Introduction to R

In this lecture

- R and RStudio

- How to

  - set the working directory

  - create an R file and save it

  - execute an R file
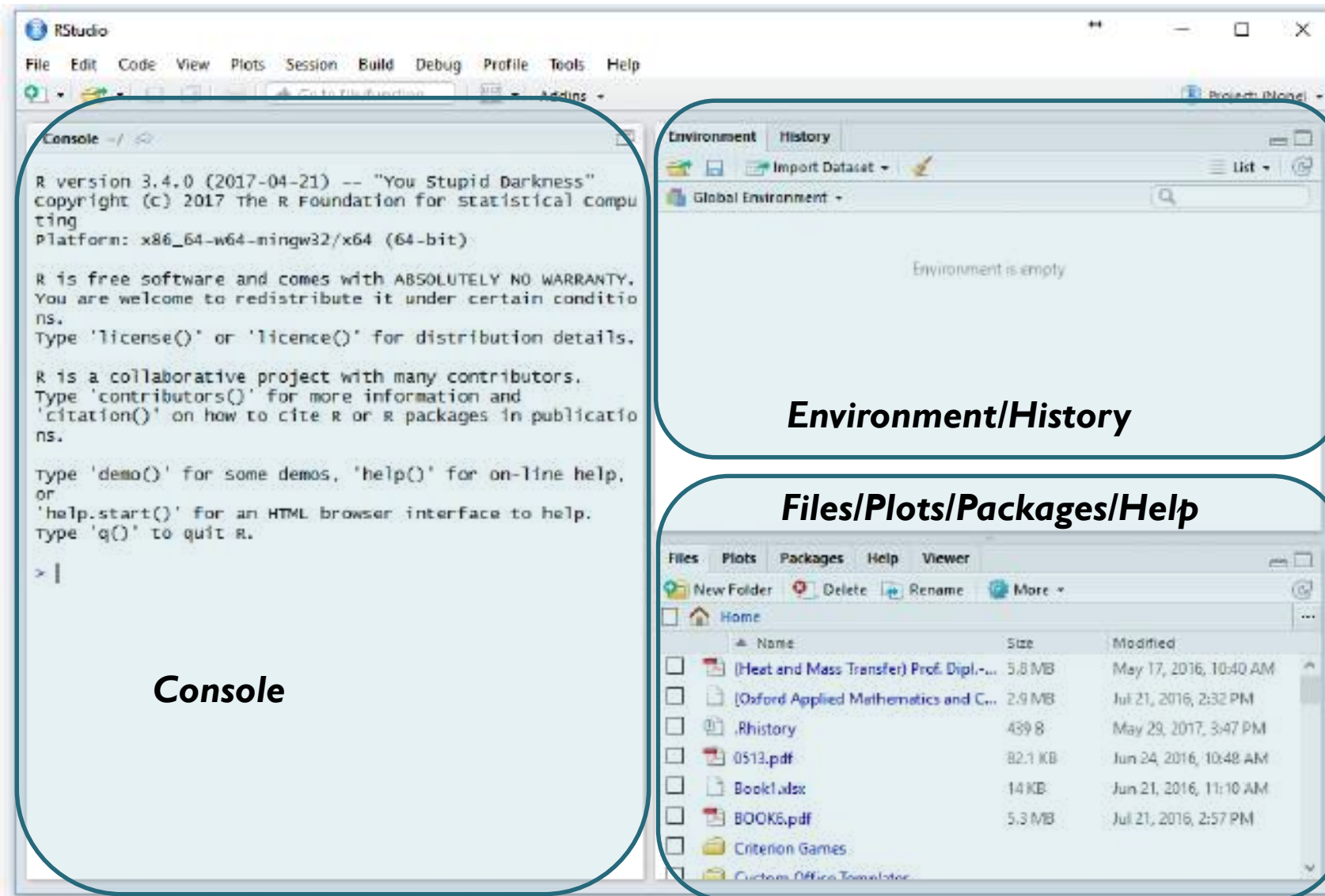
  - execute pieces of code

R

- Open source programming language
- Statistical software and Data analysis tool
- Interface
  - Command line user interface
- Platforms
  - Windows, Linux and Mac OS

