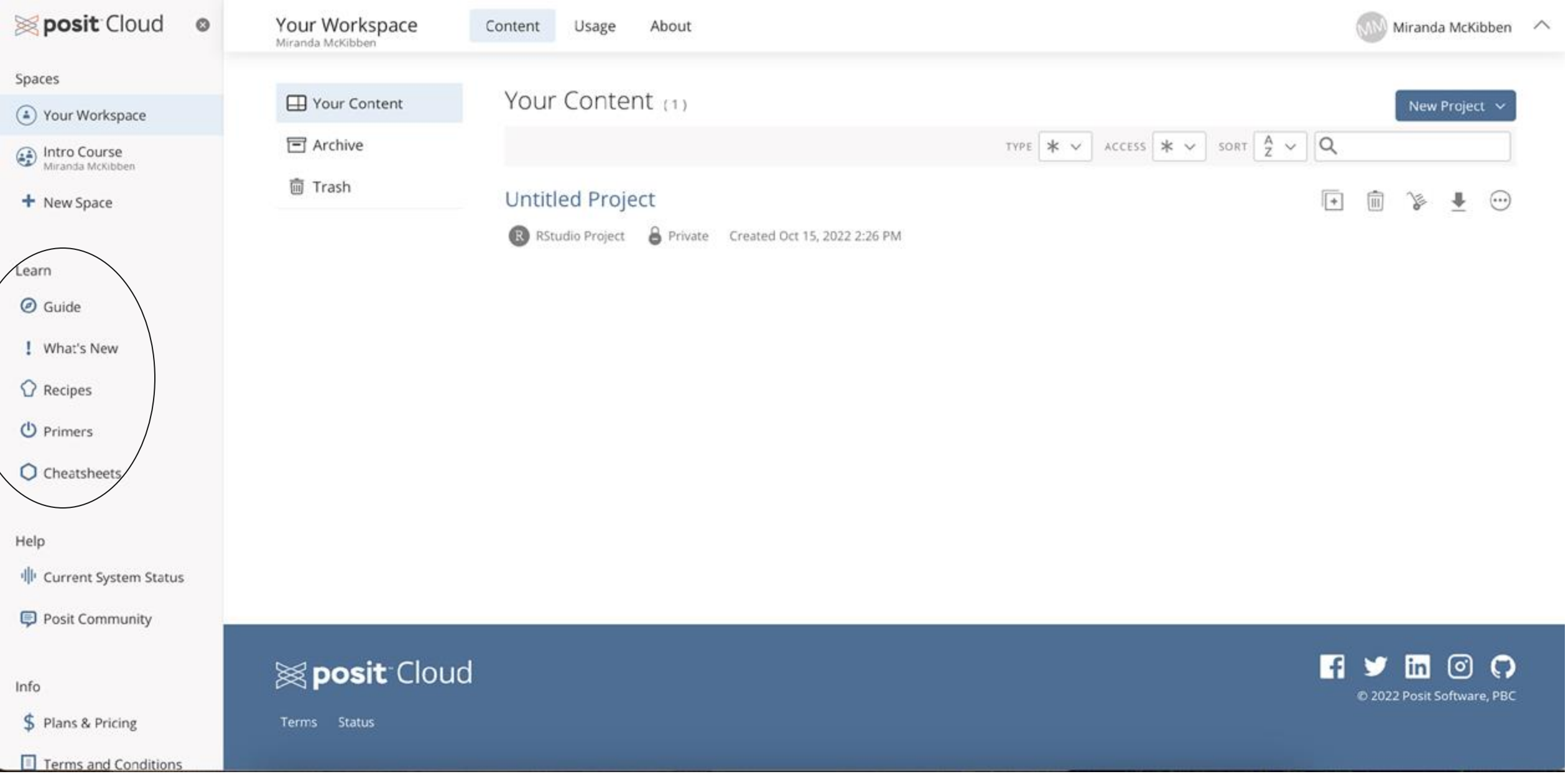
shinyapps.io

Posit User Settings

or

Log Out


posit Cloud
Your Workspace
Miranda McKibben
Content
Usage
About
Miranda McKibben
Spaces
Your Workspace
Intro Course
Miranda McKibben
New Space
Learn
Guide
What's New
Recipes
Primers
Cheatsheets
Help
Current System Status
Posit Community
Info
Plans & Pricing
Terms and Conditions
Your Content
Archive
Trash
Your Content (1)
New Project
TYPE
ACCESS
SORT
Untitled Project
RStudio Project
Private
Created Oct 15, 2022 2:26 PM
posit Cloud
Terms
Status
© 2022 Posit Software, PBC


posit Cloud
Your Workspace
Miranda McKibben
Content
Usage
About
Miranda McKibben
Spaces
Your Workspace
Intro Course
Miranda McKibben
New Space
Learn
Guide
What's New
Recipes
Primers
Cheatsheets
Help
Current System Status
Posit Community
Info
Plans & Pricing
Terms and Conditions
Your Content
Archive
Trash
Your Content (1)
New Project
TYPE
ACCESS
SORT
Untitled Project
RStudio Project
Private
Created Oct 15, 2022 2:26 PM
posit Cloud
Terms
Status
© 2022 Posit Software, PBC

Posit Recipes

Some tasty R code snippets

R Basics

Do basic tasks with R, like import data and call functions.

- Read a CSV file (.csv)
- Read a character-delimited file (.txt)
- Read an Excel file (.xls, .xlsx)
- Arithmetic with single numbers
- Call a function on a number
- Obey R's naming rules
- Run a function
- Create a table manually

Transform Tables

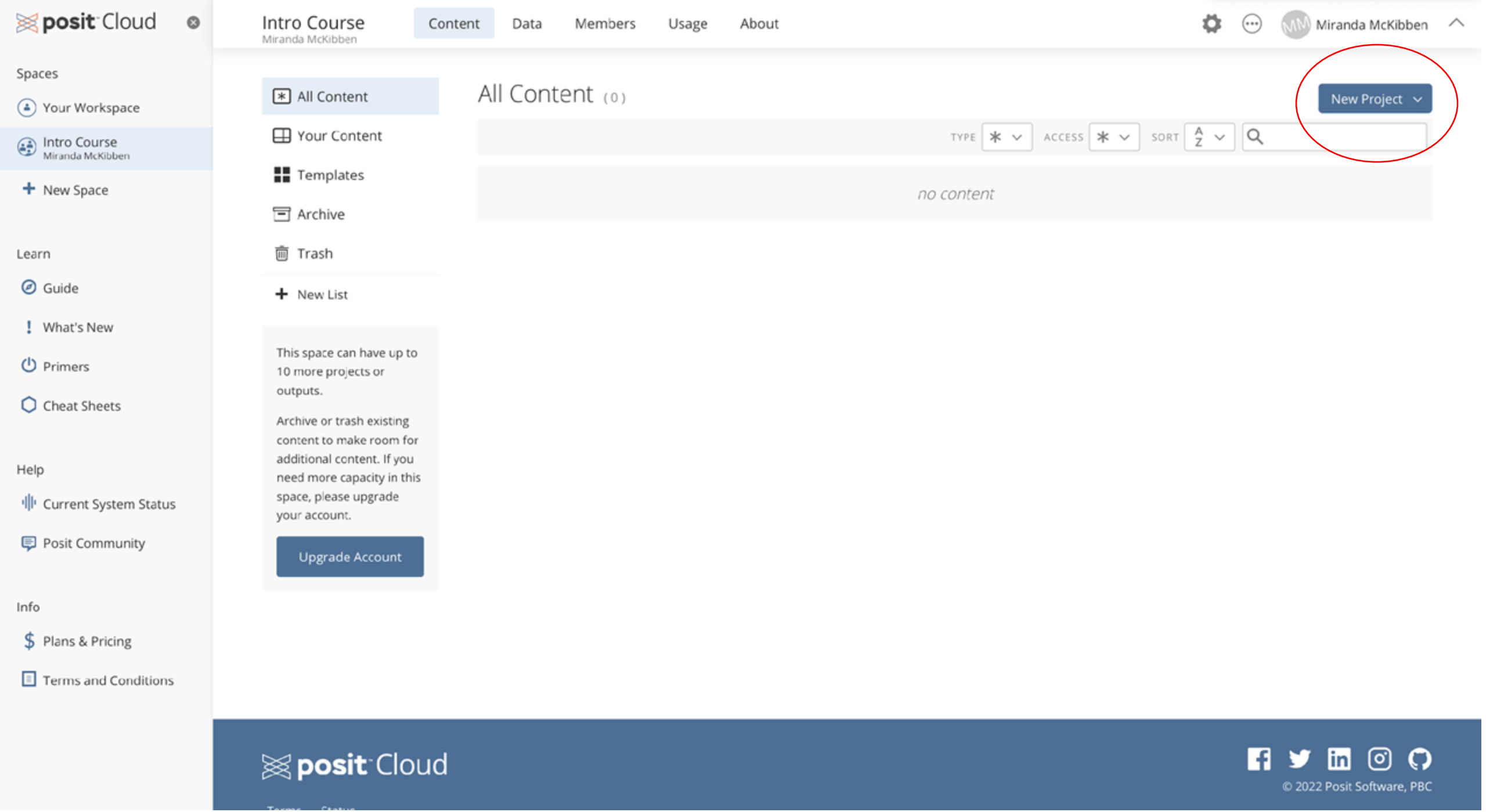
Do things like filter, sort, and pivot your tables of data.

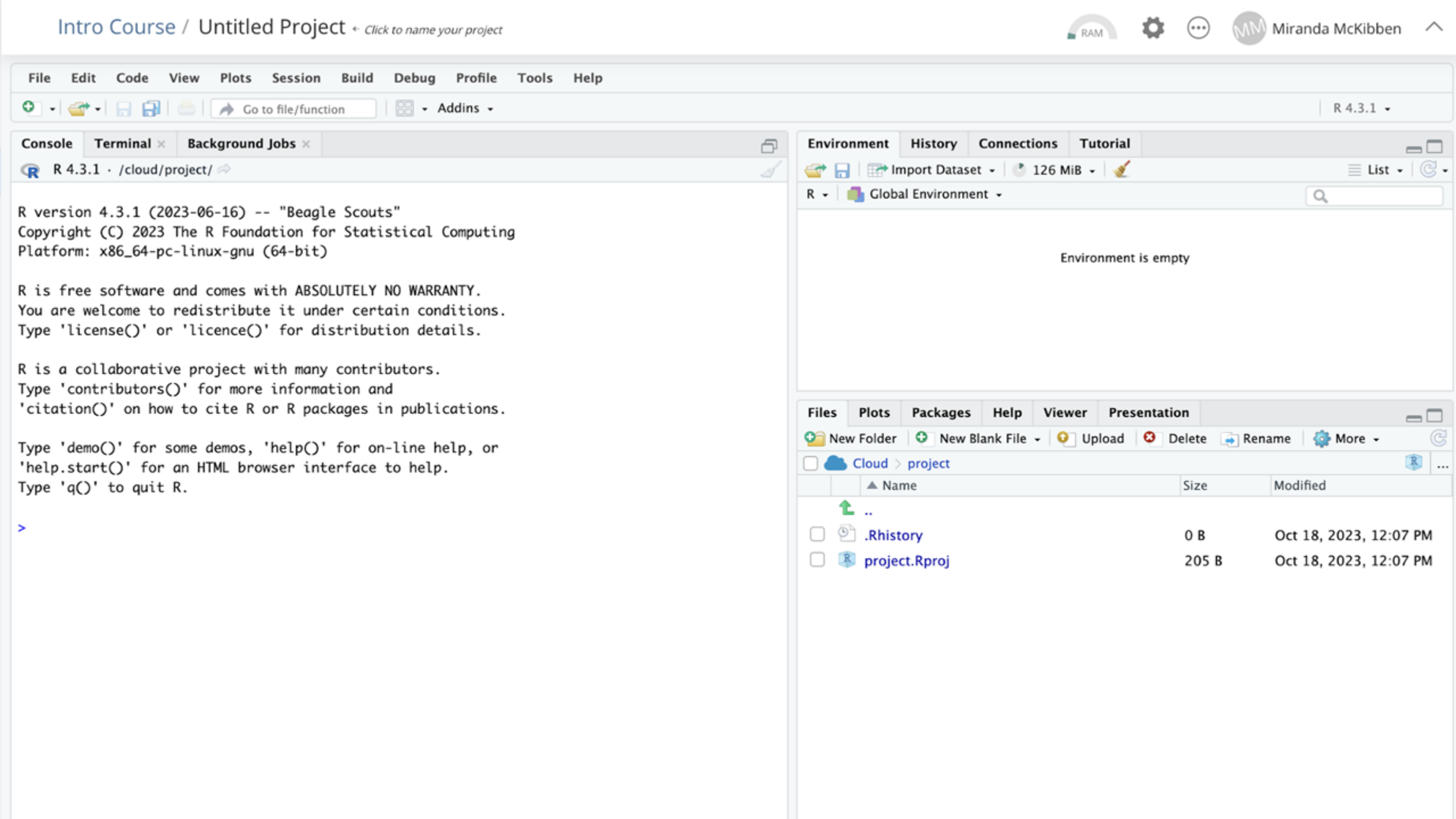
- Extract columns from a table as a new table
- Rename columns in a table
- Add a column to a table and compute its values
- Compute summary statistics for a table
- Compute summary statistics for groups of rows within a table
- Filter your table to rows with specific values
- Group a continuous variable into categories

