Introduction to Rstudio

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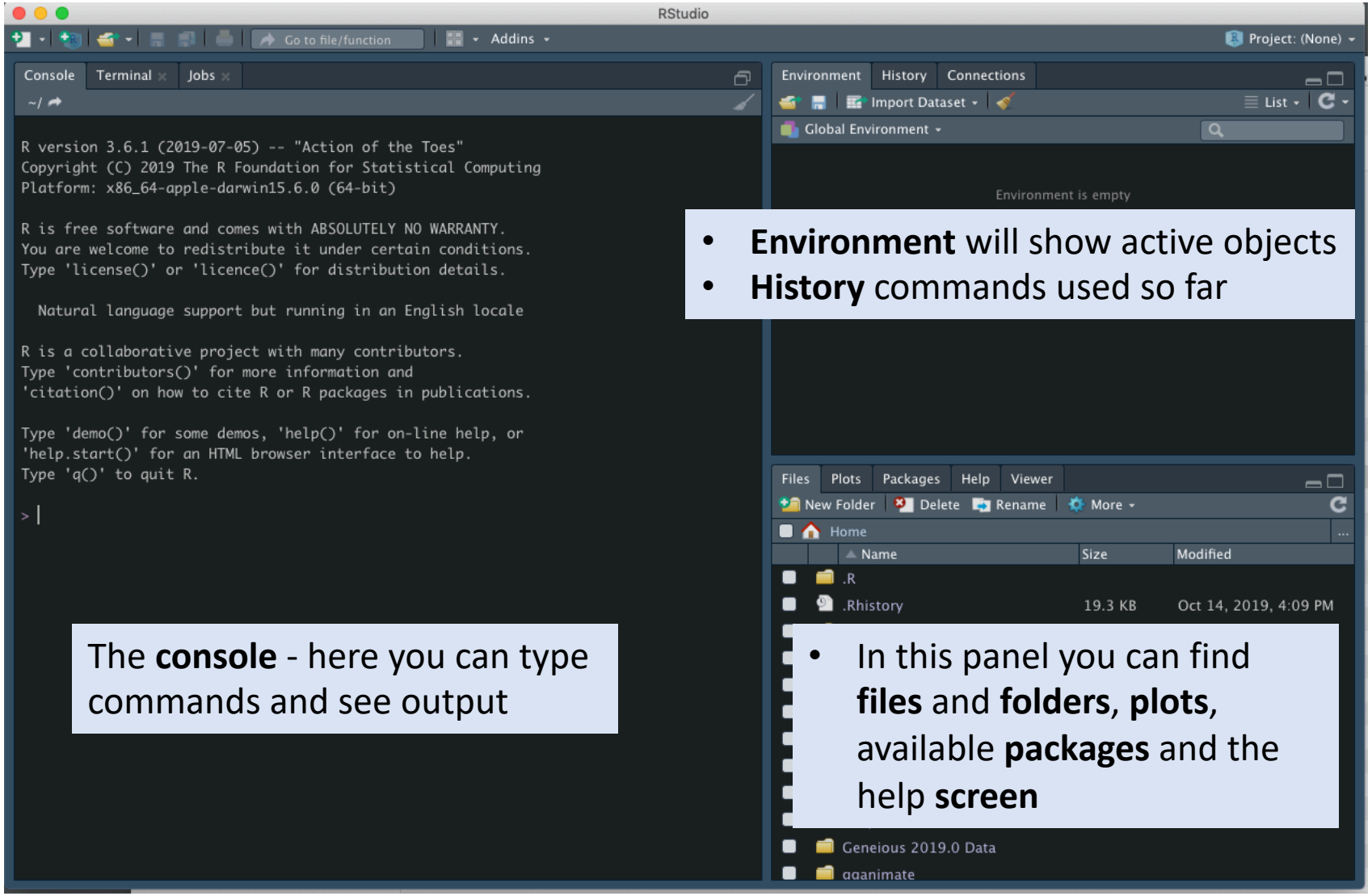
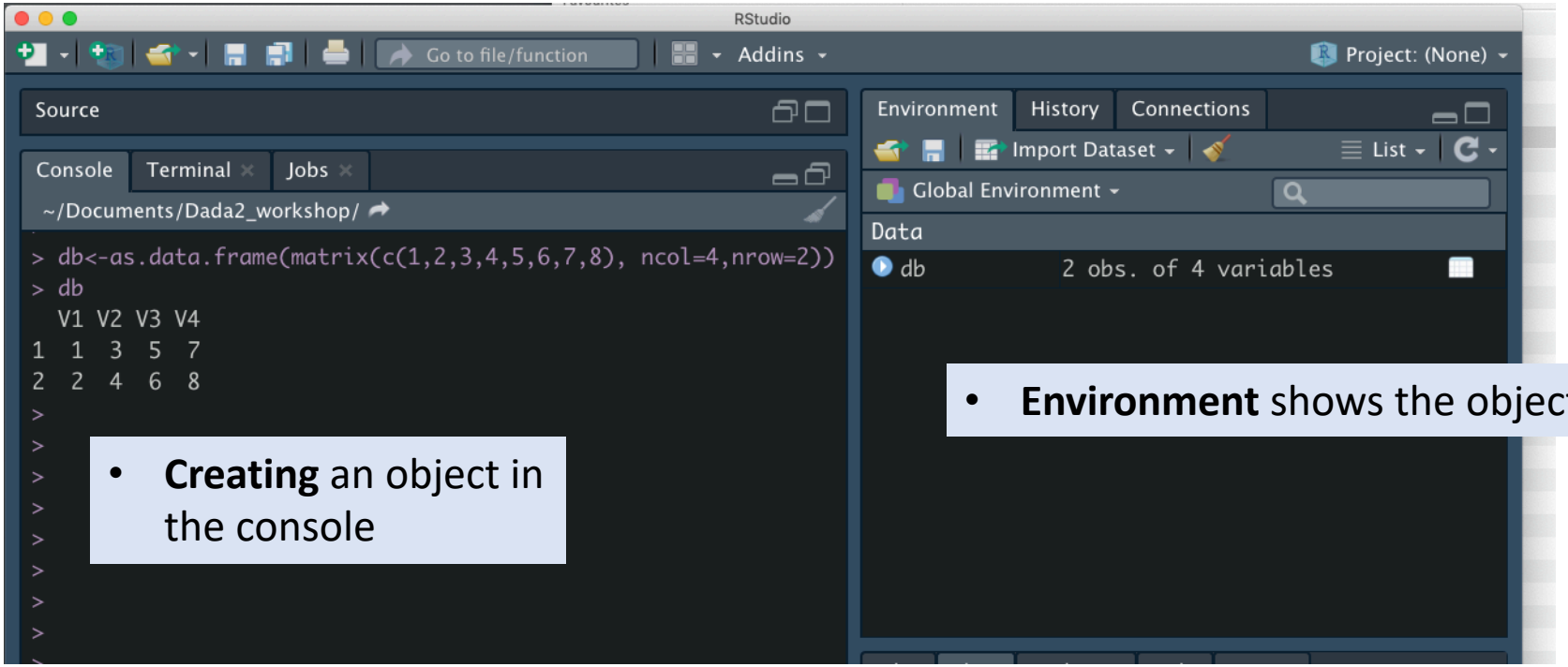
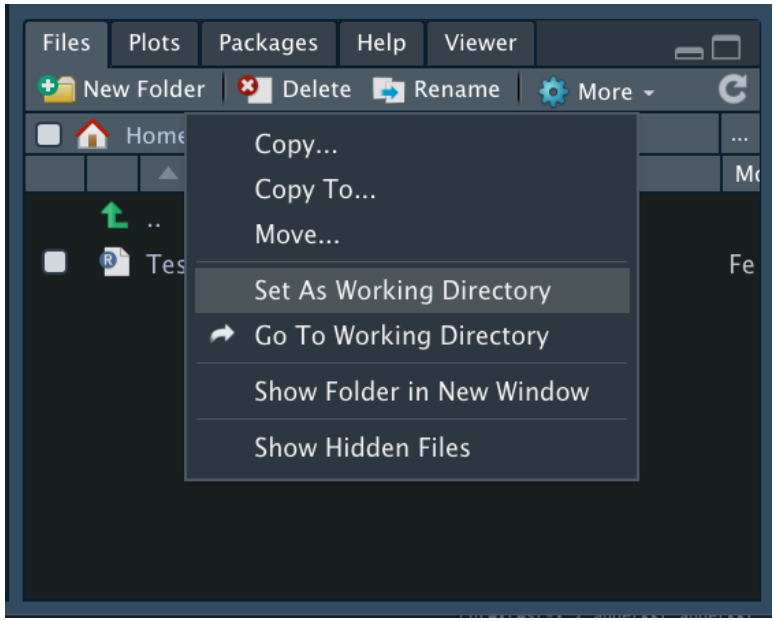
Rstudio screen