RStudio

- Integrated Development Environment (IDE) for R
- Availability
  - Open source
  - Commercial
- Editions
  - Desktop
  - Server
- Platforms
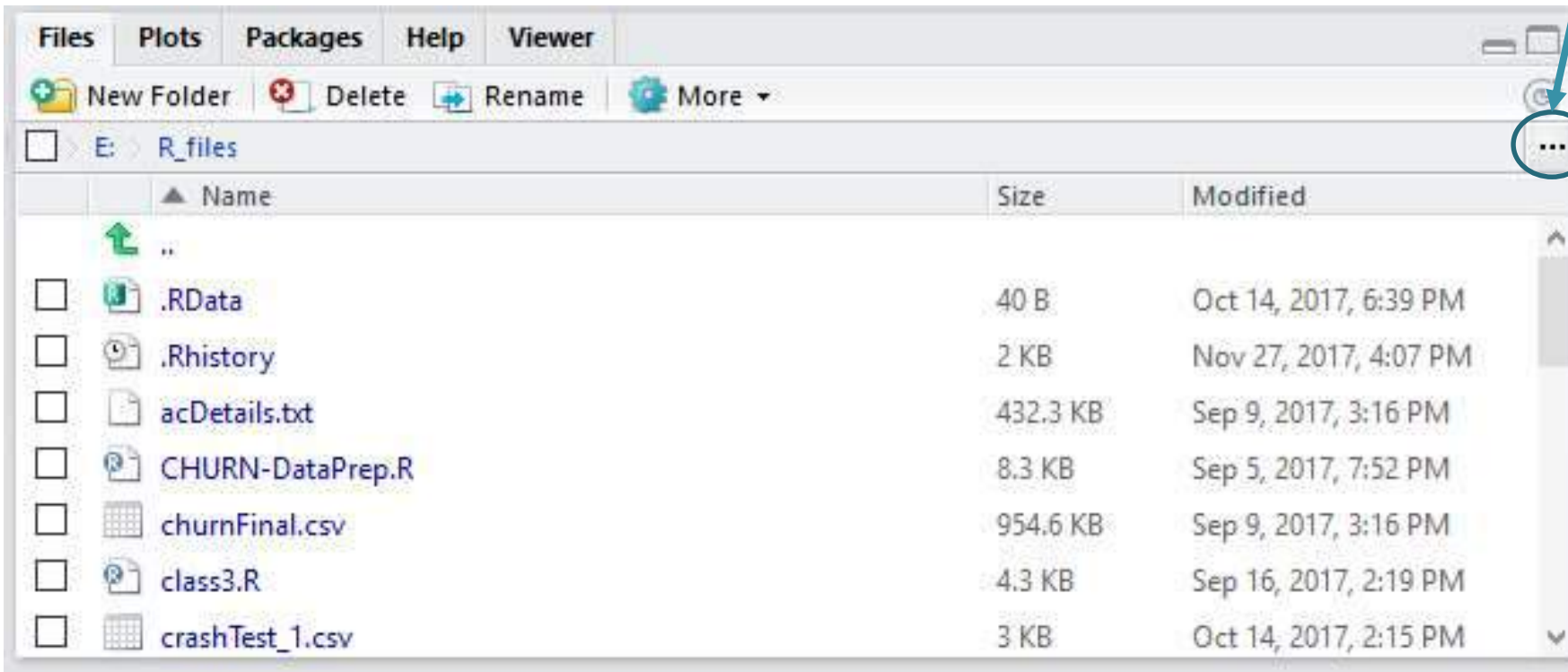 - Windows, Linux and Mac OS

A first look of RStudio

Set the working directory

Enter in the console : setwd("directorypath")

(OR)

To choose Working directory

STEP 1: Choose a suitable location by clicking on the indicated icon

Files	Plots	Packages	Help	Viewer		