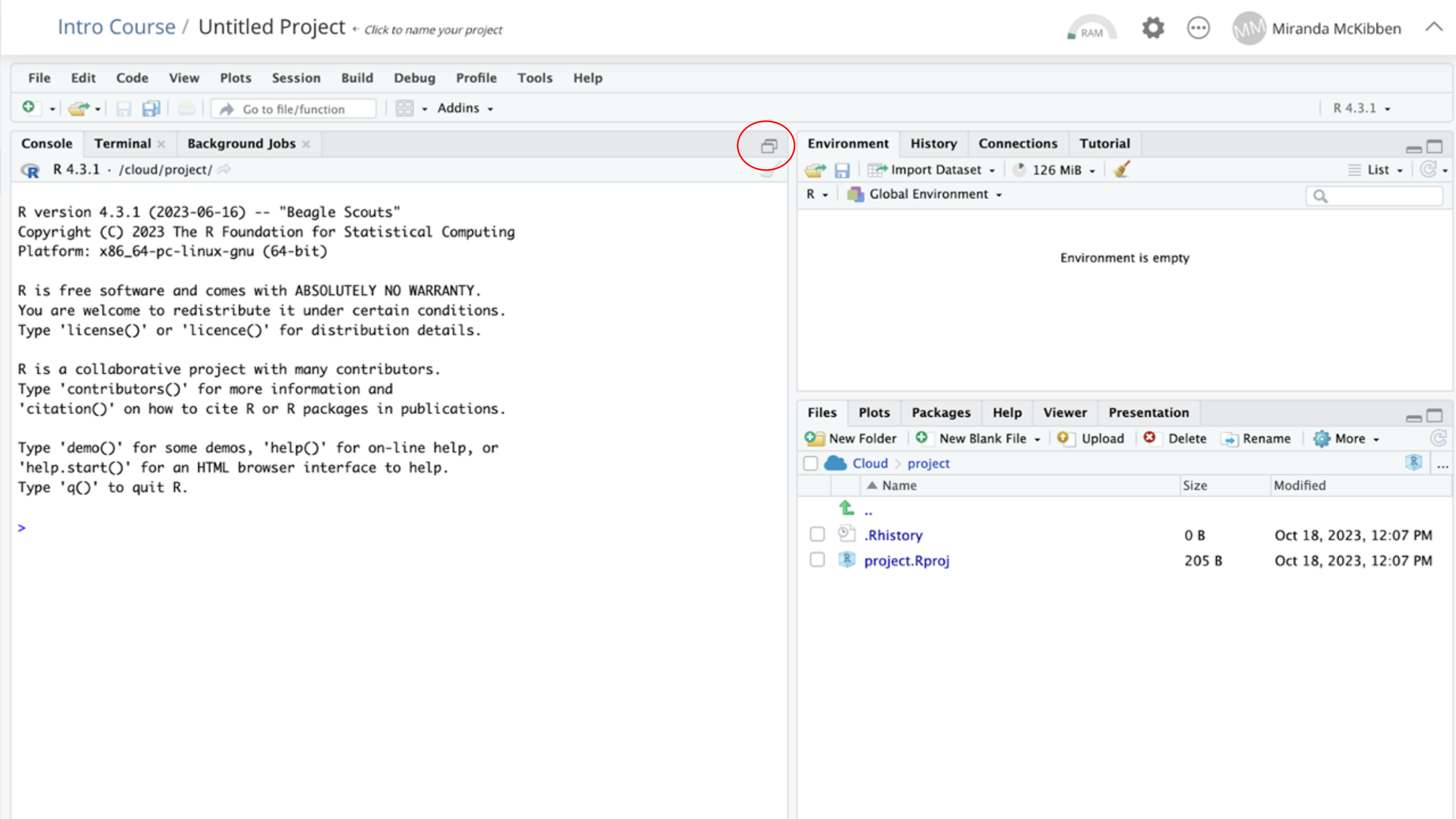
Visualize Data

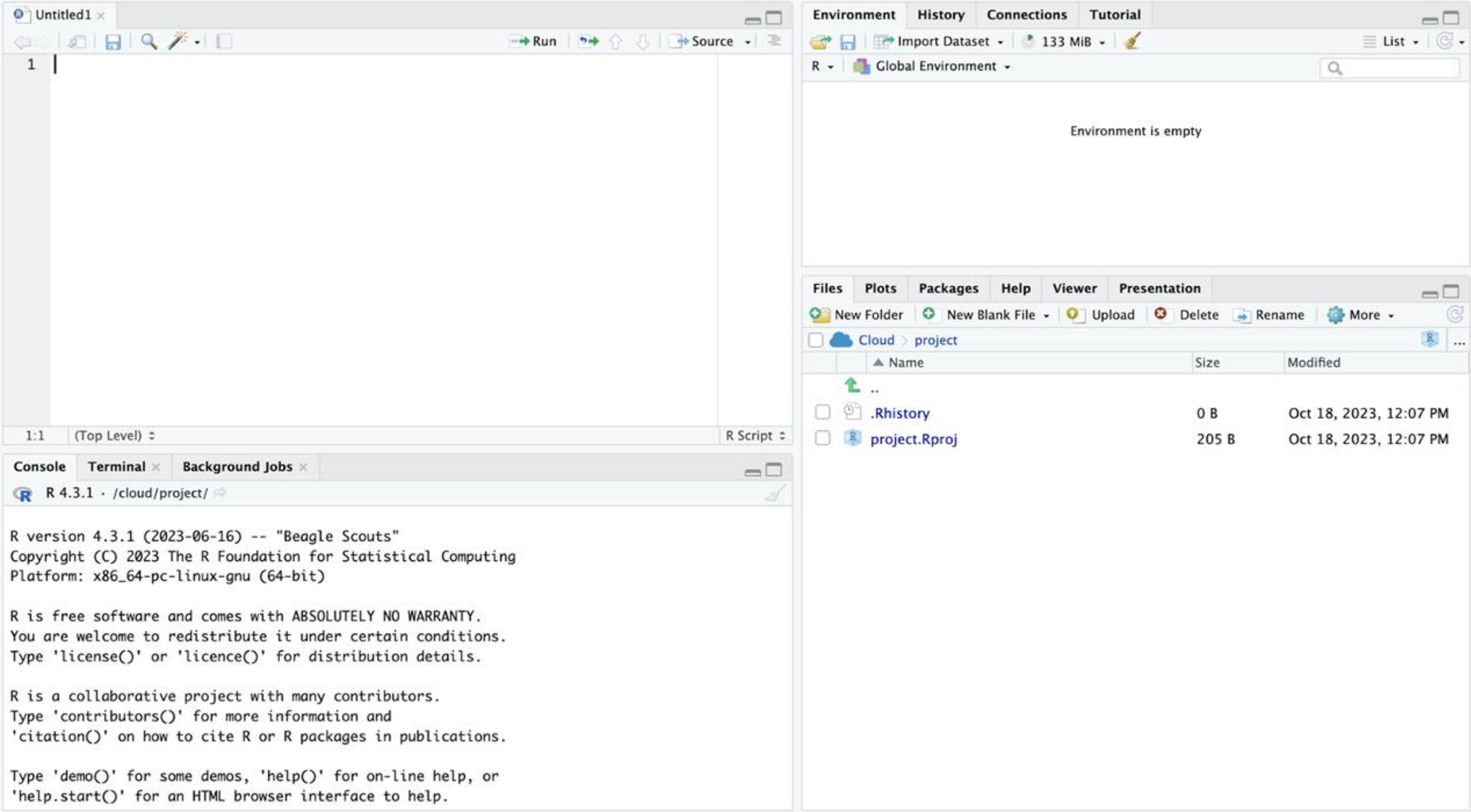
Plot your data in various ways.

- Visualize two vectors using a scatterplot
- Visualize data with a scatterplot
- Visualize counts with a bar chart
- Visualize grouped counts with a stacked bar chart
- Visualize a distribution with a histogram
- Visualize ordered continuous data with a line chart
- Visualize distributions with boxplots
- Change the axis labels of a plot

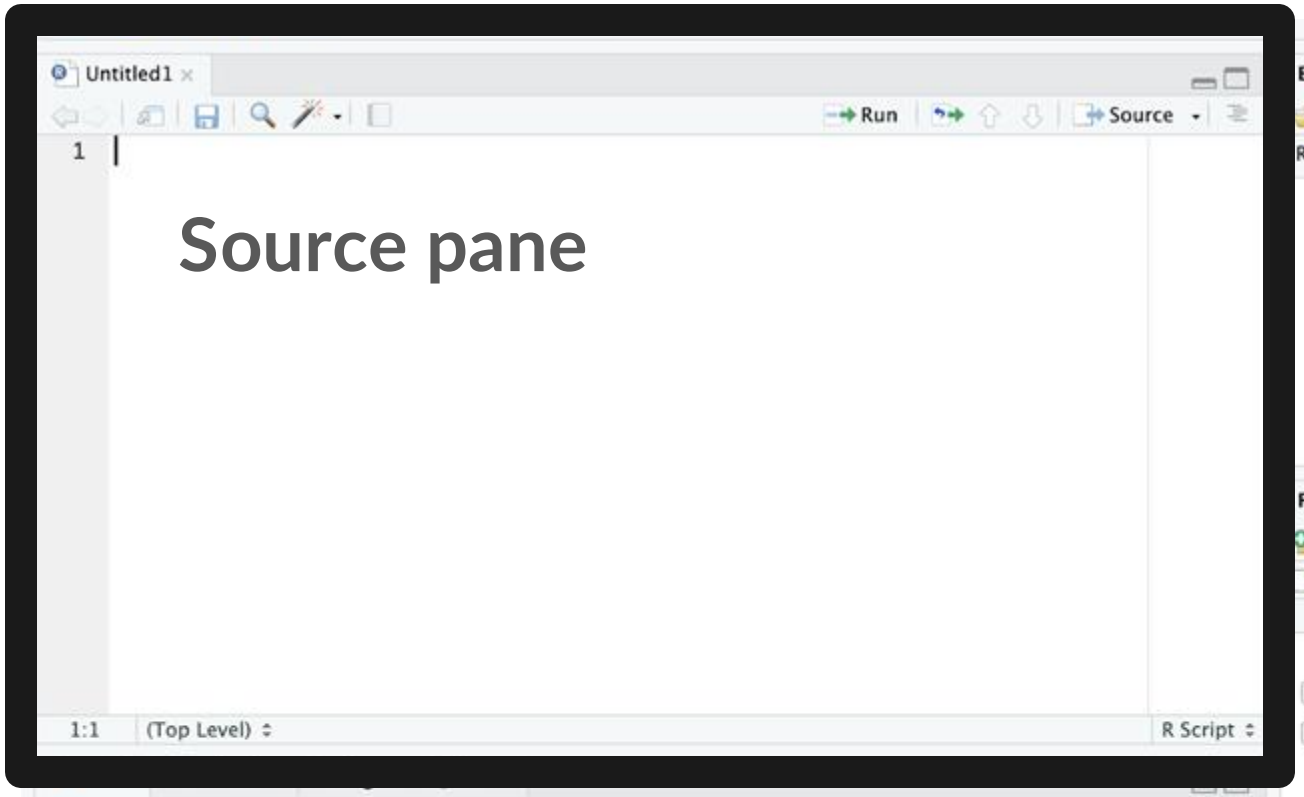

posit Cloud
Spaces
Your Workspace
Intro Course
Miranda McKibben
New Space
Learn
Guide
What's New
Primers
Cheat Sheets
Help
Current System Status
Posit Community
Info
Plans & Pricing
Terms and Conditions
Intro Course
Miranda McKibben
Content
Data
Members
Usage
About
Miranda McKibben
All Content
Your Content
Templates
Archive
Trash
New List
This space can have up to 10 more projects or outputs.
Archive or trash existing content to make room for additional content. If you need more capacity in this space, please upgrade your account.
Upgrade Account
All Content (0)
New Project
TYPE
ACCESS
SORT
no content
posit Cloud
© 2022 Posit Software, PBC

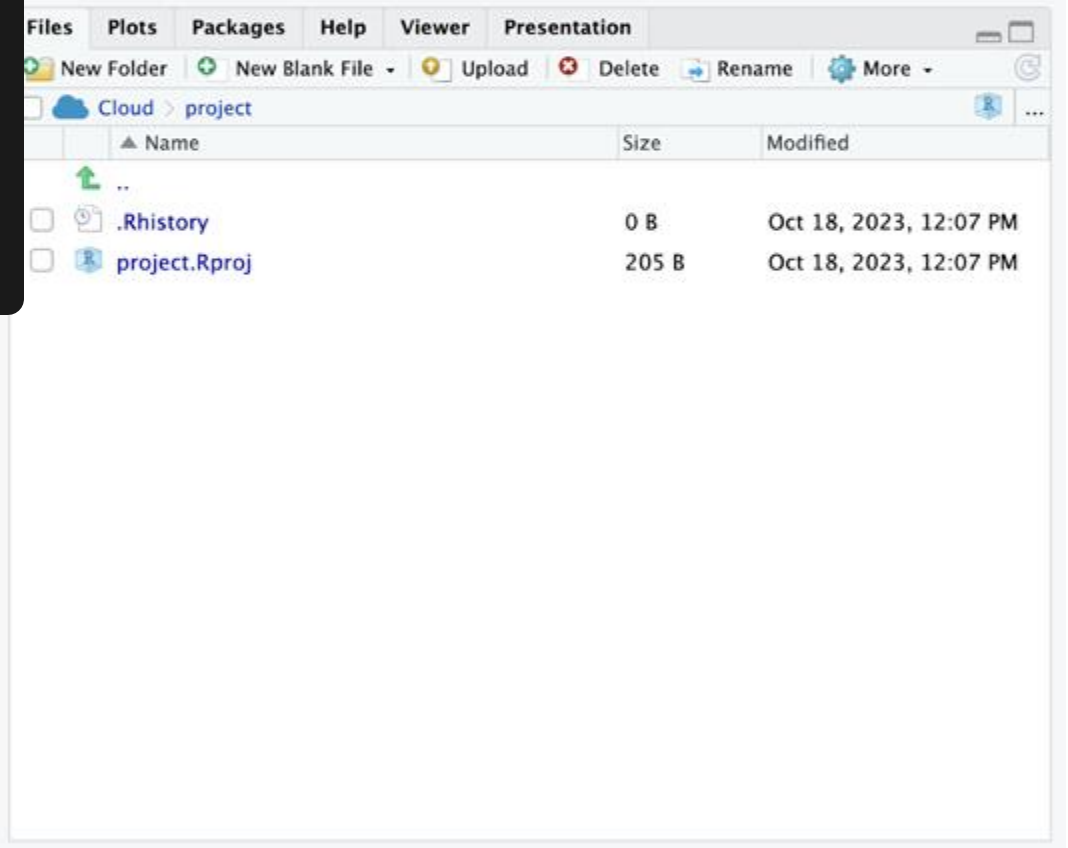

Intro Course / Untitled Project
Click to name your project
RAM
Miranda McKibben
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
R 4.3.1
Console Terminal Background Jobs
R 4.3.1 · /cloud/project/
R version 4.3.1 (2023-06-16) -- "Beagle Scouts"
Copyright (C) 2023 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 Tutorial
Import Dataset
126 MiB
List
R
Global Environment
Environment is empty
Files Plots Packages Help Viewer Presentation
New Folder
New Blank File
Upload
Delete
Rename
More
Cloud
project
Name
Size
Modified
..
.Rhistory
0 B
Oct 18, 2023, 12:07 PM
project.Rproj
205 B
Oct 18, 2023, 12:07 PM

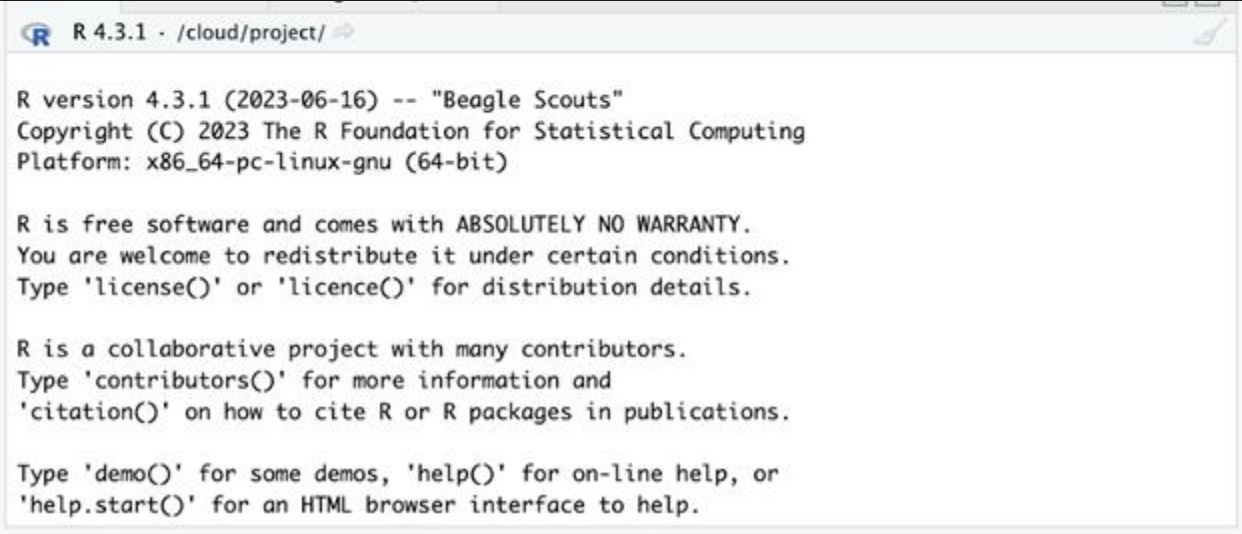

Intro Course / Untitled Project Click to name your project
RAM
Miranda McKibben
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
R 4.3.1
Console Terminal Background Jobs
R 4.3.1 · /cloud/project/
R version 4.3.1 (2023-06-16) -- "Beagle Scouts"
Copyright (C) 2023 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 Tutorial
Import Dataset
126 MiB
List
R
Global Environment
Environment is empty
Files Plots Packages Help Viewer Presentation
New Folder
New Blank File
Upload
Delete
Rename
More
Cloud
project
Name
Size
Modified
..
.Rhistory
0 B
Oct 18, 2023, 12:07 PM
project.Rproj
205 B
Oct 18, 2023, 12:07 PM


Untitled1
Run
Source
1
1:1
(Top Level)
R Script
Environment
History
Connections
Tutorial
Import Dataset
133 MiB
List
R
Global Environment
Environment is empty
Files
Plots
Packages
Help
Viewer
Presentation
New Folder
New Blank File
Upload
Delete
Rename
More
Cloud
project
Name
Size
Modified
..
.Rhistory
0 B
Oct 18, 2023, 12:07 PM
project.Rproj
205 B
Oct 18, 2023, 12:07 PM
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
R version 4.3.1 (2023-06-16) -- "Beagle Scouts"
Copyright (C) 2023 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.

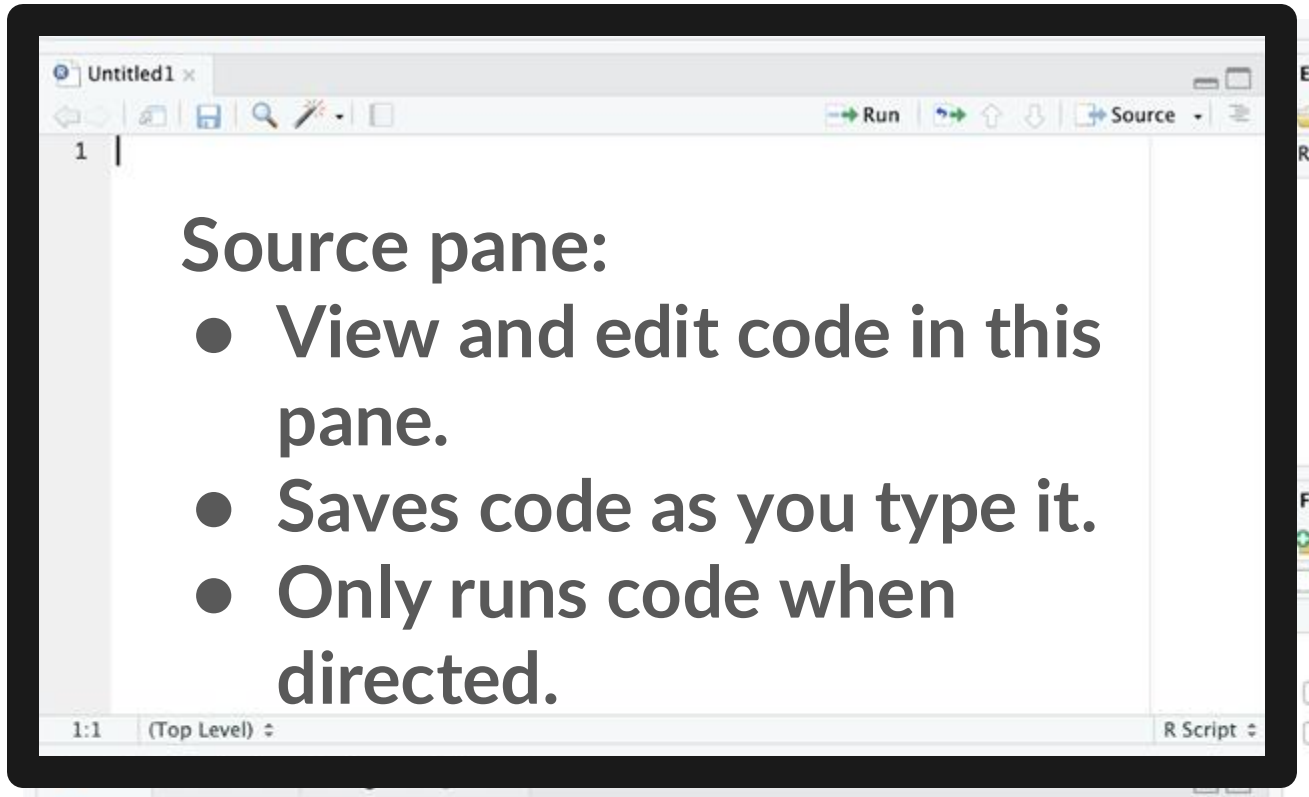
RStudio Terminology!





