

# Introduction to RStudio

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Fall 2017

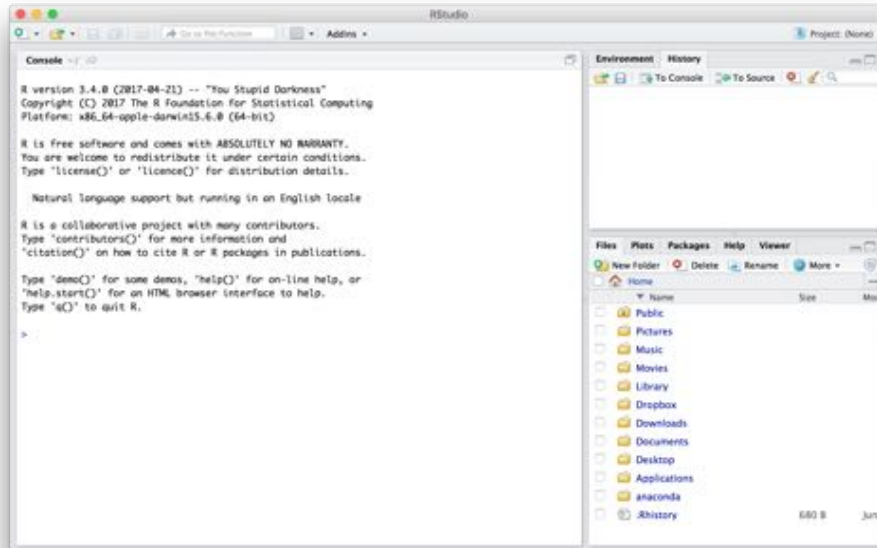
## RStudio

What is it?

- RStudio is a program that allows you to run R in a more user-friendly environment
  - RStudio offers some GUI (graphical user interface) features for R
- RStudio can be considered a "portal"
  - The same R program is running underneath the interface
- RStudio is open-source software (and therefore is free)
  - Available for download at: <http://rstudio.com>

# RStudio

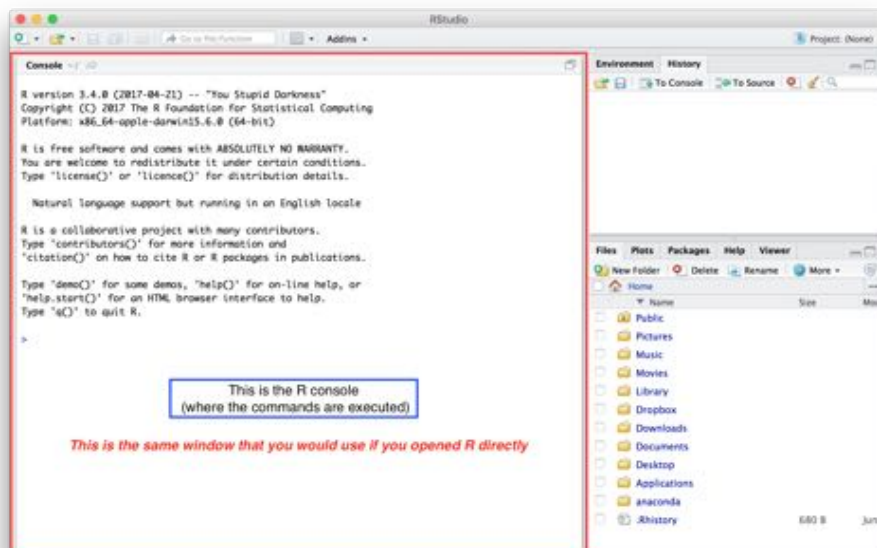
Open RStudio and this is what you will see:



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# RStudio

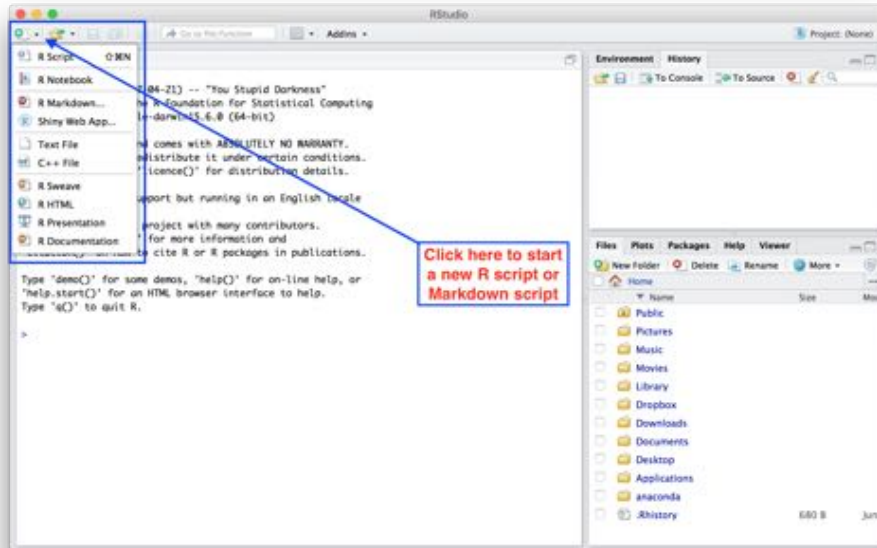
Outlined in red is the R Console:



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# RStudio

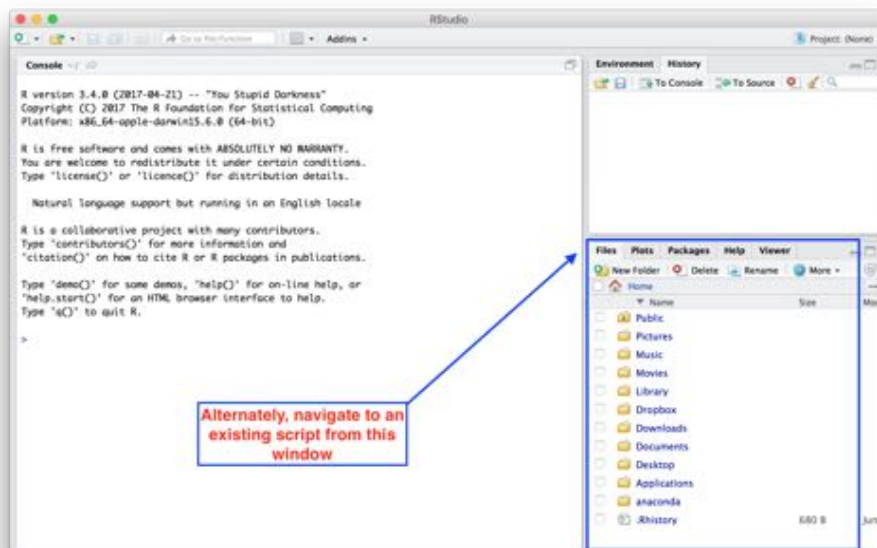
You can open a new script in the editing window:



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# RStudio

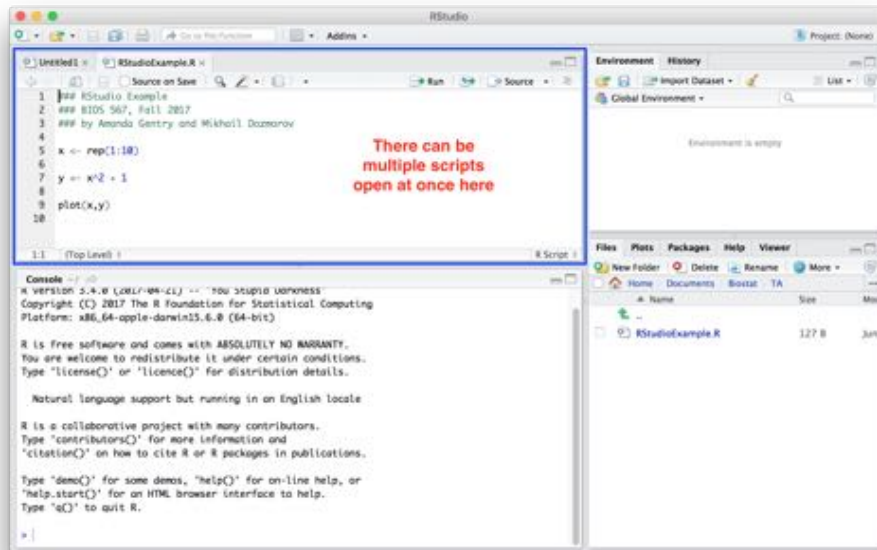
Or you can open an existing script:



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# RStudio

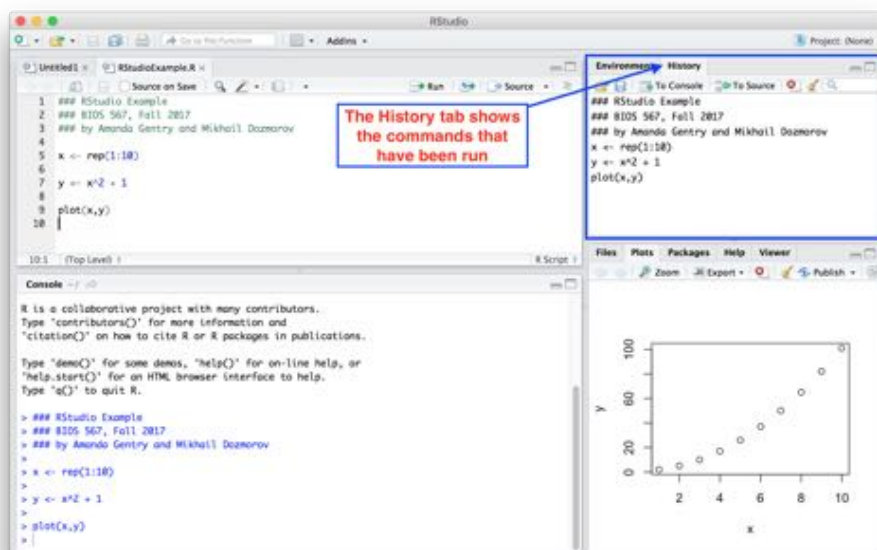
There can be multiple scripts open in the editing window:



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# RStudio

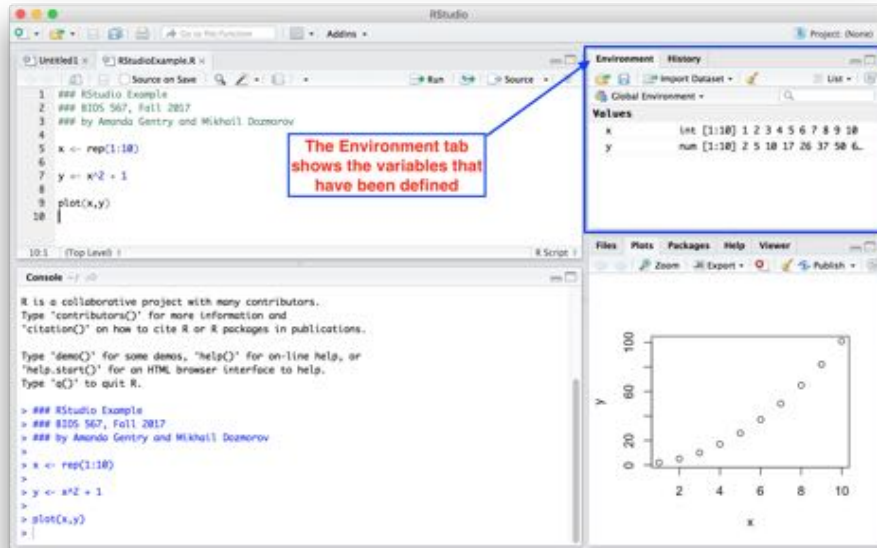
History tab shows command run:



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# RStudio

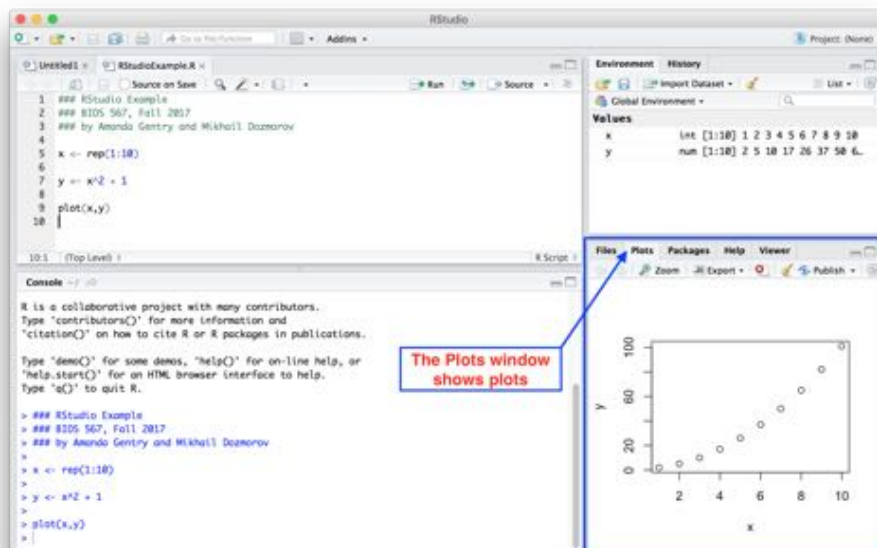
Environment tab keeps track of the things the user defines:



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# RStudio

Plots appear in the plots tab (as expected):



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# Getting help

- Is there a built-in function that does x? and if so,
- Where can i find it among the +2000 R Packages in CRAN?
- Use `?function_name` to get help on a function from a *loaded* package
- Use `??function_name` to search for the function across all installed packages, even not loaded
- Use `apropos("part_of_function_name")` if you forgot the exact name, to get suggestions what the function name may be
- `library(sos)`, `findFn` function, e.g., `findFn("cosine", maxPages=2, sortby="MaxScore")`
- Search engine is your best friend on many things

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# RStudio keyboard shortcuts

- Command (Ctrl) + Enter - Run current line/selection, go to the next line
- Alt + Enter - Run current line/selection, stay on the current line
- Ctrl + 1 - Move cursor to source
- Ctrl + 2 - Move cursor to console
- Ctrl + L - Clear console
- Ctrl + Alt + I - Create new code chunk
- Ctrl + Alt + c - Run curret code chunk
- All the usual - Ctrl + Z, C, X, V, S, O

And more: <https://support.rstudio.com/hc/en-us/articles/200711853-Keyboard-Shortcuts>

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# RStudio summary

## Why use it?

- Project-centric work - scripts and data are organized in one folder (project), easily accessible
- Single workspace with four (rearrangeable, zoomable) panels
- Work on multiple projects simultaneously in several instances of RStudio
- Work on multiple (types of) scripts (rearrangeable tabbed interface)
- See all variables in R environment, easily visualize them
- Easy access to help, plots, packages
- Simple integration with Git version control system

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## RStudio Tutorials

- <http://dss.princeton.edu/training/RStudio101.pdf>
- [http://stcorp.nl/R\\_course/rstudio\\_tutorial.html](http://stcorp.nl/R_course/rstudio_tutorial.html)
  - This tutorial describes RStudio's interaction with git

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