New Folder	Delete	Rename	More ▾			
☐ E: ❯ R_files						⋯
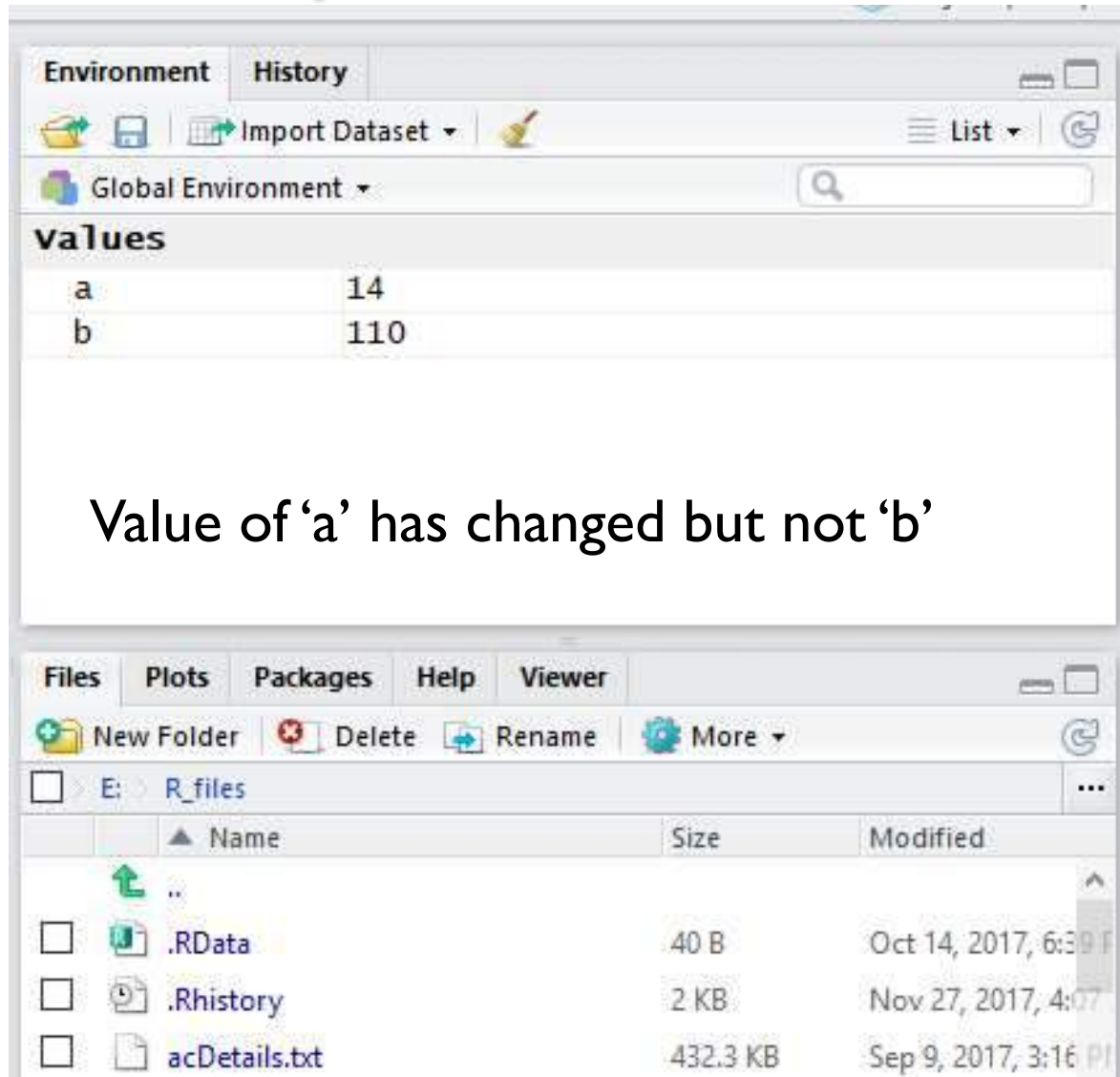
	▲ Name	Size	Modified
⬆	..		
☐	.RData	40 B	Oct 14, 2017, 6:39 PM
☐	.Rhistory	2 KB	Nov 27, 2017, 4:07 PM
☐	acDetails.txt	432.3 KB	Sep 9, 2017, 3:16 PM
☐	CHURN-DataPrep.R	8.3 KB	Sep 5, 2017, 7:52 PM
☐	churnFinal.csv	954.6 KB	Sep 9, 2017, 3:16 PM
☐	class3.R	4.3 KB	Sep 16, 2017, 2:19 PM
☐	crashTest_1.csv	3 KB	Oct 14, 2017, 2:15 PM