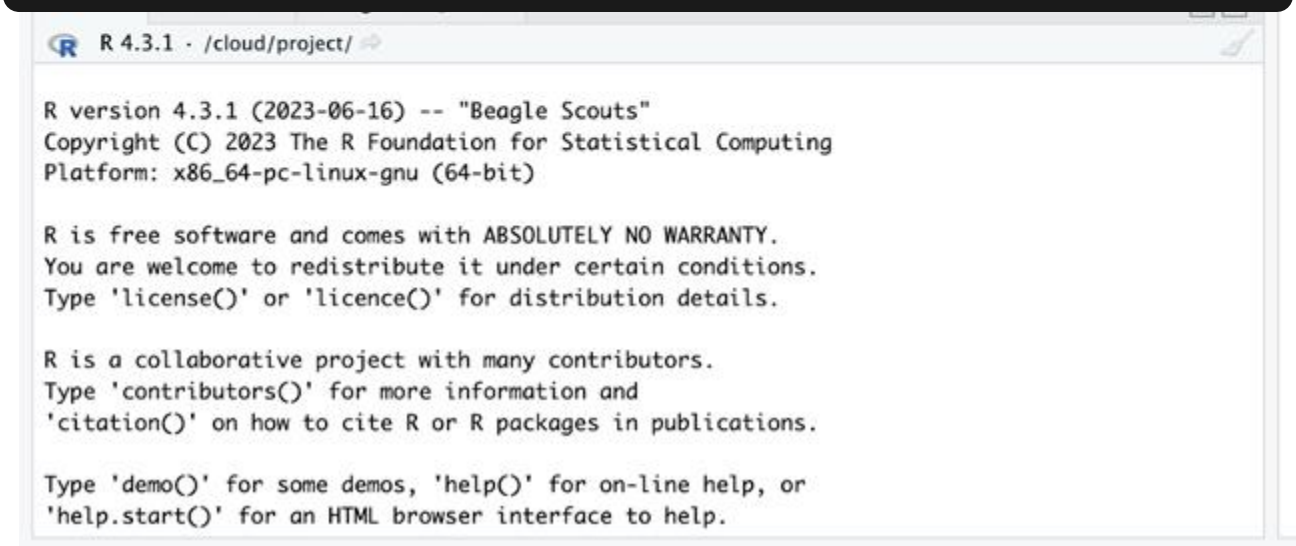


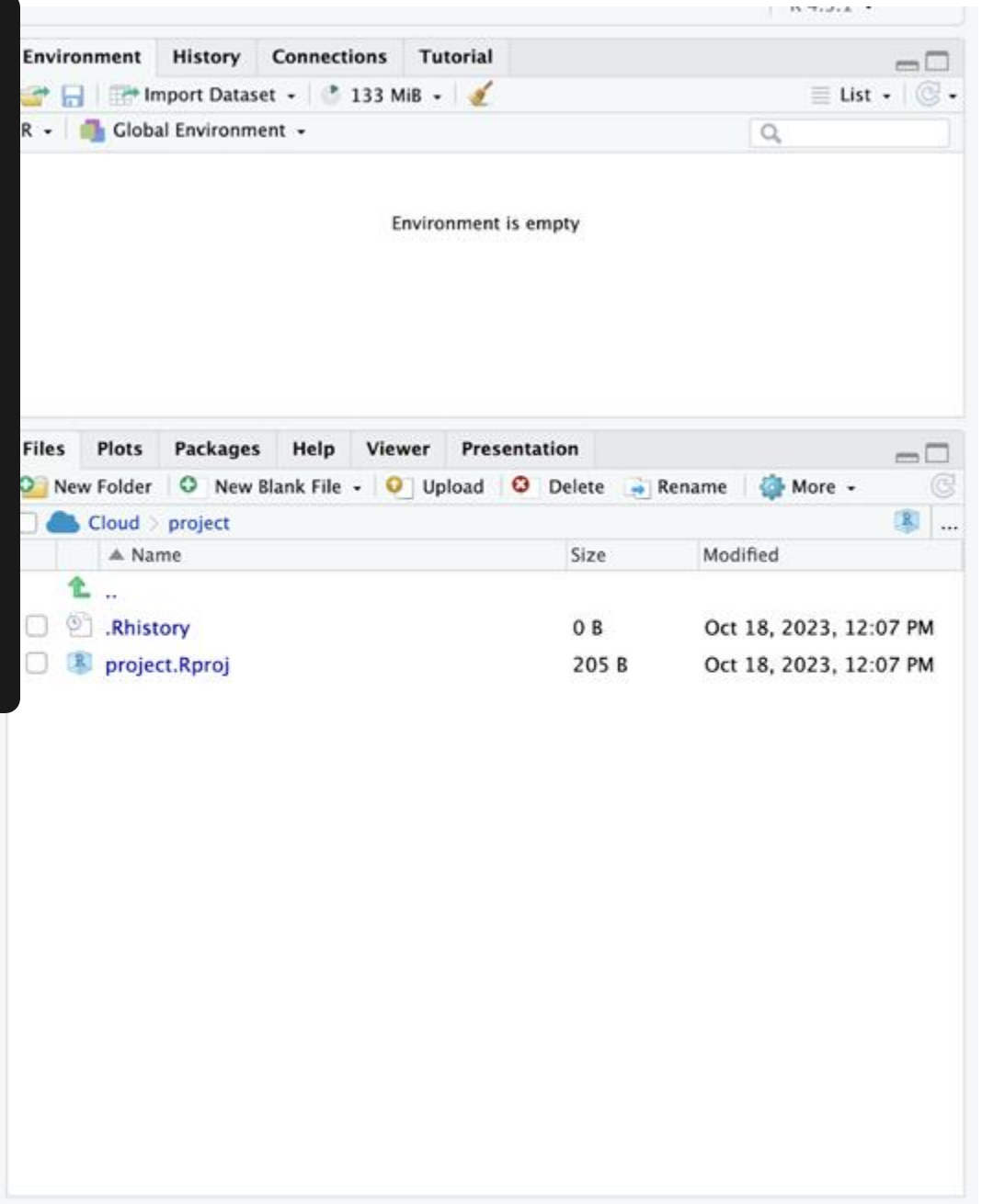
RStudio Terminology!



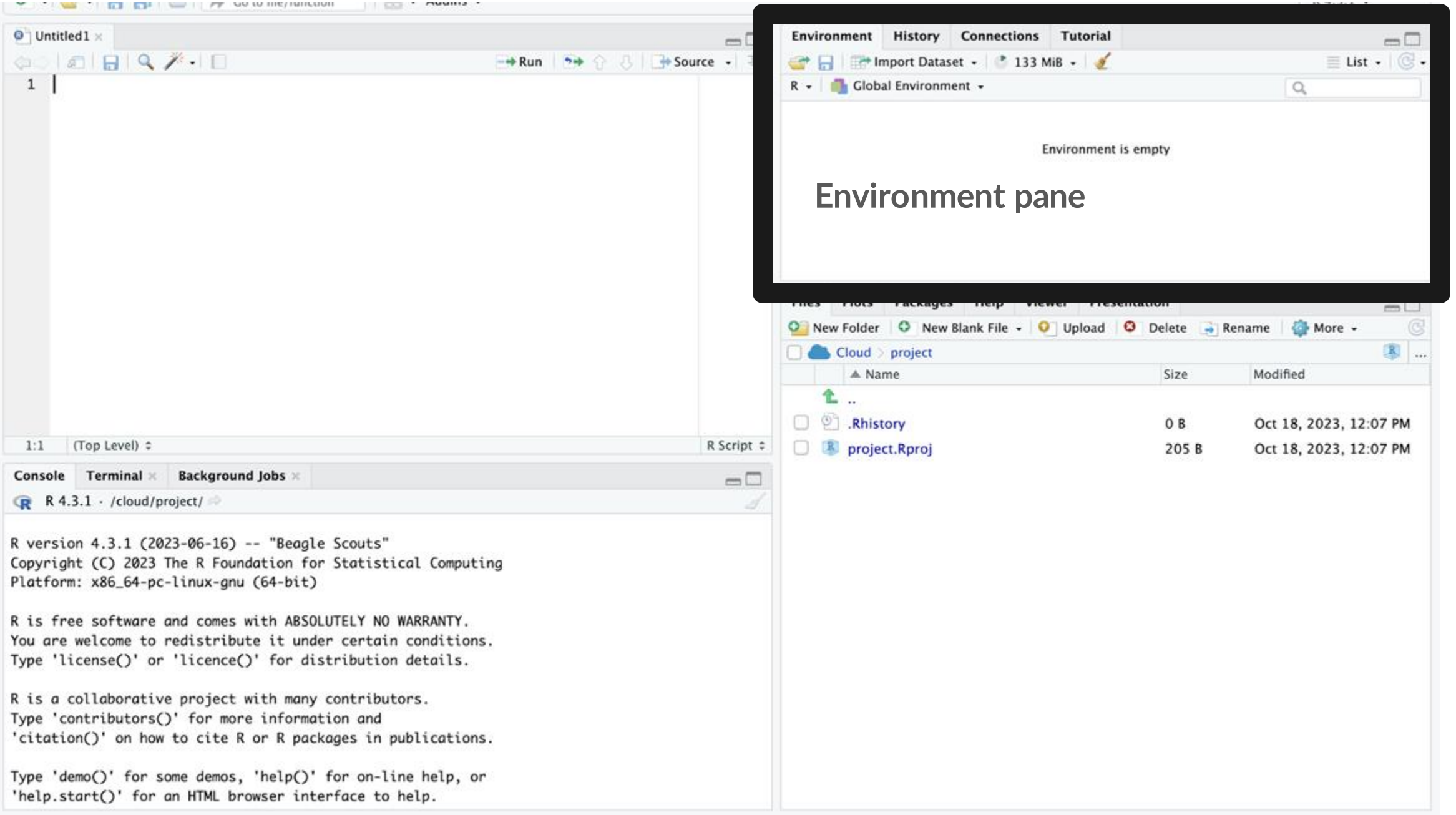
Source pane:

- View and edit code in this pane.
- Saves code as you type it.
- Only runs code when directed.

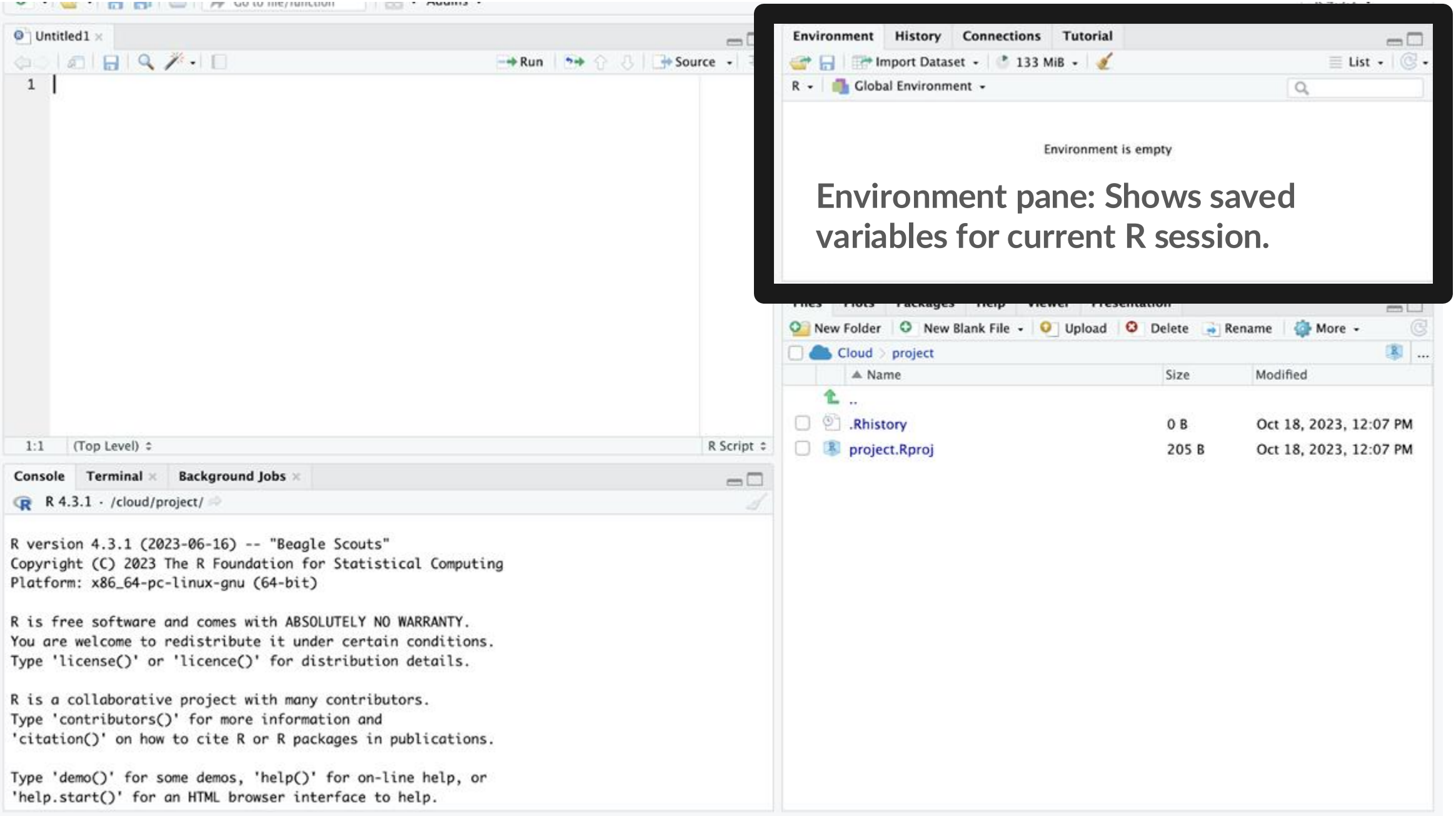




RStudio Terminology!

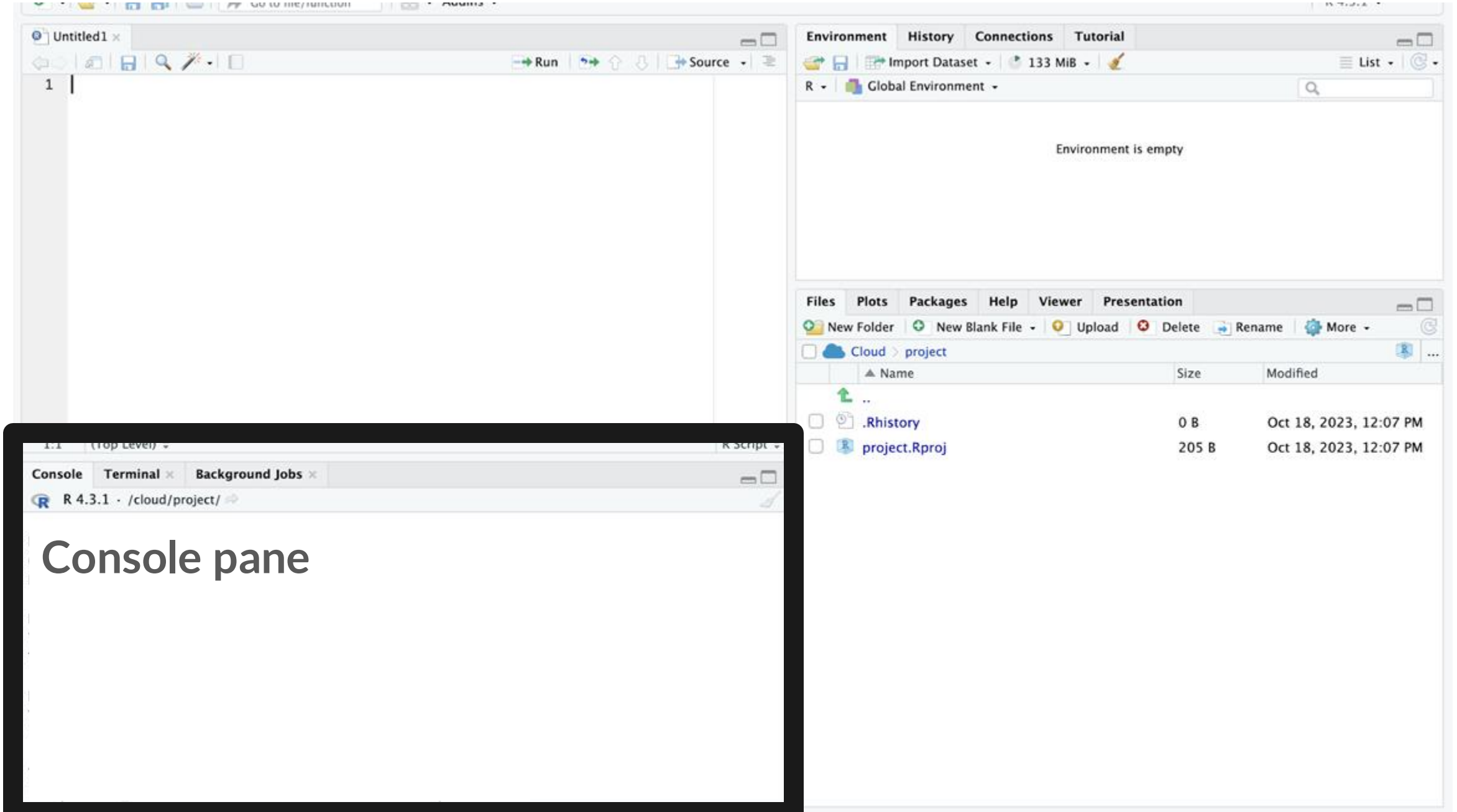


RStudio Terminology!

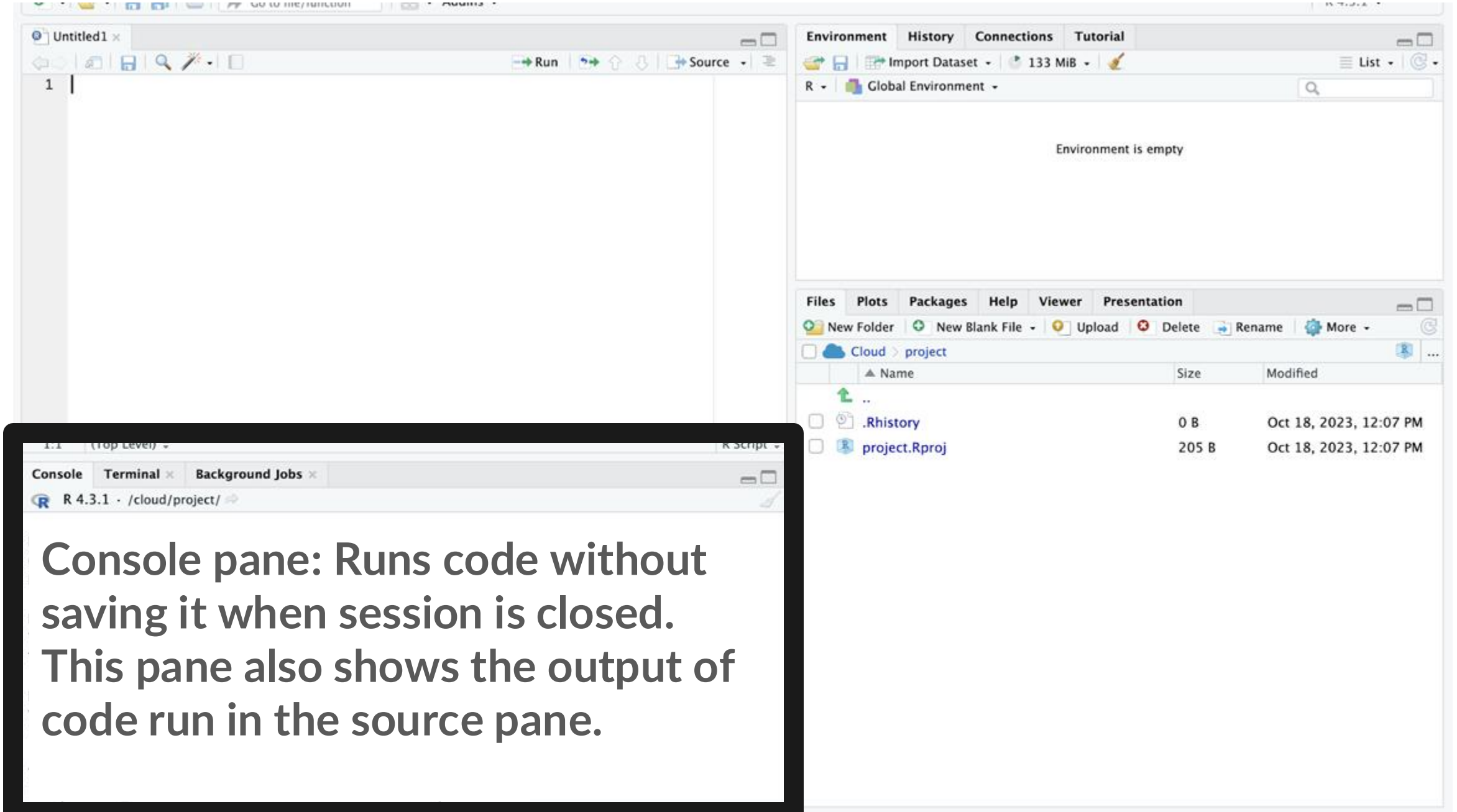


Environment pane: Shows saved variables for current R session.

RStudio Terminology!

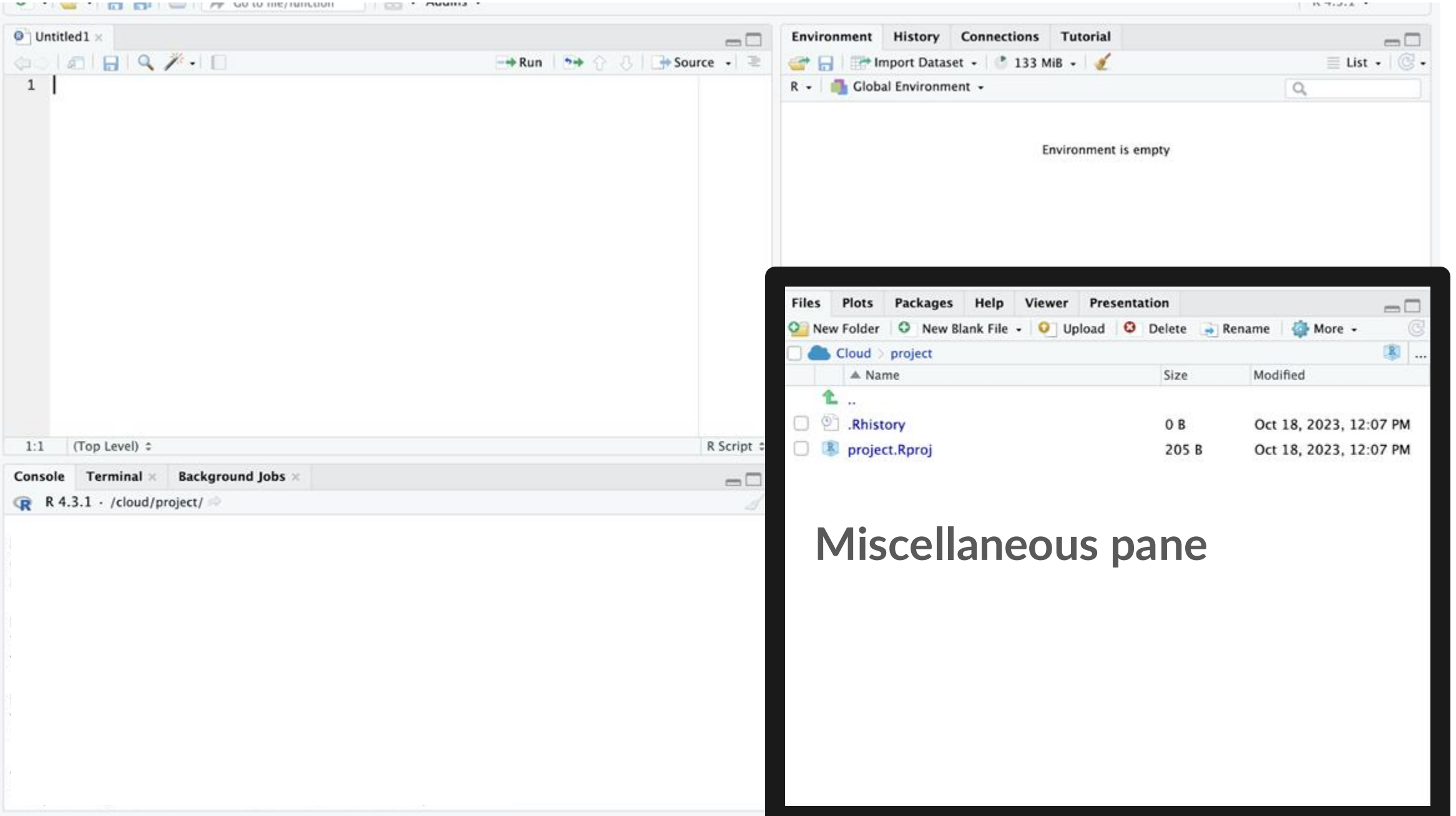


RStudio Terminology!

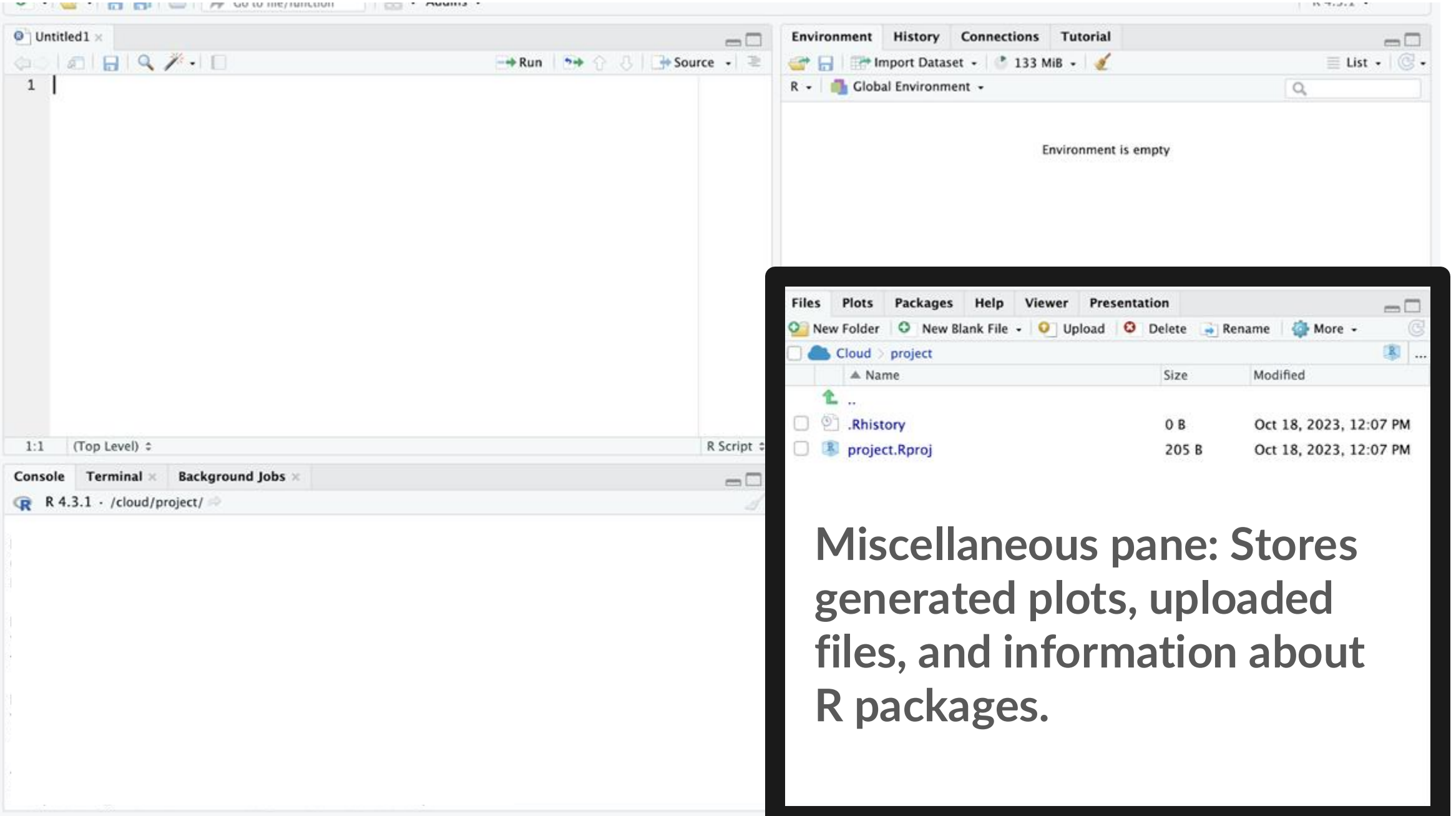


Console pane: Runs code without saving it when session is closed. This pane also shows the output of code run in the source pane.

RStudio Terminology!



RStudio Terminology!



Miscellaneous pane: Stores generated plots, uploaded files, and information about R packages.

github.com/mmckibben273/R-tist-Studio

Finish update

Product Solutions Resources Open Source Enterprise Pricing

Search or jump to...

Sign in Sign up

mmckibben273 / R-tist-Studio Public

Notifications Fork 0 Star 0

Code Issues Pull requests Actions Projects Security Insights

main 1 Branch 0 Tags Go to file Code

mmckibben273 Add files via upload 3acb5d7 · 4 hours ago 18 Commits

Cheatsheets	Delete Cheatsheets/filler	6 hours ago
Codes	Delete Codes/filler	6 hours ago
Datasets	Delete Datasets/filler	5 hours ago
Papers	Add files via upload	4 hours ago
Powerpoints	Create filler	6 hours ago
Poll Everywhere Login.pdf	Add files via upload	5 hours ago
README.md	Initial commit	6 hours ago