Set the working directory

STEP 2: Once directory is chosen, select the more icon and choose "Set as Working Directory"
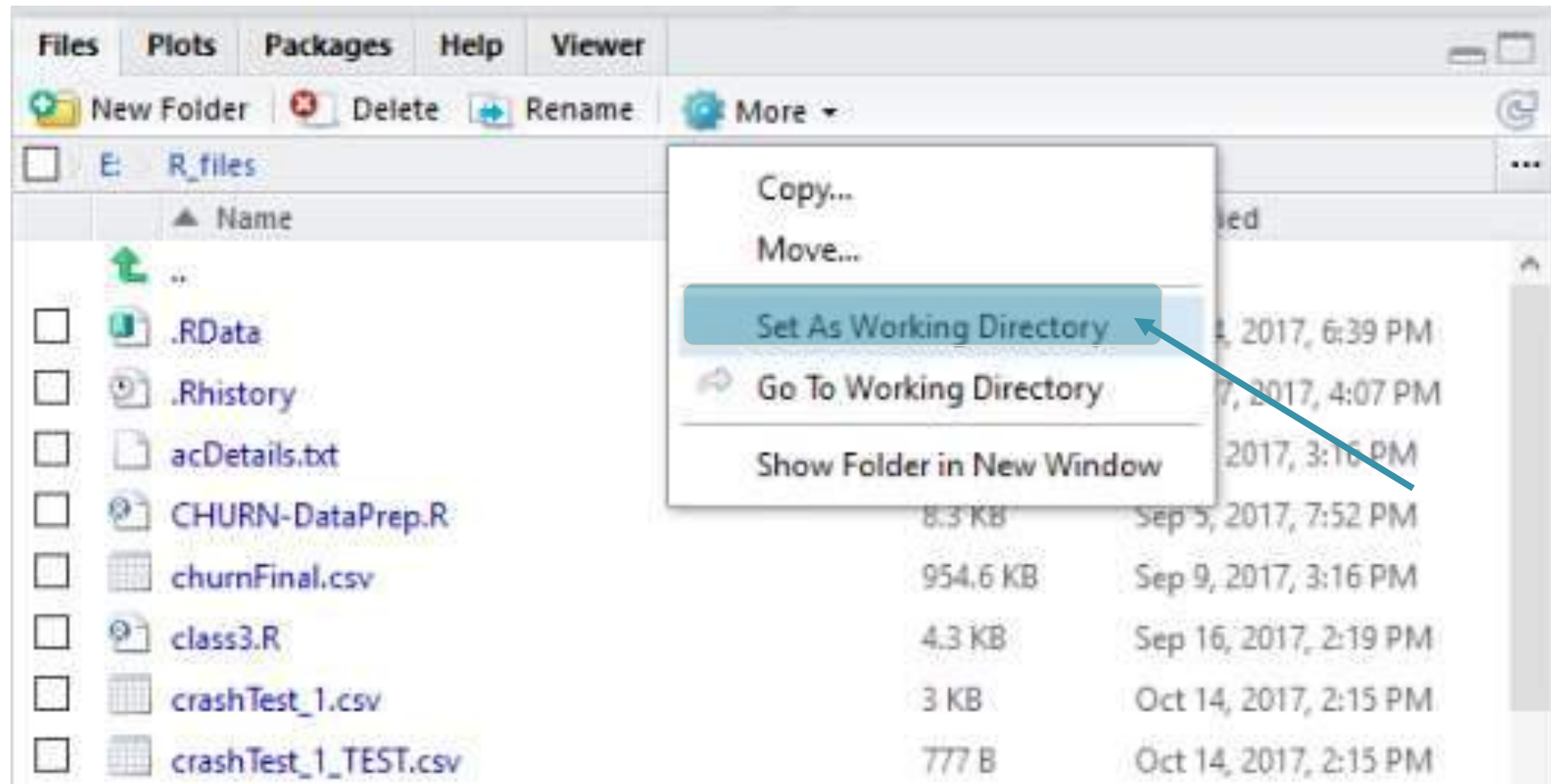
RStudio
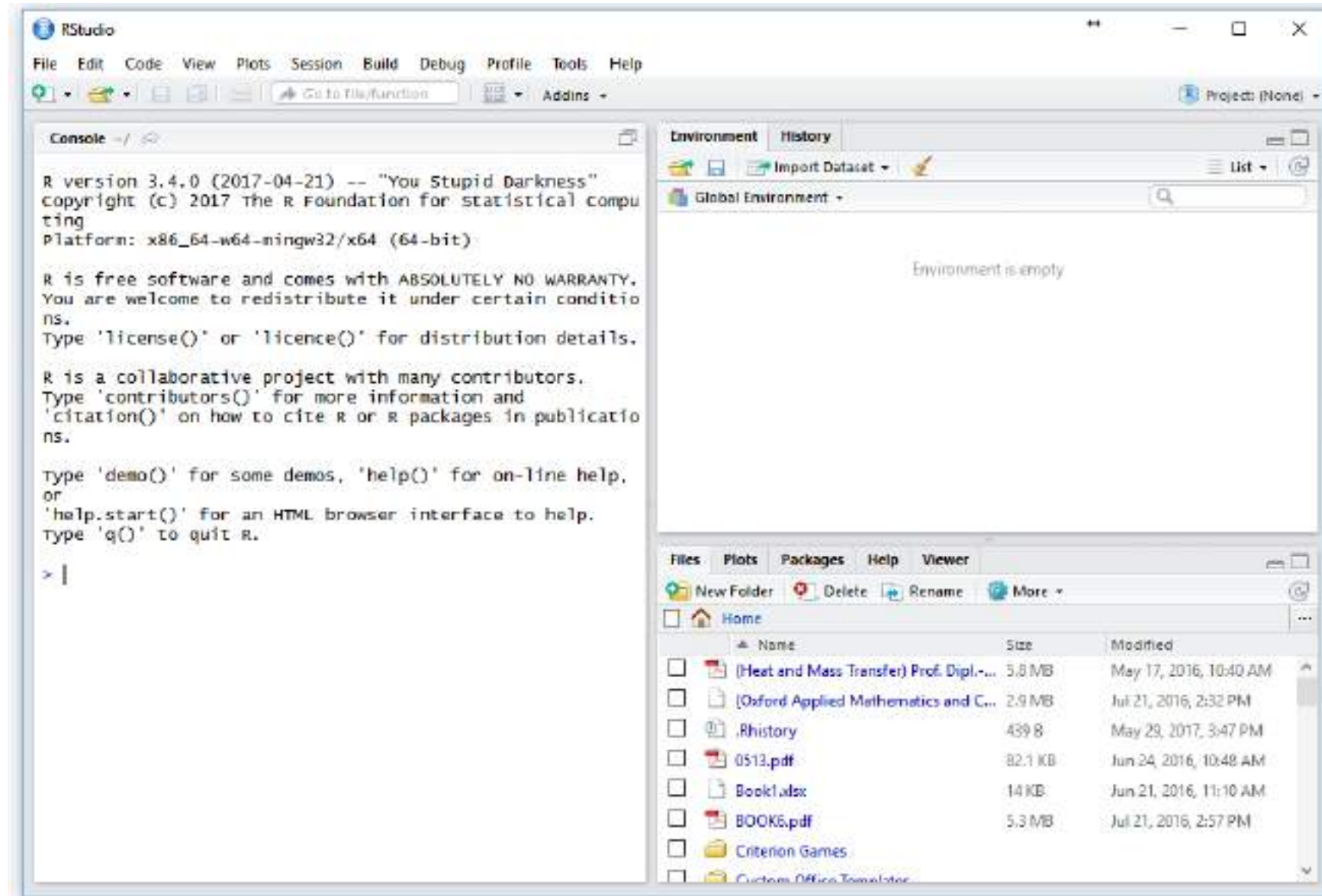
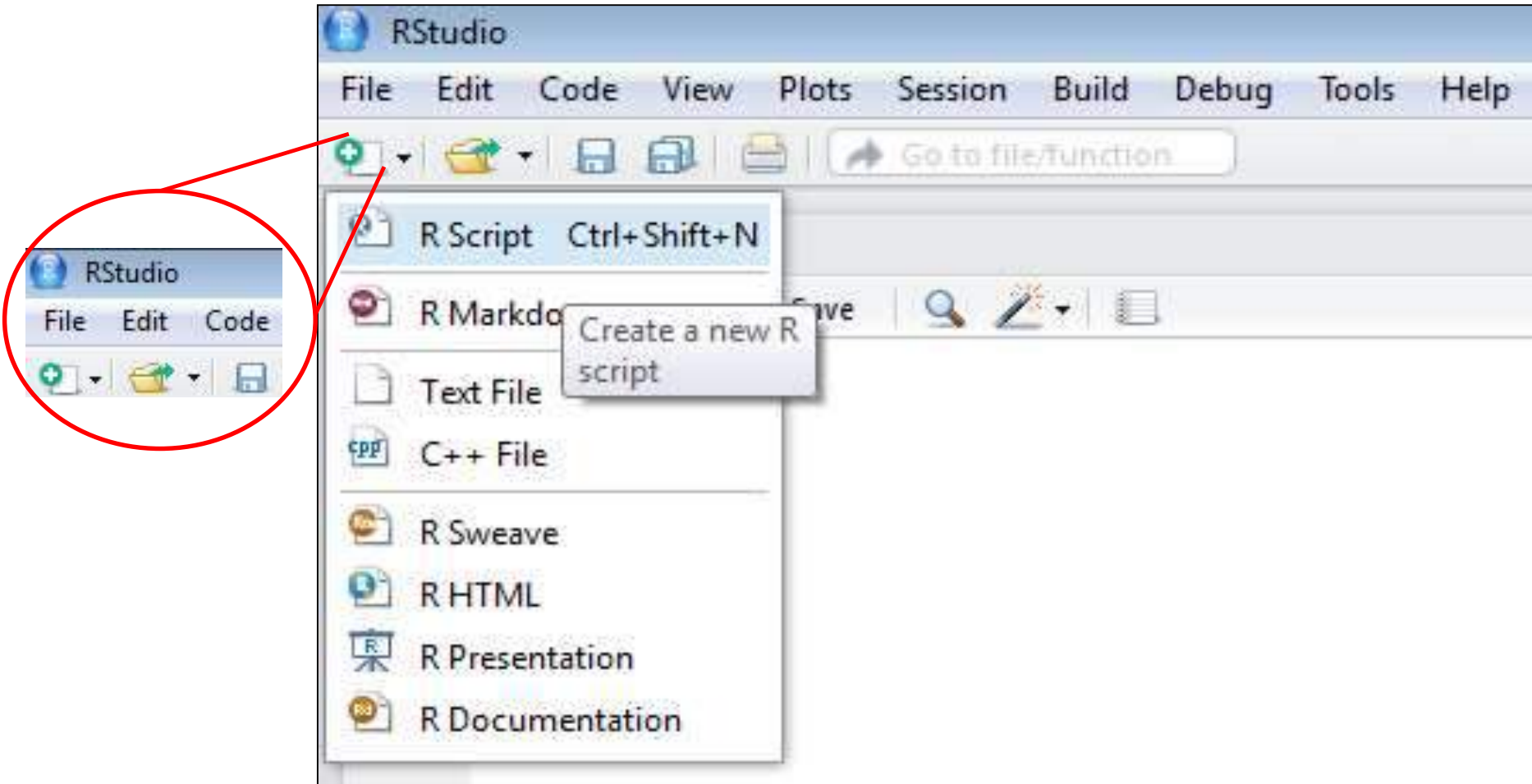# Create an R file