README

R-tist-Studio

About

Introductory class for highschool students to learn coding in RStudio

Readme

Activity

0 stars

1 watching

0 forks

Report repository

Releases

No releases published

Packages

No packages published

Languages

R 100.0%

mmckibben273 Add files via upload

cd6b1a7 · 6 hours ago History

Code Blame 139 lines (105 loc) · 5.6 KB Raw

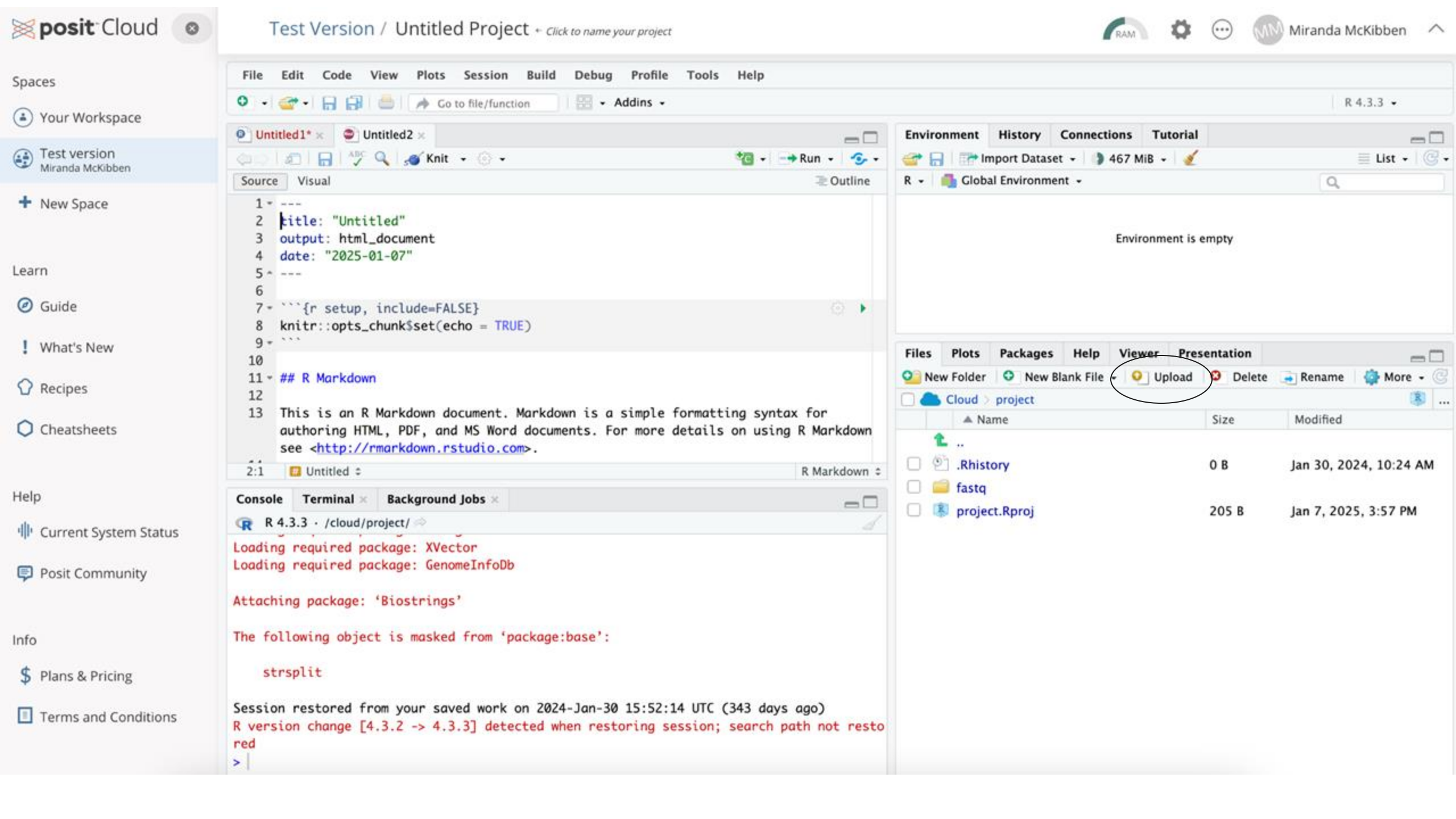
```
---
title: "Intro to R"
output: html_document
date: "2023-10-13"
---

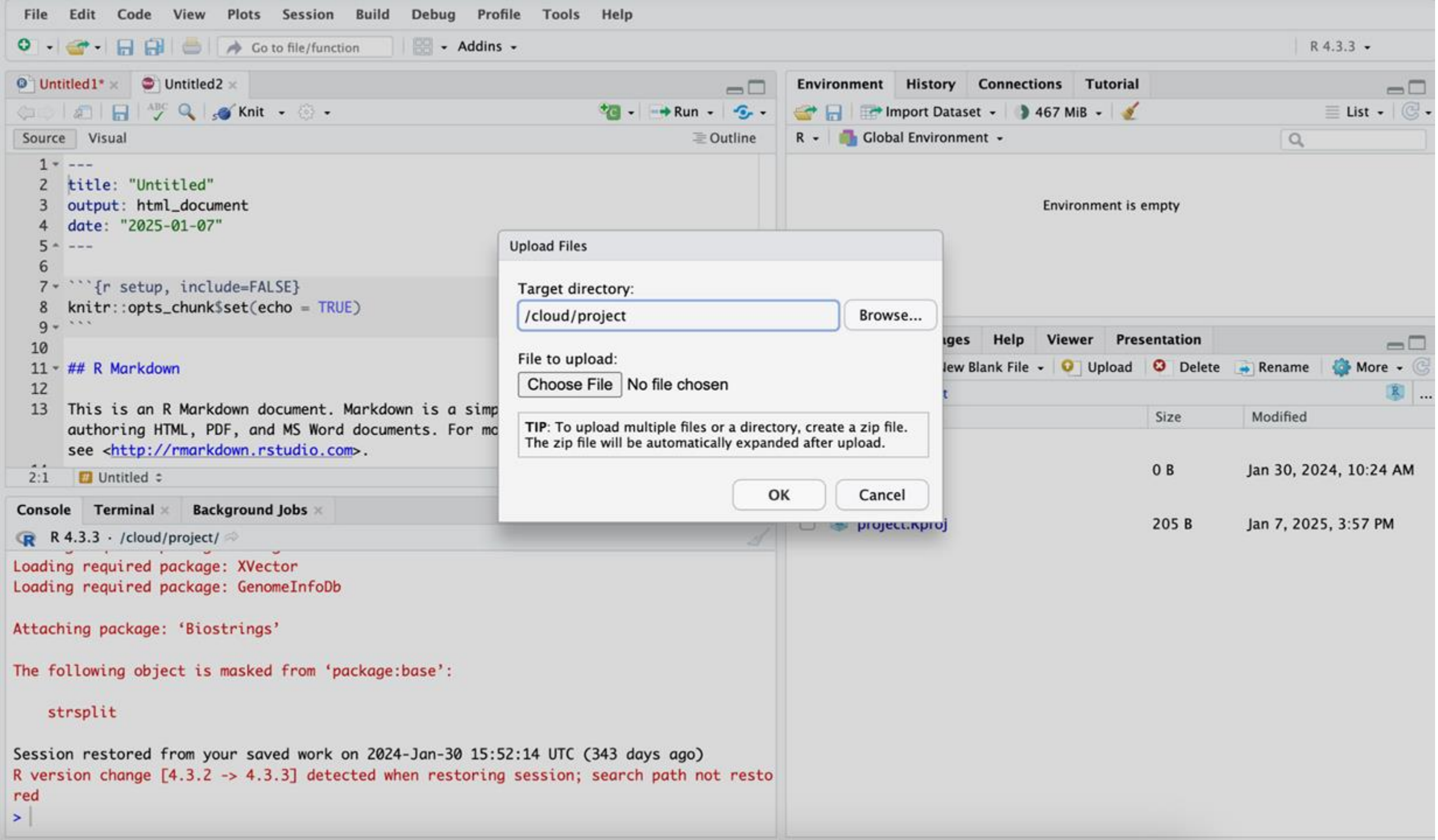
When performing calculations in RStudio Markdown, make sure to type your code in the shaded areas. These are called "code chunks." To pe
+ for addition
- for subtraction
* for multiplication
/ for division
^ for exponentials

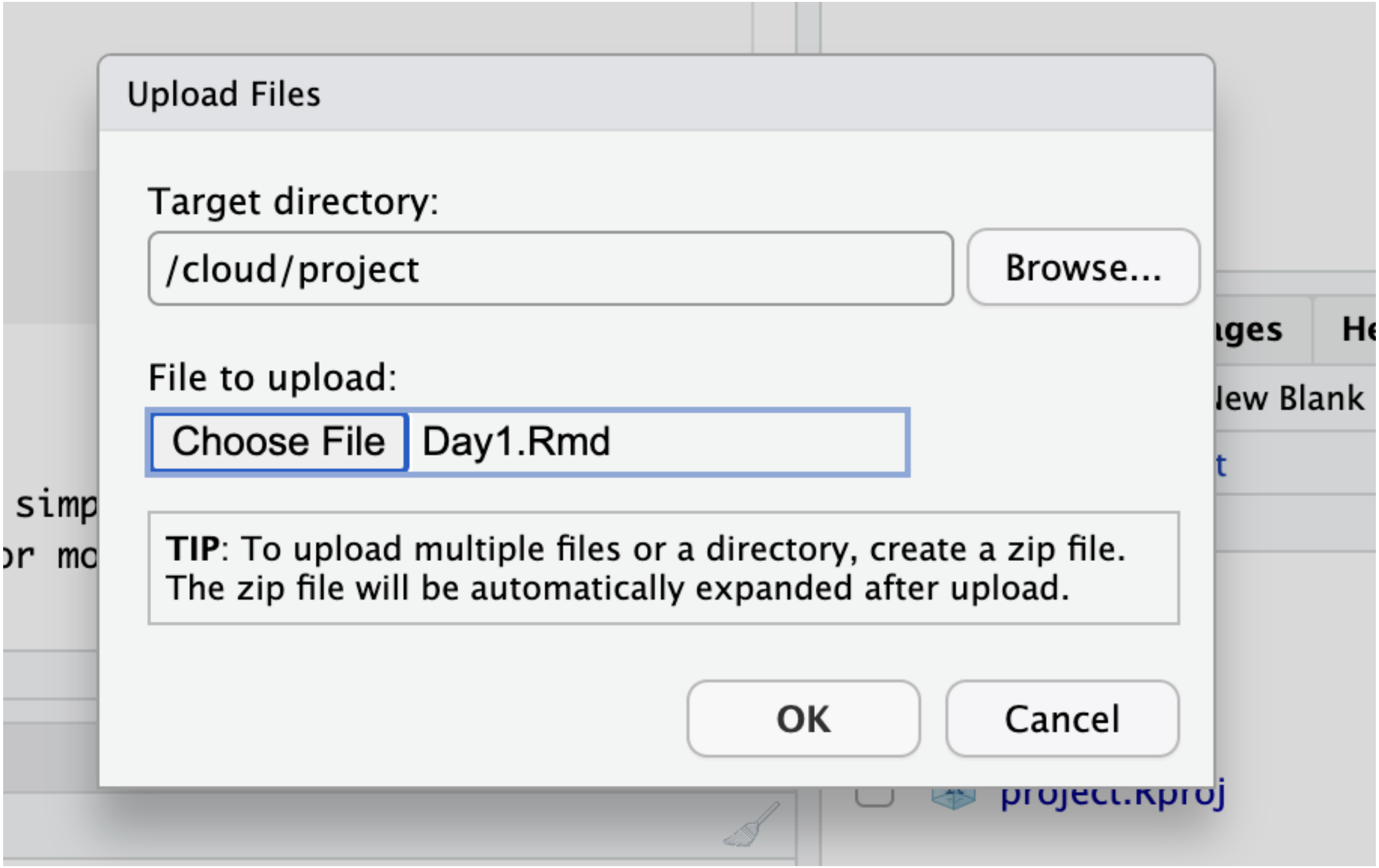
Run the code chunk below by clicking on the green arrow in the right hand corner of the shaded area.
```{r}
2+3
2-3
2*3
2^3
2/3
```

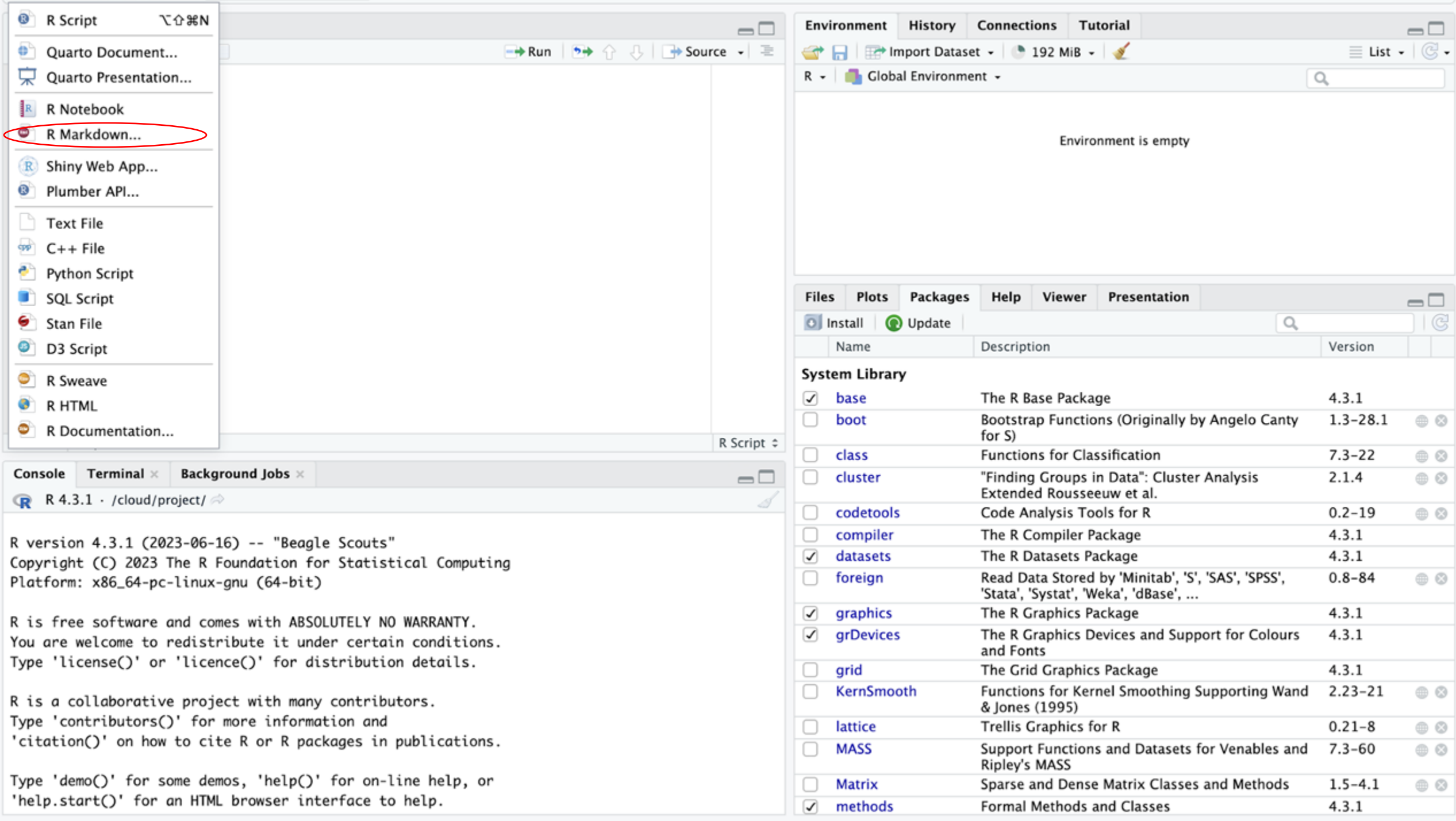
Try typing in some of your own small equations in the empty chunk below. Make sure you type your code between the ```{r} and ```.
```{r}

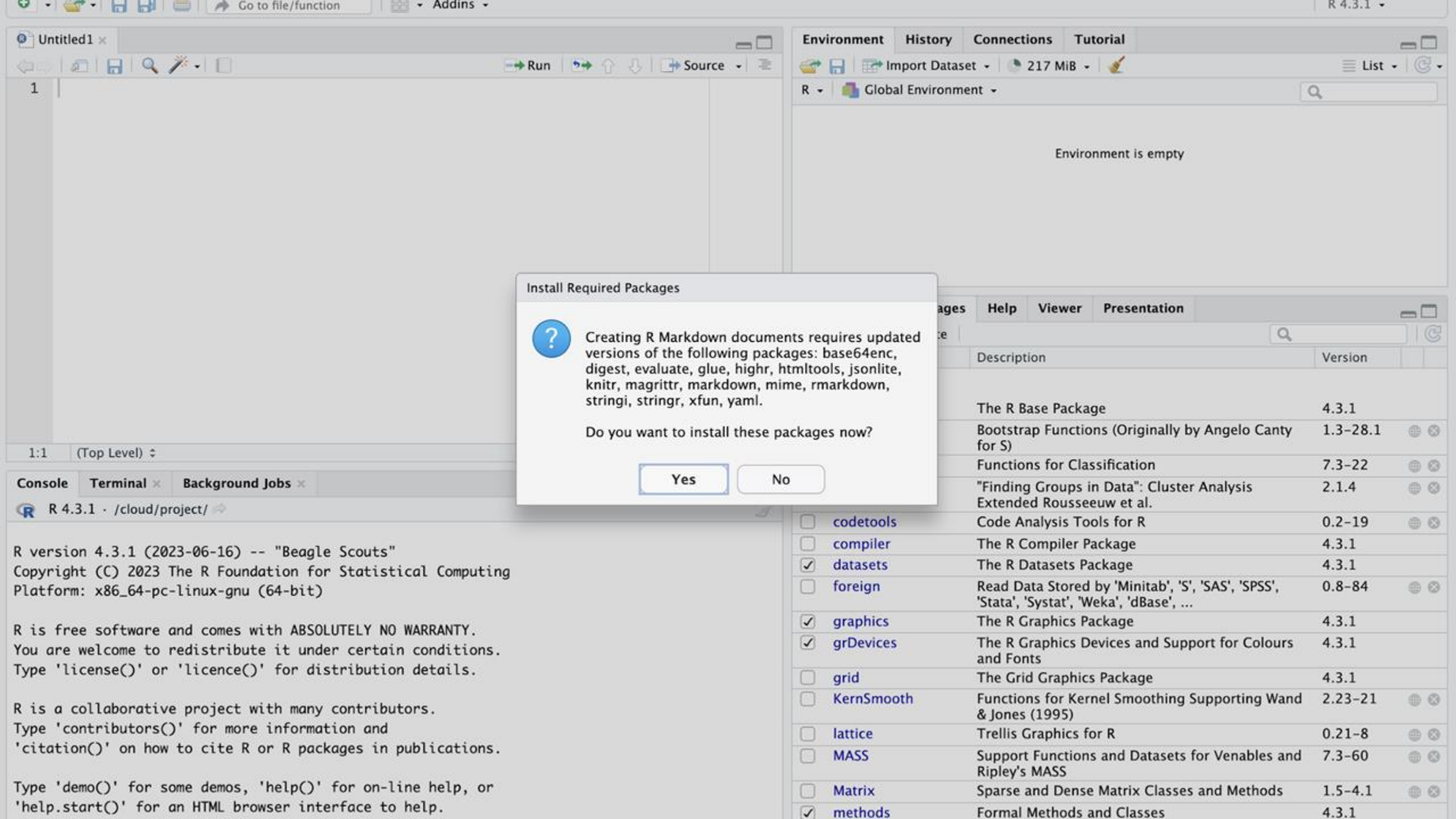
```
```

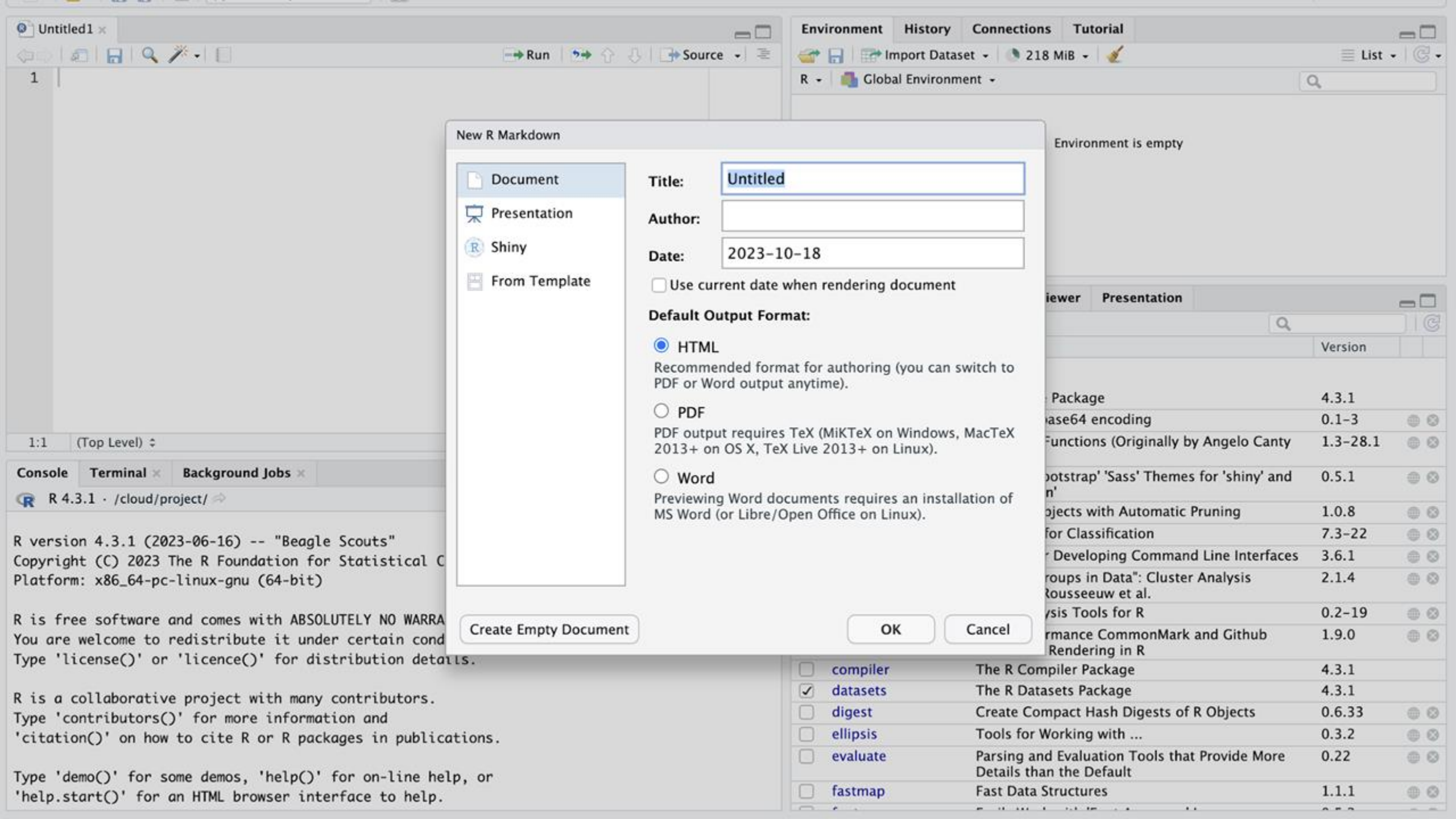

posit Cloud
Test Version / Untitled Project
Click to name your project
RAM
Miranda McKibben
Spaces
Your Workspace
Test version
Miranda McKibben
New Space
Learn
Guide
What's New
Recipes
Cheatsheets
Help
Current System Status
Posit Community
Info
Plans & Pricing
Terms and Conditions
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
R 4.3.3
Untitled1*
Untitled2
Knit
Run
Source
Visual
Outline
1 ---
2 title: "Untitled"
3 output: html_document
4 date: "2025-01-07"
5 ---
6
7 ```{r setup, include=FALSE}
8 knitr::opts_chunk$set(echo = TRUE)
9 ```
10
11 ## R Markdown
12
13 This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.
2:1
Untitled
R Markdown
Console
Terminal
Background Jobs
R 4.3.3 · /cloud/project/
Loading required package: XVector
Loading required package: GenomeInfoDb
Attaching package: 'Biostrings'
The following object is masked from 'package:base':
strsplit
Session restored from your saved work on 2024-Jan-30 15:52:14 UTC (343 days ago)
R version change [4.3.2 -> 4.3.3] detected when restoring session; search path not restored
>
Environment
History
Connections
Tutorial
Import Dataset
467 MiB
List
R
Global Environment
Environment is empty
Files
Plots
Packages
Help
Viewer
Presentation
New Folder
New Blank File
Upload
Delete
Rename
More
Cloud
project
Name
Size
Modified
..
.Rhistory
0 B
Jan 30, 2024, 10:24 AM
fastq
project.Rproj
205 B
Jan 7, 2025, 3:57 PM


File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
R 4.3.3
Untitled1*
Untitled2
Knit
Run
Source
Visual
Outline
1 ---
2 title: "Untitled"
3 output: html_document
4 date: "2025-01-07"
5 ---
6
7 ```{r setup, include=FALSE}
8 knitr::opts_chunk$set(echo = TRUE)
9 ```
10
11 ## R Markdown
12
13 This is an R Markdown document. Markdown is a simp
authoring HTML, PDF, and MS Word documents. For mo
see <http://rmarkdown.rstudio.com>.
2:1
Untitled
Environment
History
Connections
Tutorial
Import Dataset
467 MiB
List
R
Global Environment
Environment is empty
Upload Files
Target directory:
/cloud/project
Browse...
File to upload:
Choose File
No file chosen
TIP: To upload multiple files or a directory, create a zip file.
The zip file will be automatically expanded after upload.
OK
Cancel
Help
Viewer
Presentation
New Blank File
Upload
Delete
Rename
More
Size
Modified
0 B
Jan 30, 2024, 10:24 AM
205 B
Jan 7, 2025, 3:57 PM
Console
Terminal
Background Jobs
R 4.3.3 · /cloud/project/
Loading required package: XVector
Loading required package: GenomeInfoDb
Attaching package: 'Biostrings'
The following object is masked from 'package:base':
strsplit
Session restored from your saved work on 2024-Jan-30 15:52:14 UTC (343 days ago)
R version change [4.3.2 -> 4.3.3] detected when restoring session; search path not restored
>


Upload Files
Target directory:
/cloud/project
Browse...
File to upload:
Choose File
Day1.Rmd
TIP: To upload multiple files or a directory, create a zip file.
The zip file will be automatically expanded after upload.
OK
Cancel
project.Rproj


R Script ⌥⇧⌘N
Quarto Document...
Quarto Presentation...
R Notebook
R Markdown...
Shiny Web App...
Plumber API...
Text File
C++ File
Python Script
SQL Script
Stan File
D3 Script
R Sweave
R HTML
R Documentation...
Run
Source
R Script
Environment
History
Connections
Tutorial
Import Dataset
192 MiB
List
R
Global Environment
Environment is empty
Files
Plots
Packages
Help
Viewer
Presentation
Install
Update
Name
Description
Version
System Library
base
The R Base Package
4.3.1
boot
Bootstrap Functions (Originally by Angelo Canty for S)
1.3-28.1
class
Functions for Classification
7.3-22
cluster
"Finding Groups in Data": Cluster Analysis Extended Rousseeuw et al.
2.1.4
codetools
Code Analysis Tools for R
0.2-19
compiler
The R Compiler Package
4.3.1
datasets
The R Datasets Package
4.3.1
foreign
Read Data Stored by 'Minitab', 'S', 'SAS', 'SPSS', 'Stata', 'Systat', 'Weka', 'dBase', ...
0.8-84
graphics
The R Graphics Package
4.3.1
grDevices
The R Graphics Devices and Support for Colours and Fonts
4.3.1
grid
The Grid Graphics Package
4.3.1
KernSmooth
Functions for Kernel Smoothing Supporting Wand & Jones (1995)
2.23-21
lattice
Trellis Graphics for R
0.21-8
MASS
Support Functions and Datasets for Venables and Ripley's MASS
7.3-60
Matrix
Sparse and Dense Matrix Classes and Methods
1.5-4.1
methods
Formal Methods and Classes
4.3.1
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
R version 4.3.1 (2023-06-16) -- "Beagle Scouts"
Copyright (C) 2023 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.


Go to file/function
Addins
R 4.3.1
Untitled1
Run
Source
1
1:1
(Top Level)
Environment
History
Connections
Tutorial
Import Dataset
217 MiB
List
R
Global Environment
Environment is empty
Install Required Packages
Creating R Markdown documents requires updated versions of the following packages: base64enc, digest, evaluate, glue, highr, htmltools, jsonlite, knitr, magrittr, markdown, mime, rmarkdown, stringi, stringr, xfun, yaml.
Do you want to install these packages now?
Yes
No
Help
Viewer
Presentation
Description
Version
The R Base Package 4.3.1
Bootstrap Functions (Originally by Angelo Canty for S) 1.3-28.1
Functions for Classification 7.3-22
"Finding Groups in Data": Cluster Analysis Extended Rousseeuw et al. 2.1.4
codetools Code Analysis Tools for R 0.2-19
compiler The R Compiler Package 4.3.1
datasets The R Datasets Package 4.3.1
foreign Read Data Stored by 'Minitab', 'S', 'SAS', 'SPSS', 'Stata', 'Systat', 'Weka', 'dBase', ... 0.8-84
graphics The R Graphics Package 4.3.1
grDevices The R Graphics Devices and Support for Colours and Fonts 4.3.1
grid The Grid Graphics Package 4.3.1
KernSmooth Functions for Kernel Smoothing Supporting Wand & Jones (1995) 2.23-21
lattice Trellis Graphics for R 0.21-8
MASS Support Functions and Datasets for Venables and Ripley's MASS 7.3-60
Matrix Sparse and Dense Matrix Classes and Methods 1.5-4.1
methods Formal Methods and Classes 4.3.1
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
R version 4.3.1 (2023-06-16) -- "Beagle Scouts"
Copyright (C) 2023 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.


Untitled1
Run
Source
1
1:1
(Top Level)
Environment
History
Connections
Tutorial
Import Dataset
218 MiB
List
R
Global Environment
Environment is empty
New R Markdown
Document
Presentation
Shiny
From Template
Title:
Untitled
Author:
Date:
2023-10-18
Use current date when rendering document
Default Output Format:
HTML
Recommended format for authoring (you can switch to PDF or Word output anytime).
PDF
PDF output requires TeX (MiKTeX on Windows, MacTeX 2013+ on OS X, TeX Live 2013+ on Linux).
Word
Previewing Word documents requires an installation of MS Word (or Libre/Open Office on Linux).
Create Empty Document
OK
Cancel
Viewer
Presentation
Version
Package
4.3.1
base64 encoding
0.1-3
Functions (Originally by Angelo Canty
1.3-28.1
bootstrap' 'Sass' Themes for 'shiny' and
0.5.1
objects with Automatic Pruning
1.0.8
for Classification
7.3-22
Developing Command Line Interfaces
3.6.1
roups in Data": Cluster Analysis
Rousseeuw et al.
2.1.4
ysis Tools for R
0.2-19
rmance CommonMark and Github
Rendering in R
1.9.0
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
R version 4.3.1 (2023-06-16) -- "Beagle Scouts"
Copyright (C) 2023 The R Foundation for Statistical C
Platform: x86_64-pc-linux-gnu (64-bit)
R is free software and comes with ABSOLUTELY NO WARRA
You are welcome to redistribute it under certain cond
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.
compiler
The R Compiler Package
4.3.1
datasets
The R Datasets Package
4.3.1
digest
Create Compact Hash Digests of R Objects
0.6.33
ellipsis
Tools for Working with ...
0.3.2
evaluate
Parsing and Evaluation Tools that Provide More Details than the Default
0.22
fastmap
Fast Data Structures
1.1.1

```
---
title: "Intro to R"
output: html_document
date: "2023-10-18"
---

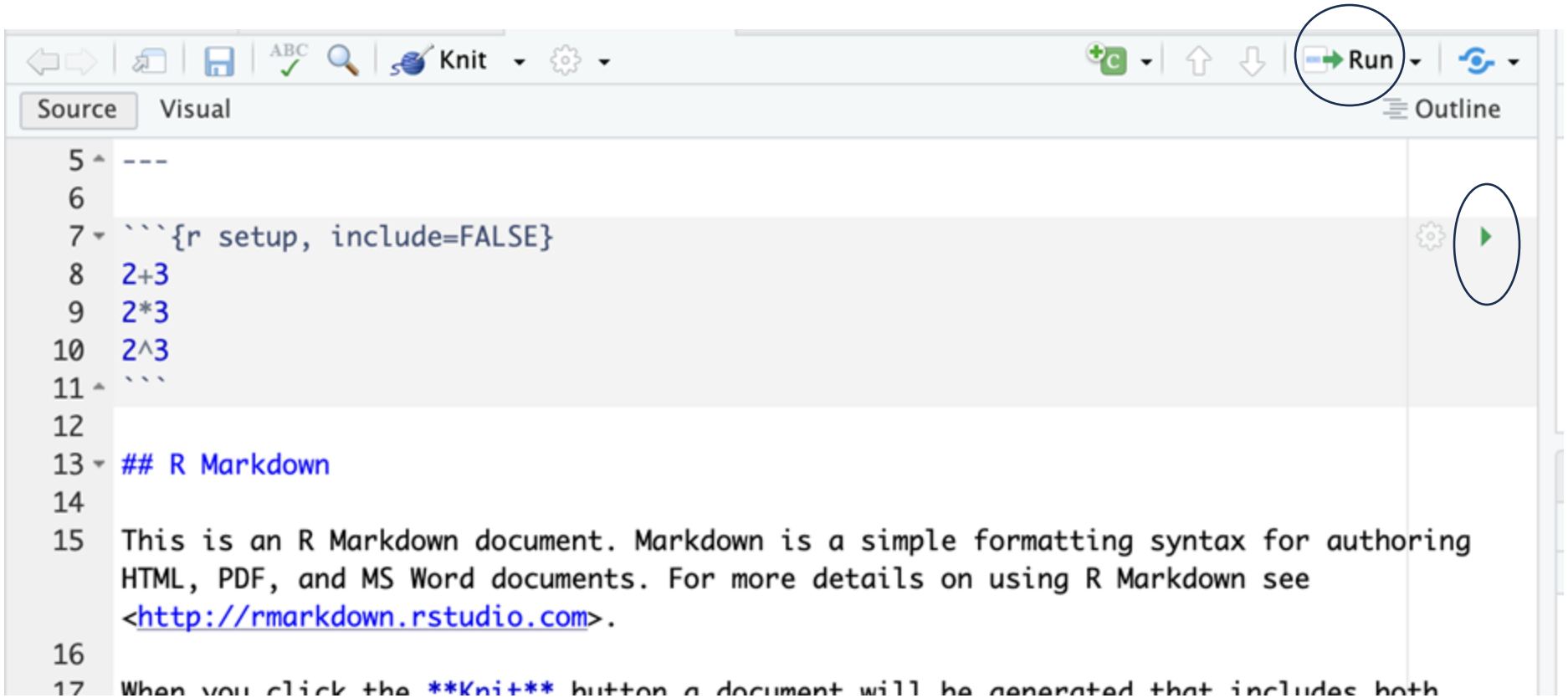
```{r setup, include=FALSE}
knitr::opts_chunk$set(echo = TRUE)
```

R Markdown

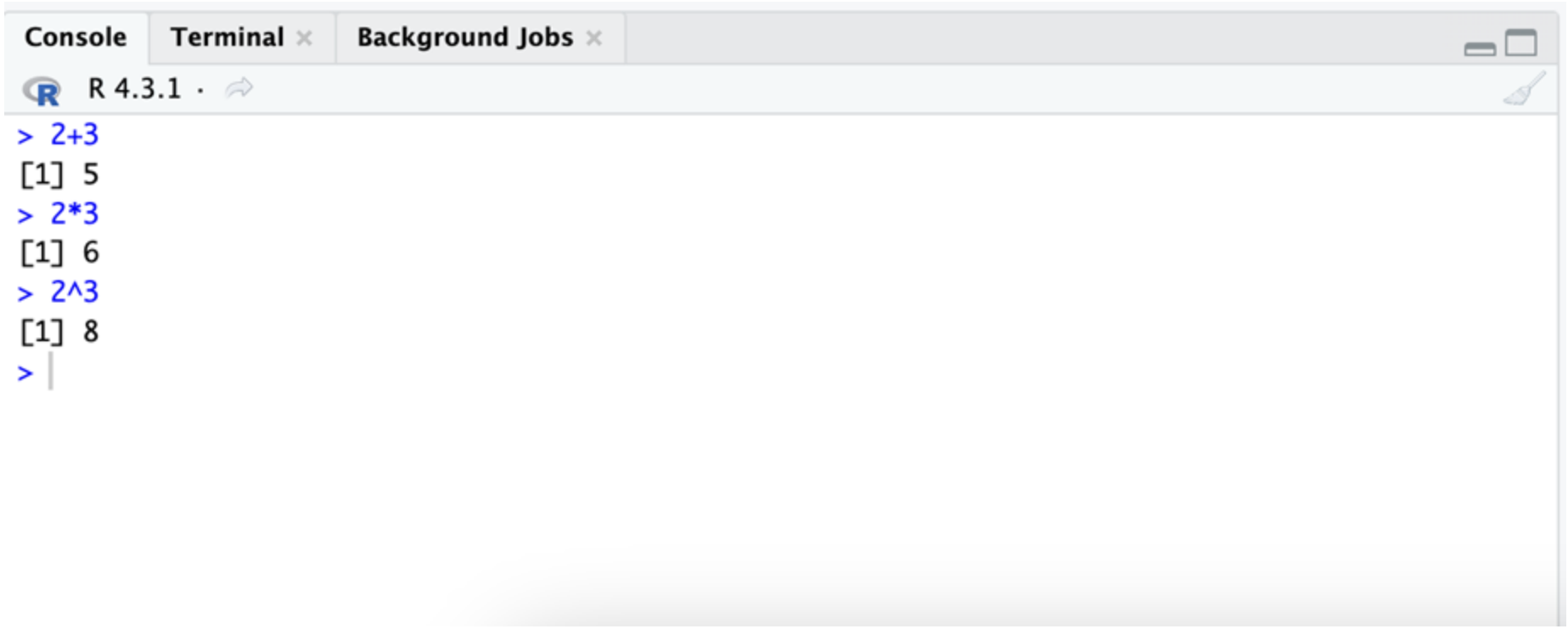
This is an R Markdown document. Markdown is a simple formatting syn
HTML, PDF, and MS Word documents. For more details on using R Markd
<http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated tha
```

Try typing in equations:



The results appear in the console pane.