"File" icon
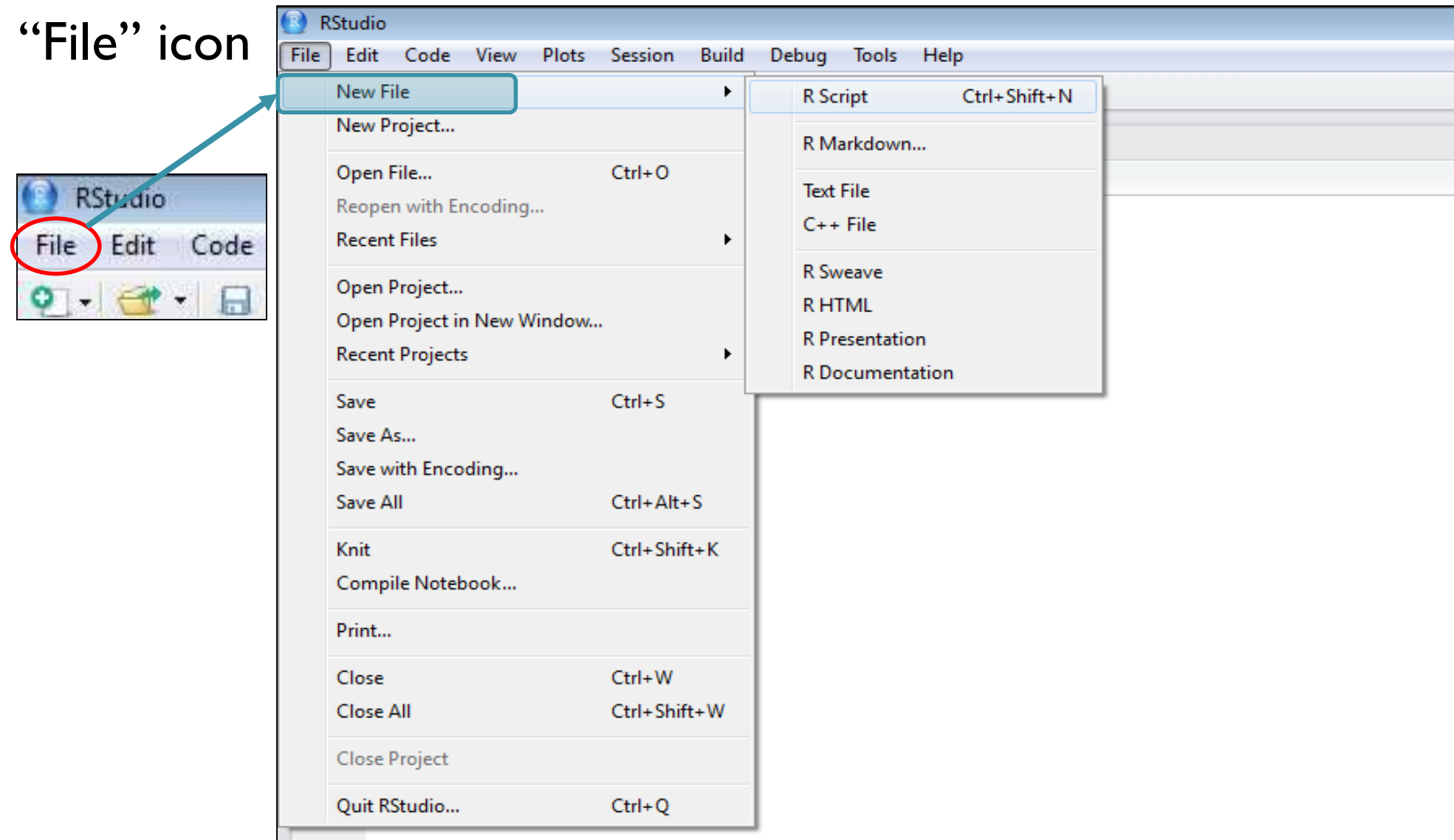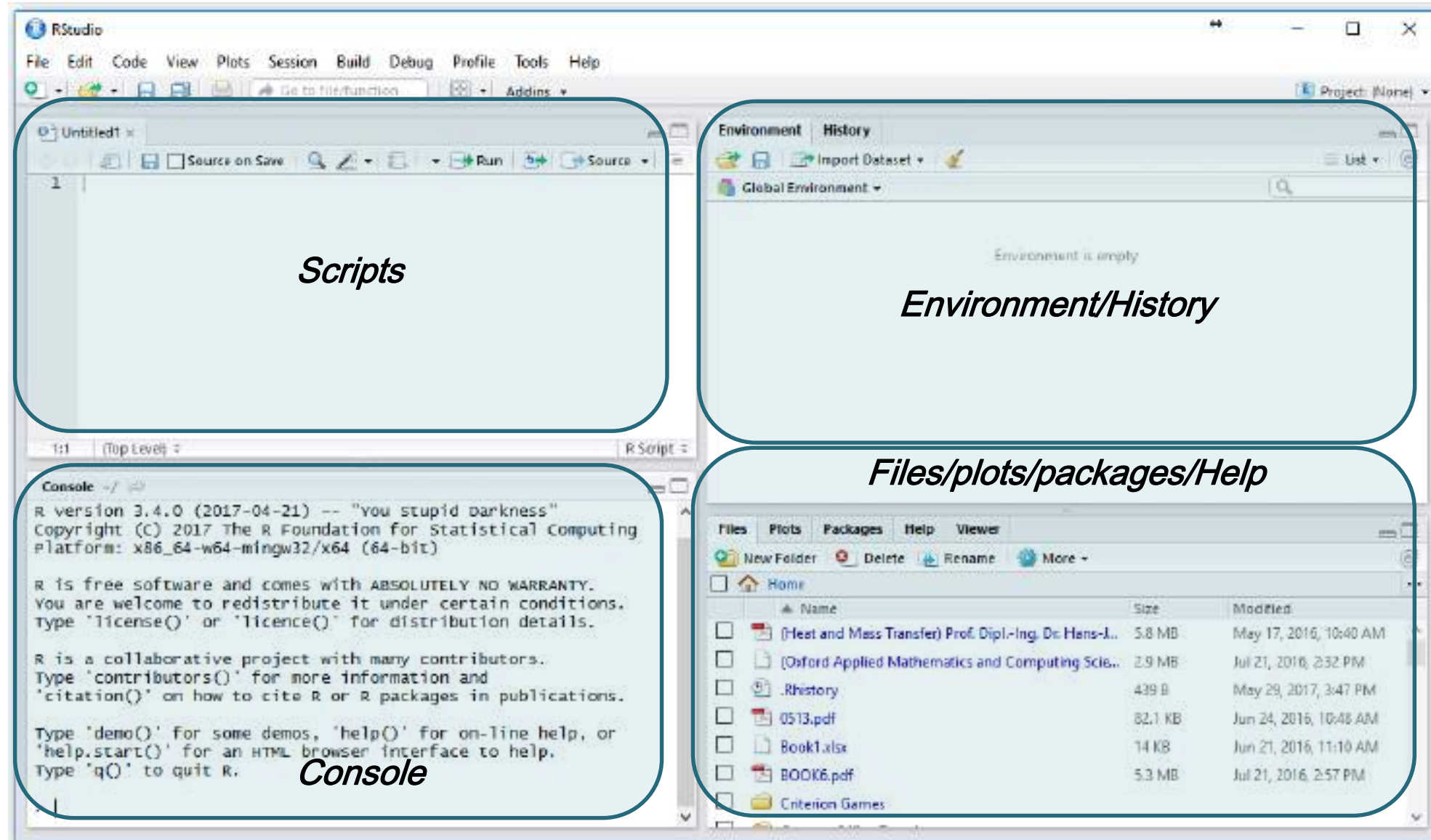
Create an R file