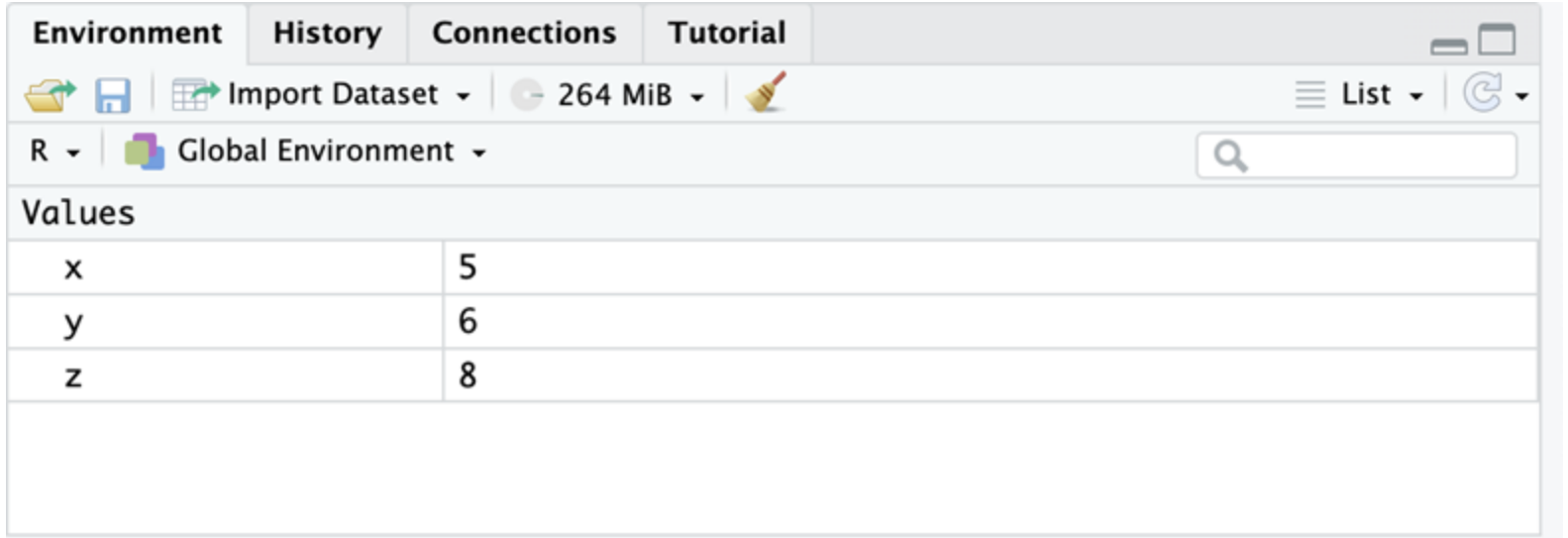


Assigning variable names

```
5  ---
6
7  ```{r setup, include=FALSE}
8  x<-2+3
9  y<-2*3
10 z<-2^3
11 ```
12
```

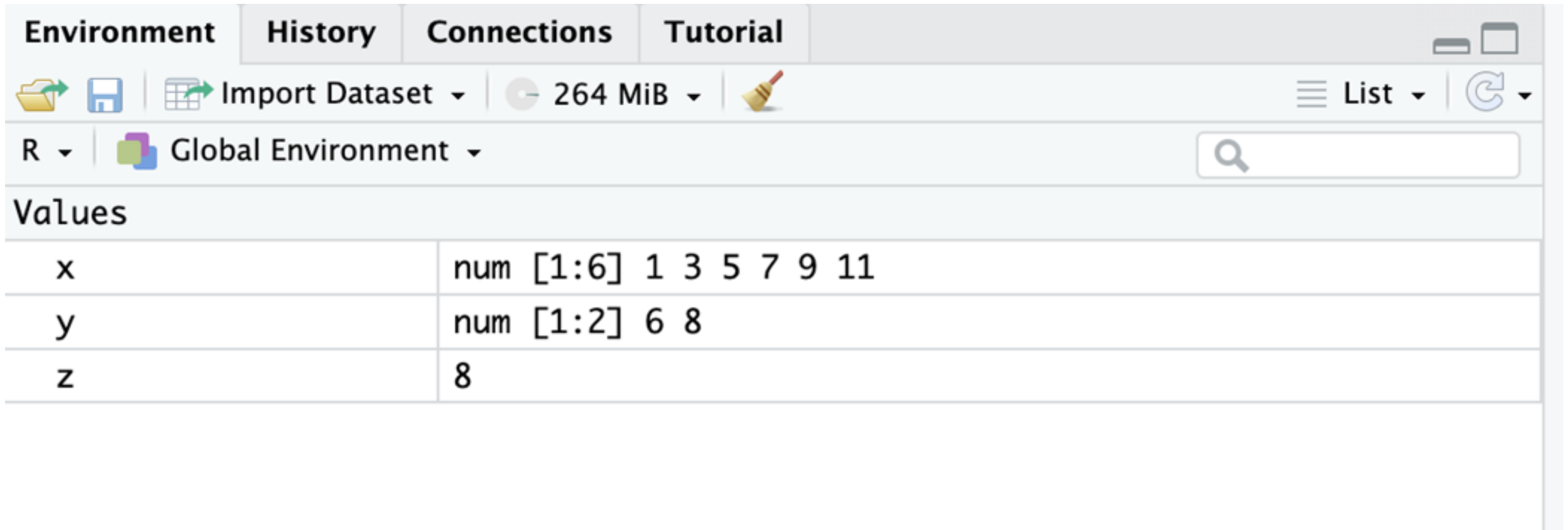
Assigning variable names

```
5  ---
6
7  ```{r setup, include=FALSE}
8  x<-2+3
9  y<-2*3
10 z<-2^3
11 ```
12
```



```{r }
x <- c(1,3,5,7,9,11)
y <- c(y,z)
```

```{r }
x <- c(1,3,5,7,9,11)
y <- c(y,z)
```



```{r pressure, echo=FALSE}
min(x) #minimum value in x
max(x) #maximum value in x
mean(x) #average value of x
length(x) #number of variables in x
sum(x) #sum of x
var(x) #variance of x
summary(x) #summary of x
```

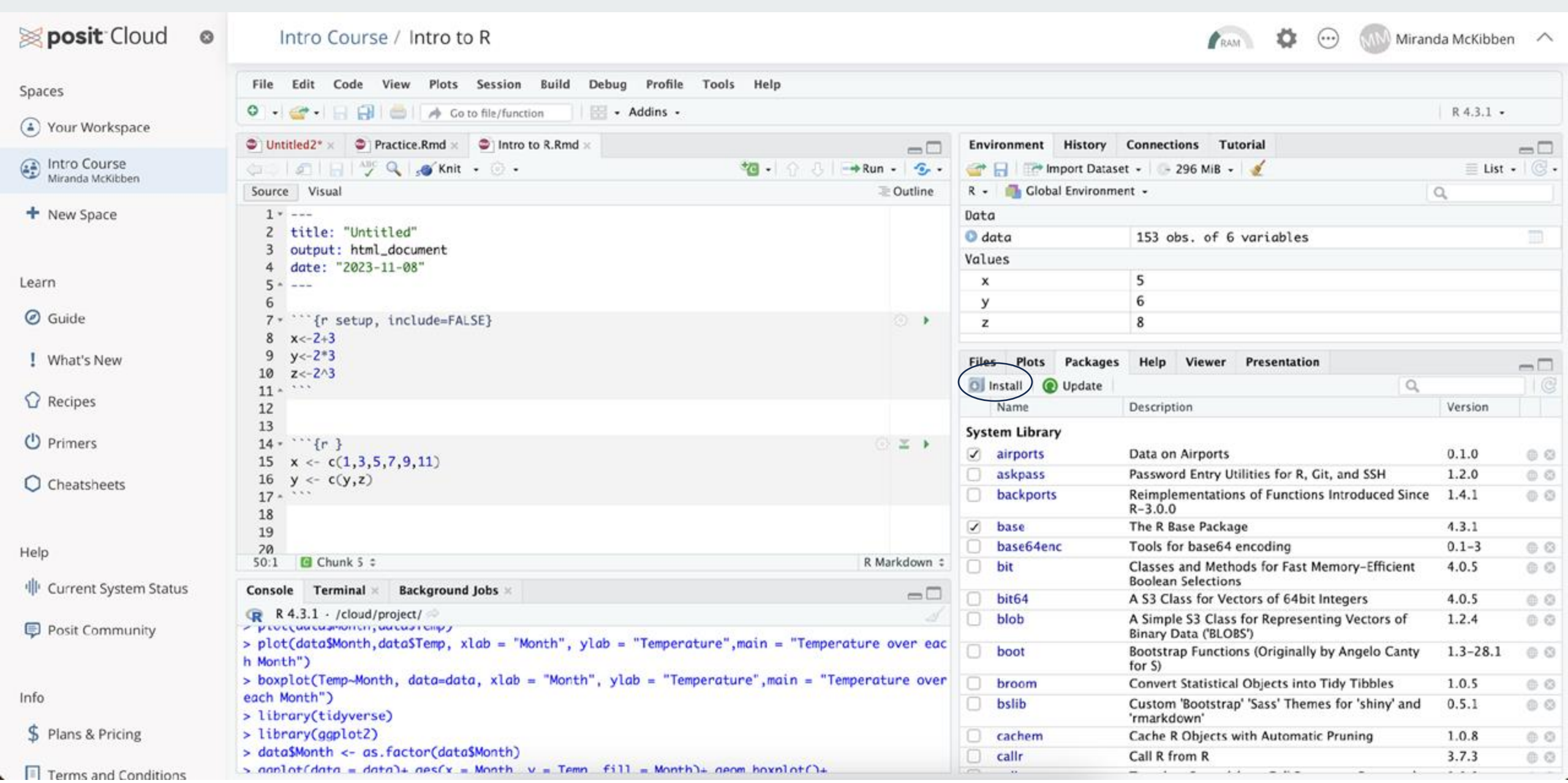
```
> min(x)
[1] 1
> max(x)
[1] 11
> mean(x)
[1] 6
> length(x)
[1] 6
> sum(x)
[1] 36
> var(x)
[1] 14
> summary(x)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    1.0     3.5     6.0     6.0     8.5    11.0
```

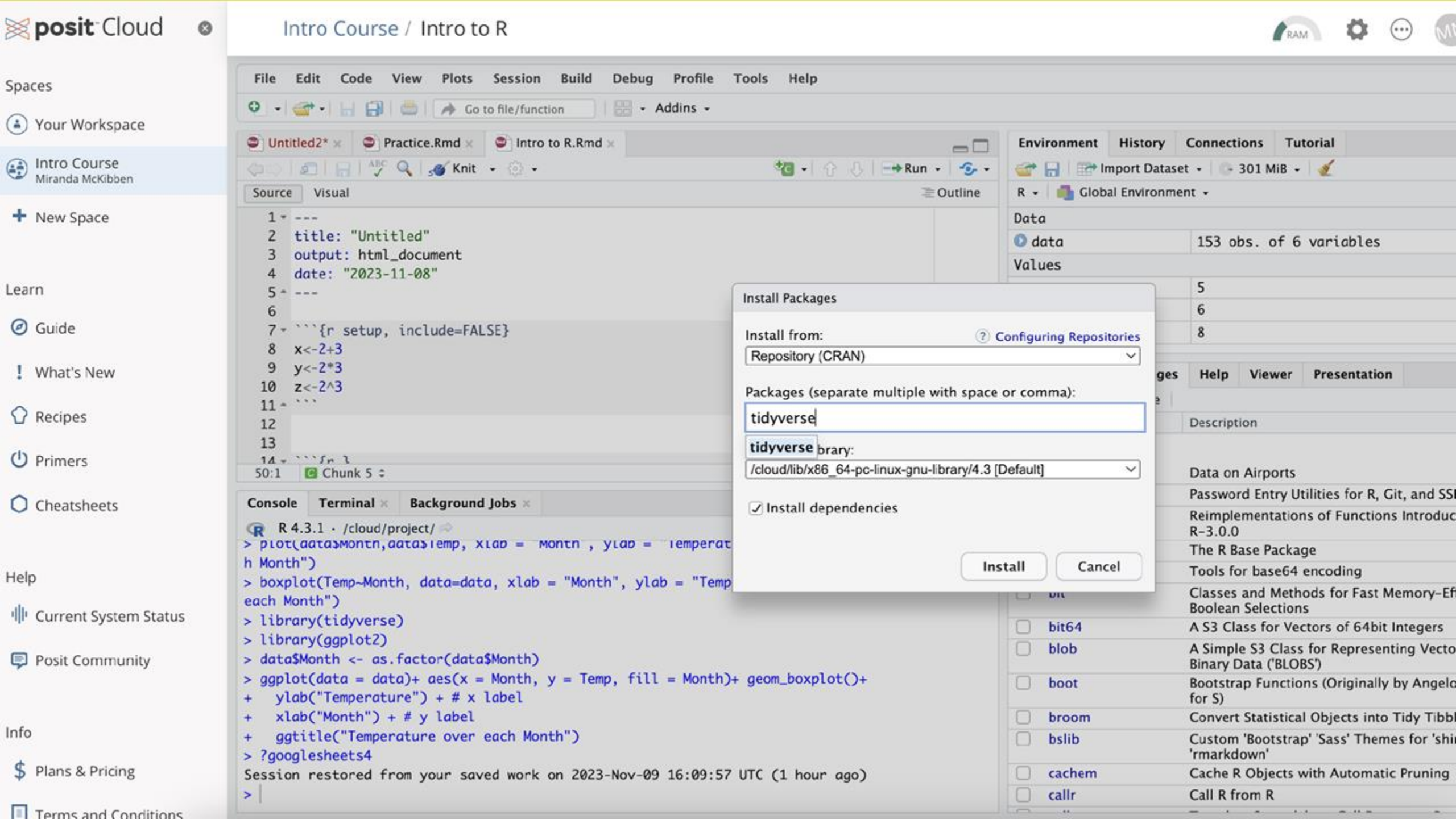
Pulling out parts of a dataset

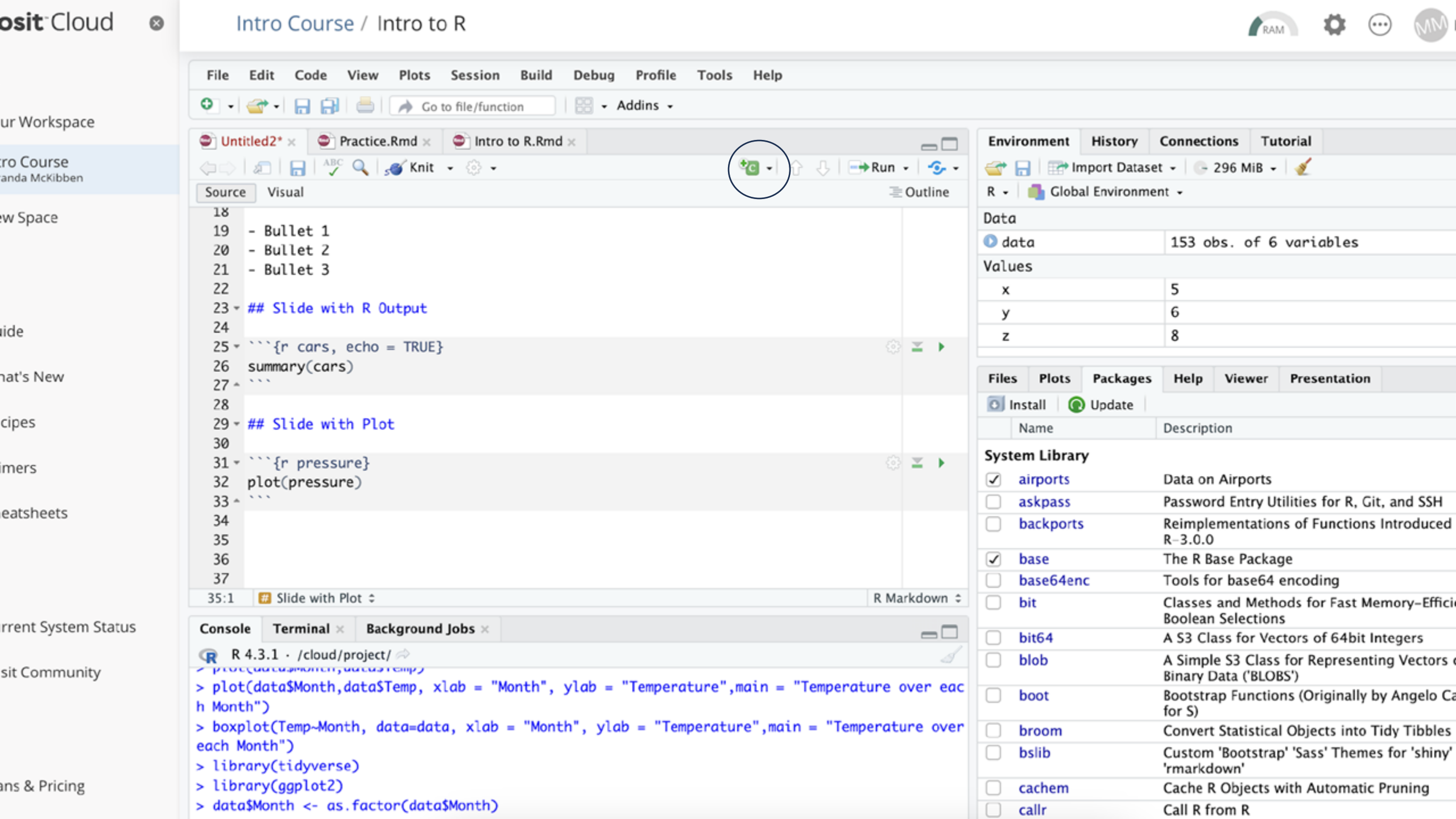
```
30 ```{r}
31 first_three <- x[1:3] #Pulls out the first 3 variables from the vector
32 pickn choose <- x[c(1,3,5)] #Pulls out the first, third,and fifth variable from the
   vector
33 ```
```