By clicking the icon " "below the toolbar

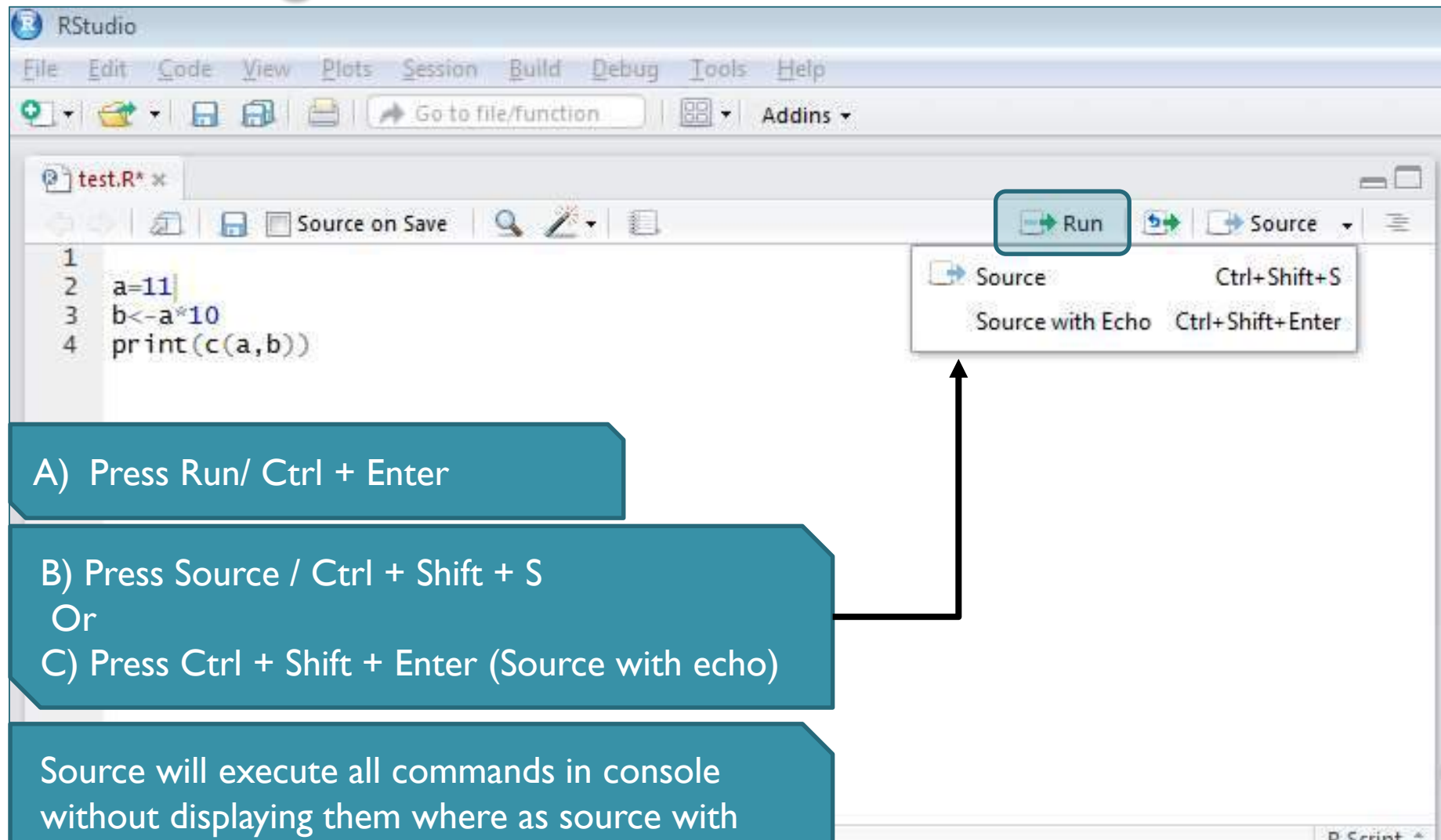# RStudio with script file open

Writing scripts

Saving R script file
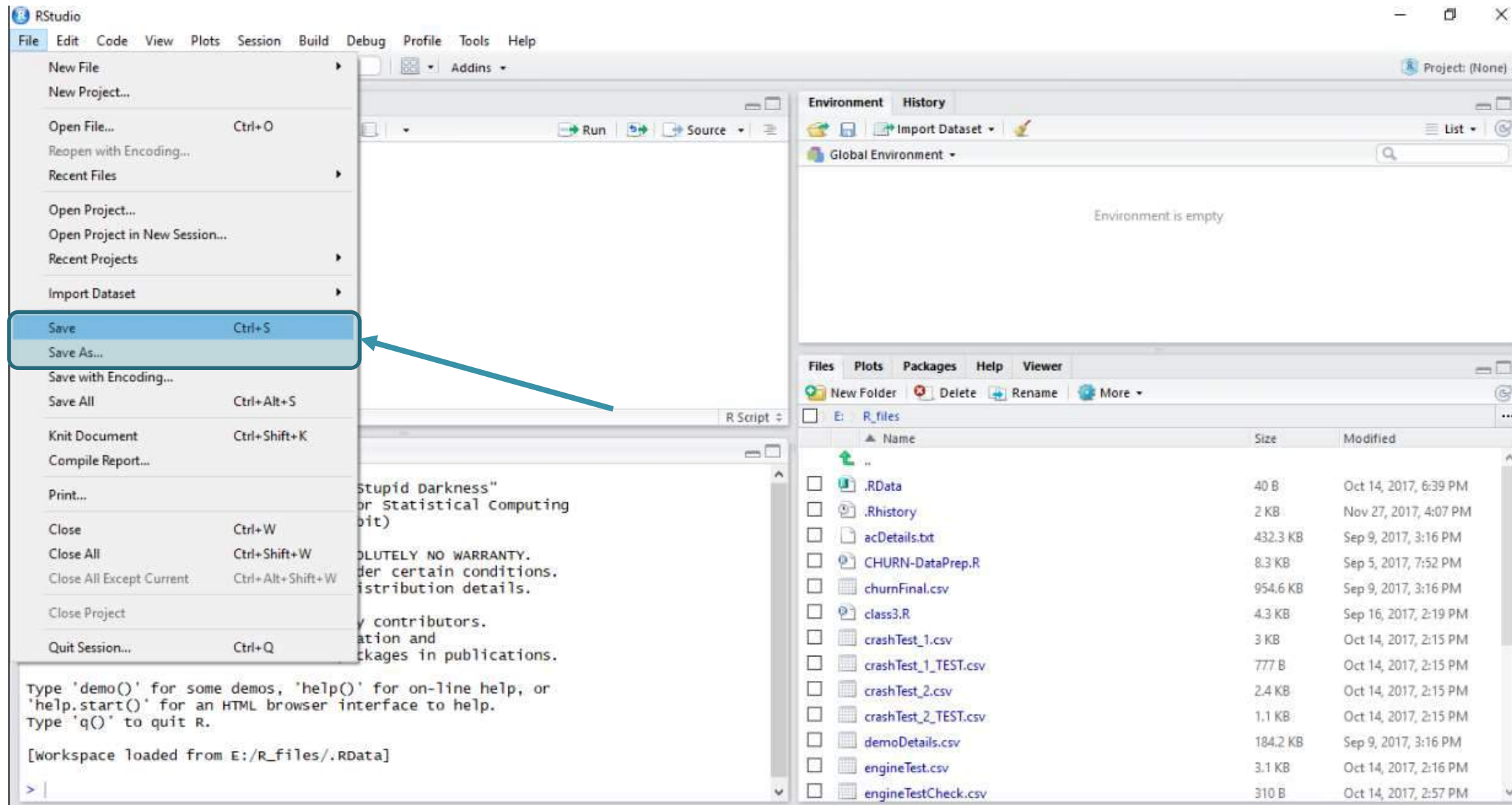
Saving R script file
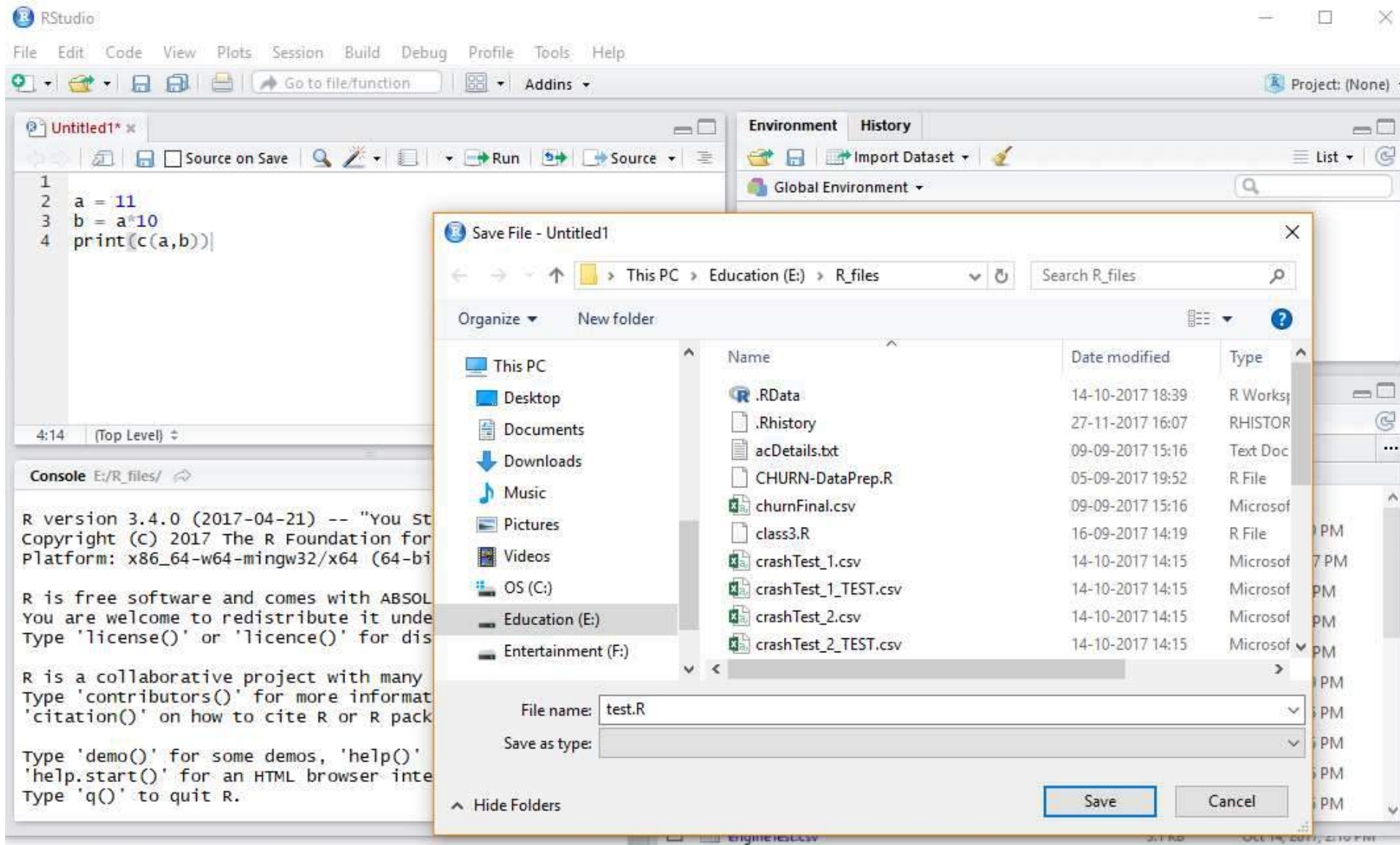
Executing an R file

A) Press Run/ Ctrl + Enter

B) Press Source / Ctrl + Shift + S
 Or
C) Press Ctrl + Shift + Enter (Source with echo)

Source will execute all commands in console without displaying them where as source with echo will execute and print automatically

Executing an R file: Example

Execute pieces of code – Run

Execute pieces of code – Run

Value of 'a' has changed but not 'b'

Executing R files – Summary

- Run can be used to execute selected lines

- Source/ Source with echo is for a whole file

- Advantages – using Run :
  - troubleshooting/debugging

- Disadvantages – using Run :
  - For large section, console will be over populated and messy