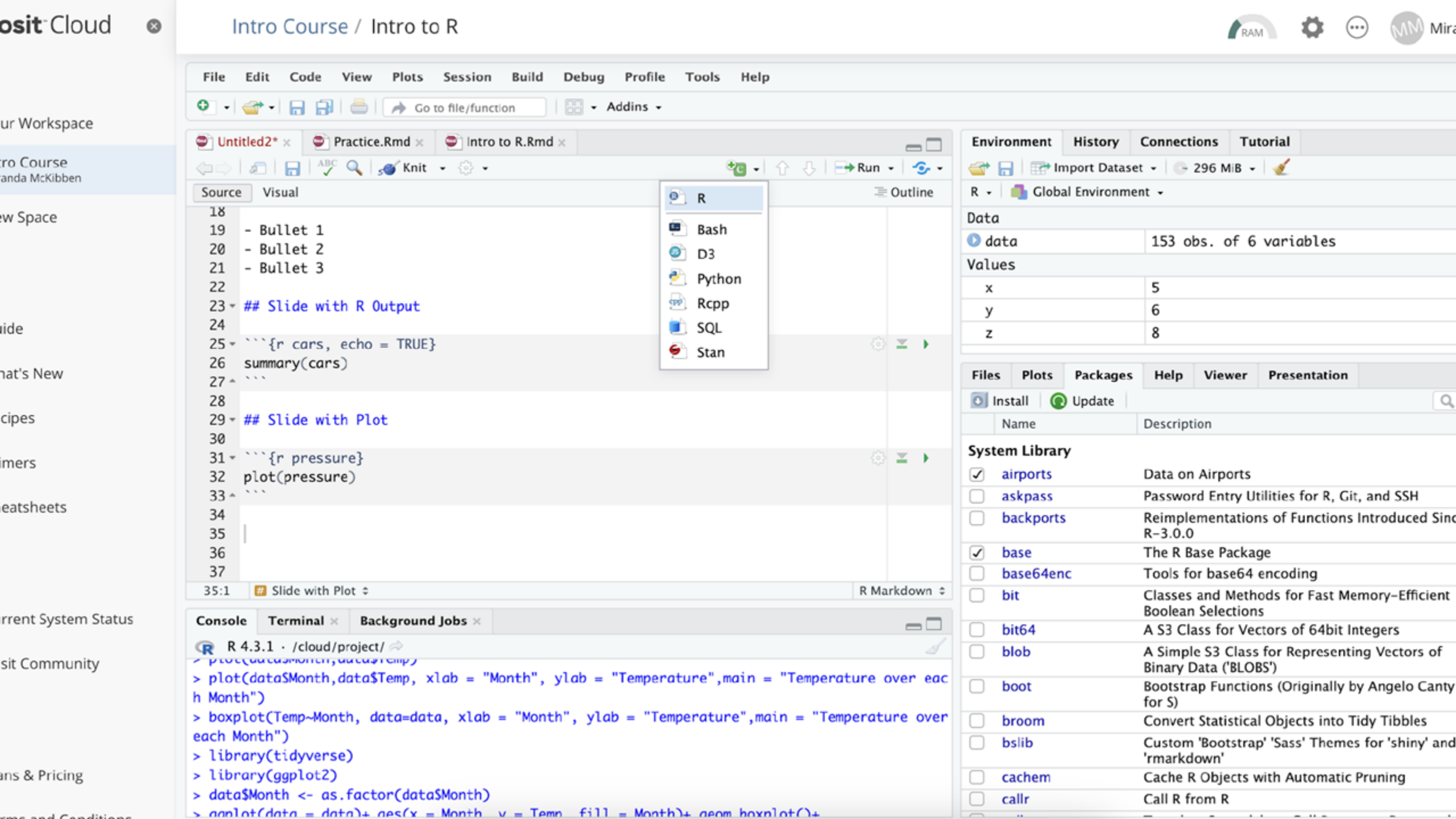
first_three	num [1:3] 1 3 5
pickn choose	num [1:3] 1 5 9

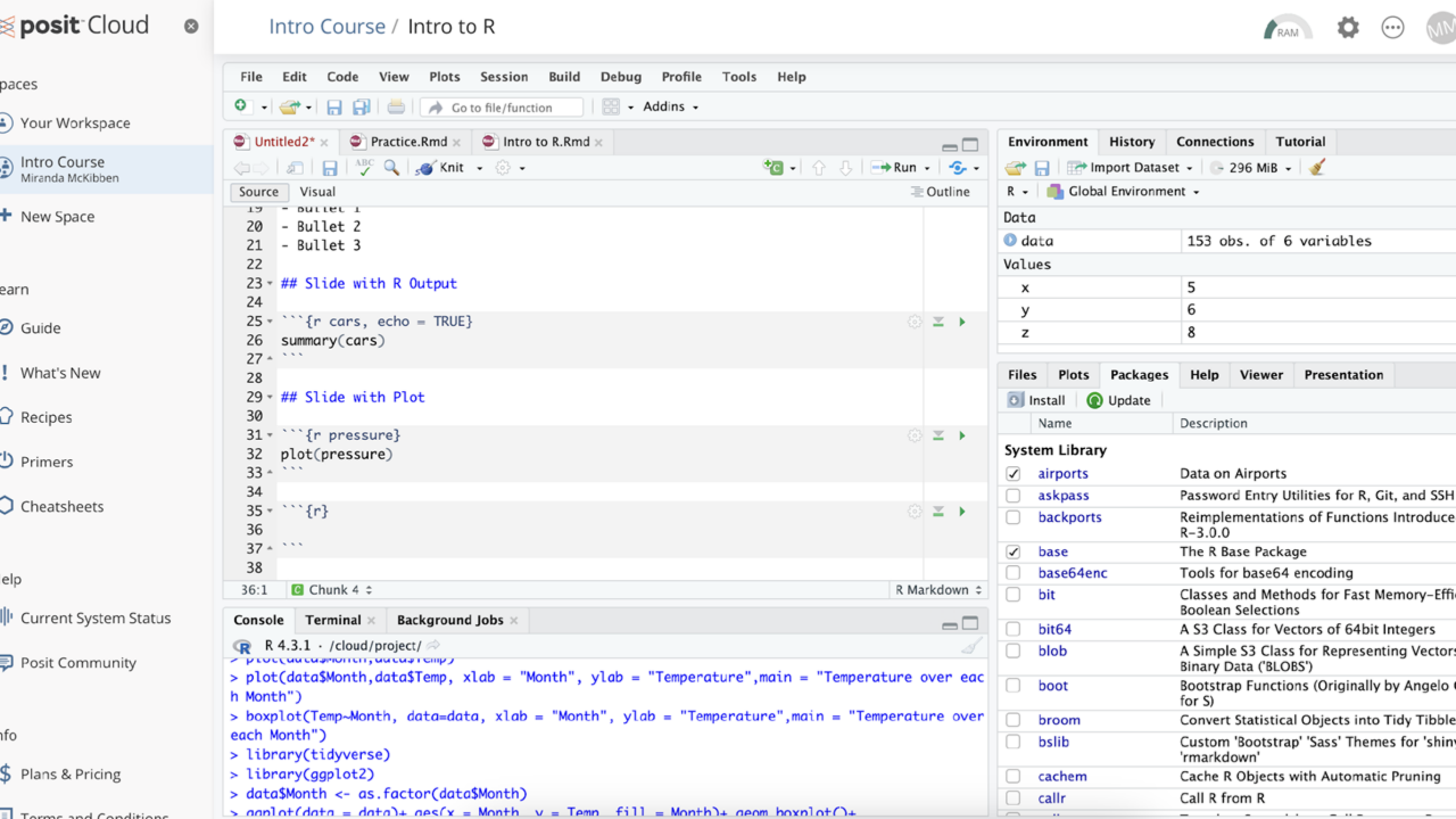
```r
data <- airquality #This line calls the airquality set and gives it the name "data"
head(data) #This shows a preview of the dataset
cor.test(data$Month,data$Temp) #This tests the correlation between the provided variables
```


posit Cloud
Intro Course / Intro to R
Miranda McKibben
Spaces
Your Workspace
Intro Course
Miranda McKibben
New Space
Learn
Guide
What's New
Recipes
Primers
Cheatsheets
Help
Current System Status
Posit Community
Info
Plans & Pricing
Terms and Conditions
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
R 4.3.1
Untitled2*
Practice.Rmd
Intro to R.Rmd
Knit
Run
Source
Visual
Outline
1 ---
2 title: "Untitled"
3 output: html_document
4 date: "2023-11-08"
5 ---
6
7 ```{r setup, include=FALSE}
8 x<-2+3
9 y<-2*3
10 z<-2^3
11 ```
12
13
14 ```{r }
15 x <- c(1,3,5,7,9,11)
16 y <- c(y,z)
17 ```
18
19
20
50:1
Chunk 5
R Markdown
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
> plot(data$Month,data$Temp, xlab = "Month", ylab = "Temperature",main = "Temperature over eac
h Month")
> boxplot(Temp~Month, data=data, xlab = "Month", ylab = "Temperature",main = "Temperature over
each Month")
> library(tidyverse)
> library(ggplot2)
> data$Month <- as.factor(data$Month)
Environment
History
Connections
Tutorial
Import Dataset
296 MiB
List
R
Global Environment
Data
data
153 obs. of 6 variables
Values
x
5
y
6
z
8
Files
Plots
Packages
Help
Viewer
Presentation
Install
Update
Name
Description
Version
System Library
airports
Data on Airports
0.1.0
askpass
Password Entry Utilities for R, Git, and SSH
1.2.0
backports
Reimplementations of Functions Introduced Since R-3.0.0
1.4.1
base
The R Base Package
4.3.1
base64enc
Tools for base64 encoding
0.1-3
bit
Classes and Methods for Fast Memory-Efficient Boolean Selections
4.0.5
bit64
A S3 Class for Vectors of 64bit Integers
4.0.5
blob
A Simple S3 Class for Representing Vectors of Binary Data ('BLOBS')
1.2.4
boot
Bootstrap Functions (Originally by Angelo Canty for S)
1.3-28.1
broom
Convert Statistical Objects into Tidy Tibbles
1.0.5
bslib
Custom 'Bootstrap' 'Sass' Themes for 'shiny' and 'rmarkdown'
0.5.1
cachem
Cache R Objects with Automatic Pruning
1.0.8
callr
Call R from R
3.7.3


posit Cloud
Intro Course / Intro to R
Spaces
Your Workspace
Intro Course
Miranda McKibben
New Space
Learn
Guide
What's New
Recipes
Primers
Cheatsheets
Help
Current System Status
Posit Community
Info
Plans & Pricing
Terms and Conditions
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Untitled2*
Practice.Rmd
Intro to R.Rmd
Knit
Run
Source
Visual
Outline
1 ---
2 title: "Untitled"
3 output: html_document
4 date: "2023-11-08"
5 ---
6
7 ```{r setup, include=FALSE}
8 x<-2+3
9 y<-2*3
10 z<-2^3
11 ```
12
13
50:1
Chunk 5
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
> boxplot(Temp~Month, data=data, xlab = "Month", ylab = "Temp
each Month")
> library(tidyverse)
> library(ggplot2)
> data$Month <- as.factor(data$Month)
> ggplot(data = data)+ aes(x = Month, y = Temp, fill = Month)+ geom_boxplot()+
+ ylab("Temperature") + # x label
+ xlab("Month") + # y label
+ ggtitle("Temperature over each Month")
> ?googlesheets4
Session restored from your saved work on 2023-Nov-09 16:09:57 UTC (1 hour ago)
>
Environment
History
Connections
Tutorial
Import Dataset
301 MiB
R
Global Environment
Data
data
153 obs. of 6 variables
Values
5
6
8
Help
Viewer
Presentation
Description
Data on Airports
Password Entry Utilities for R, Git, and SSH
The R Base Package
Tools for base64 encoding
Classes and Methods for Fast Memory-Efficient Boolean Selections
bit64
A S3 Class for Vectors of 64bit Integers
blob
A Simple S3 Class for Representing Vectors of Binary Data ('BLOBS')
boot
Bootstrap Functions (Originally by Angelo for S)
broom
Convert Statistical Objects into Tidy Tibbles
bslib
Custom 'Bootstrap' 'Sass' Themes for 'shiny' 'rmarkdown'
cachem
Cache R Objects with Automatic Pruning
callr
Call R from R
Install Packages
Install from:
Configuring Repositories
Repository (CRAN)
Packages (separate multiple with space or comma):
tidyverse
tidyverse
brary:
/cloud/lib/x86_64-pc-linux-gnu-library/4.3 [Default]
Install dependencies
Install
Cancel


osit Cloud
Intro Course / Intro to R
RAM
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
ur Workspace
tro Course
anda McKibben
ew Space
ide
hat's New
cipes
imers
eatsheets
rrent System Status
sit Community
ans & Pricing
Untitled2*
Practice.Rmd
Intro to R.Rmd
Knit
Run
Source
Visual
Outline
18
19 - Bullet 1
20 - Bullet 2
21 - Bullet 3
22
23 ## Slide with R Output
24
25 ```{r cars, echo = TRUE}
26 summary(cars)
27 ```
28
29 ## Slide with Plot
30
31 ```{r pressure}
32 plot(pressure)
33 ```
34
35
36
37
35:1
Slide with Plot
R Markdown
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
> plot(data$Month,data$Temp, xlab = "Month", ylab = "Temperature",main = "Temperature over eac
h Month")
> boxplot(Temp~Month, data=data, xlab = "Month", ylab = "Temperature",main = "Temperature over
each Month")
> library(tidyverse)
> library(ggplot2)
> data$Month <- as.factor(data$Month)
Environment
History
Connections
Tutorial
Import Dataset
296 MiB
R
Global Environment
Data
data
153 obs. of 6 variables
Values
x
5
y
6
z
8
Files
Plots
Packages
Help
Viewer
Presentation
Install
Update
Name
Description
System Library
airports
Data on Airports
askpass
Password Entry Utilities for R, Git, and SSH
backports
Reimplementations of Functions Introduced
R-3.0.0
base
The R Base Package
base64enc
Tools for base64 encoding
bit
Classes and Methods for Fast Memory-Effici
Boolean Selections
bit64
A S3 Class for Vectors of 64bit Integers
blob
A Simple S3 Class for Representing Vectors
Binary Data ('BLOBS')
boot
Bootstrap Functions (Originally by Angelo Ca
for S)
broom
Convert Statistical Objects into Tidy Tibbles
bslib
Custom 'Bootstrap' 'Sass' Themes for 'shiny'
'rmarkdown'
cachem
Cache R Objects with Automatic Pruning
callr
Call R from R


osit Cloud
Intro Course / Intro to R
RAM
Mira
ur Workspace
tro Course
anda McKibben
ew Space
ide
hat's New
cipes
imers
eatsheets
rrent System Status
sit Community
ans & Pricing
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Untitled2*
Practice.Rmd
Intro to R.Rmd
Knit
Run
Source
Visual
Outline
18
19 - Bullet 1
20 - Bullet 2
21 - Bullet 3
22
23 ## Slide with R Output
24
25 ```{r cars, echo = TRUE}
26 summary(cars)
27 ```
28
29 ## Slide with Plot
30
31 ```{r pressure}
32 plot(pressure)
33 ```
34
35
36
37
35:1
Slide with Plot
R Markdown
R
Bash
D3
Python
Rcpp
SQL
Stan
Environment
History
Connections
Tutorial
Import Dataset
296 MiB
R
Global Environment
Data
data
153 obs. of 6 variables
Values
x
5
y
6
z
8
Files
Plots
Packages
Help
Viewer
Presentation
Install
Update
Name
Description
System Library
airports
Data on Airports
askpass
Password Entry Utilities for R, Git, and SSH
backports
Reimplementations of Functions Introduced Sinc
R-3.0.0
base
The R Base Package
base64enc
Tools for base64 encoding
bit
Classes and Methods for Fast Memory-Efficient
Boolean Selections
bit64
A S3 Class for Vectors of 64bit Integers
blob
A Simple S3 Class for Representing Vectors of
Binary Data ('BLOBS')
boot
Bootstrap Functions (Originally by Angelo Canty
for S)
broom
Convert Statistical Objects into Tidy Tibbles
bslib
Custom 'Bootstrap' 'Sass' Themes for 'shiny' and
'rmarkdown'
cachem
Cache R Objects with Automatic Pruning
callr
Call R from R
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
> plot(data$Month,data$Temp, xlab = "Month", ylab = "Temperature",main = "Temperature over eac
h Month")
> boxplot(Temp~Month, data=data, xlab = "Month", ylab = "Temperature",main = "Temperature over
each Month")
> library(tidyverse)
> library(ggplot2)
> data$Month <- as.factor(data$Month)


posit Cloud
Intro Course / Intro to R
RAM
MN
paces
Your Workspace
Intro Course
Miranda McKibben
New Space
earn
Guide
What's New
Recipes
Primers
Cheatsheets
elp
Current System Status
Posit Community
nfo
Plans & Pricing
Terms and Conditions
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Untitled2*
Practice.Rmd
Intro to R.Rmd
Knit
Run
Source
Visual
Outline
19 - Bullet 1
20 - Bullet 2
21 - Bullet 3
22
23 ## Slide with R Output
24
25 ```{r cars, echo = TRUE}
26 summary(cars)
27 ```
28
29 ## Slide with Plot
30
31 ```{r pressure}
32 plot(pressure)
33 ```
34
35 ```{r}
36
37 ```
38
36:1
Chunk 4
R Markdown
Console
Terminal
Background Jobs
R 4.3.1 · /cloud/project/
> plot(data$Month,data$Temp, xlab = "Month", ylab = "Temperature",main = "Temperature over each Month")
> boxplot(Temp~Month, data=data, xlab = "Month", ylab = "Temperature",main = "Temperature over each Month")
> library(tidyverse)
> library(ggplot2)
> data$Month <- as.factor(data$Month)
Environment
History
Connections
Tutorial
Import Dataset
296 MiB
R
Global Environment
Data
data
153 obs. of 6 variables
Values
x 5
y 6
z 8
Files
Plots
Packages
Help
Viewer
Presentation
Install
Update
Name
Description
System Library
airports Data on Airports
askpass Password Entry Utilities for R, Git, and SSH
backports Reimplementations of Functions Introduced R-3.0.0
base The R Base Package
base64enc Tools for base64 encoding
bit Classes and Methods for Fast Memory-Efficient Boolean Selections
bit64 A S3 Class for Vectors of 64bit Integers
blob A Simple S3 Class for Representing Vectors of Binary Data ('BLOBS')
boot Bootstrap Functions (Originally by Angelo for S)
broom Convert Statistical Objects into Tidy Tibbles
bslib Custom 'Bootstrap' 'Sass' Themes for 'shiny' 'rmarkdown'
cachem Cache R Objects with Automatic Pruning
callr Call R from R