RStudio
Go to file/function
Addins
Project: (None)
Source
Console
Terminal
Jobs
~/Documents/Dada2_workshop/
> db<-as.data.frame(matrix(c(1,2,3,4,5,6,7,8), ncol=4,nrow=2))
> db
V1 V2 V3 V4
1 1 3 5 7
2 2 4 6 8
Environment
History
Connections
Import Dataset
List
Global Environment
Data
db
2 obs. of 4 variables
• Creating an object in the console
• Environment shows the object

Setting working directory

- Navigate to correct folder under the “files” tab
- Click “Set As Working Directory” (under *More*)



Setting working directory

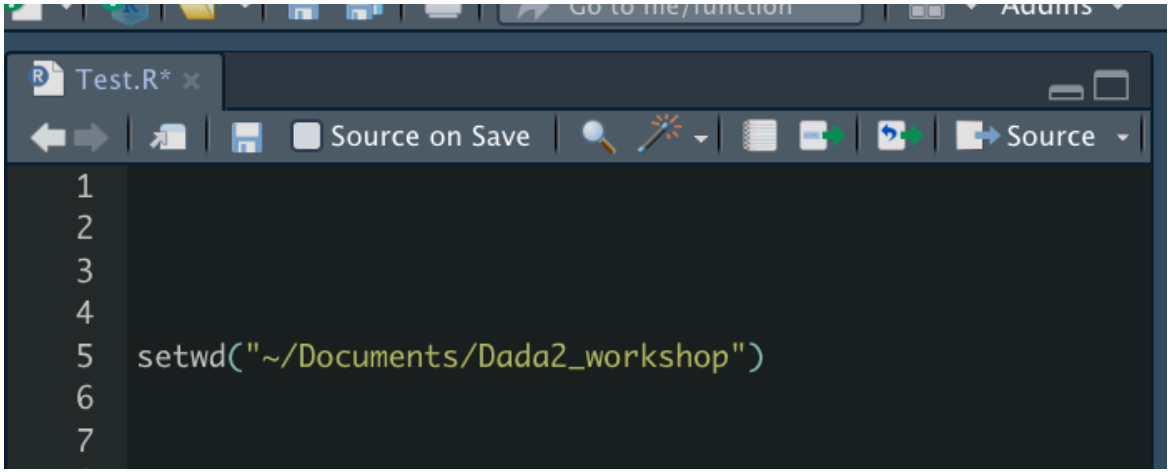
- Alternatively write

  MAC:

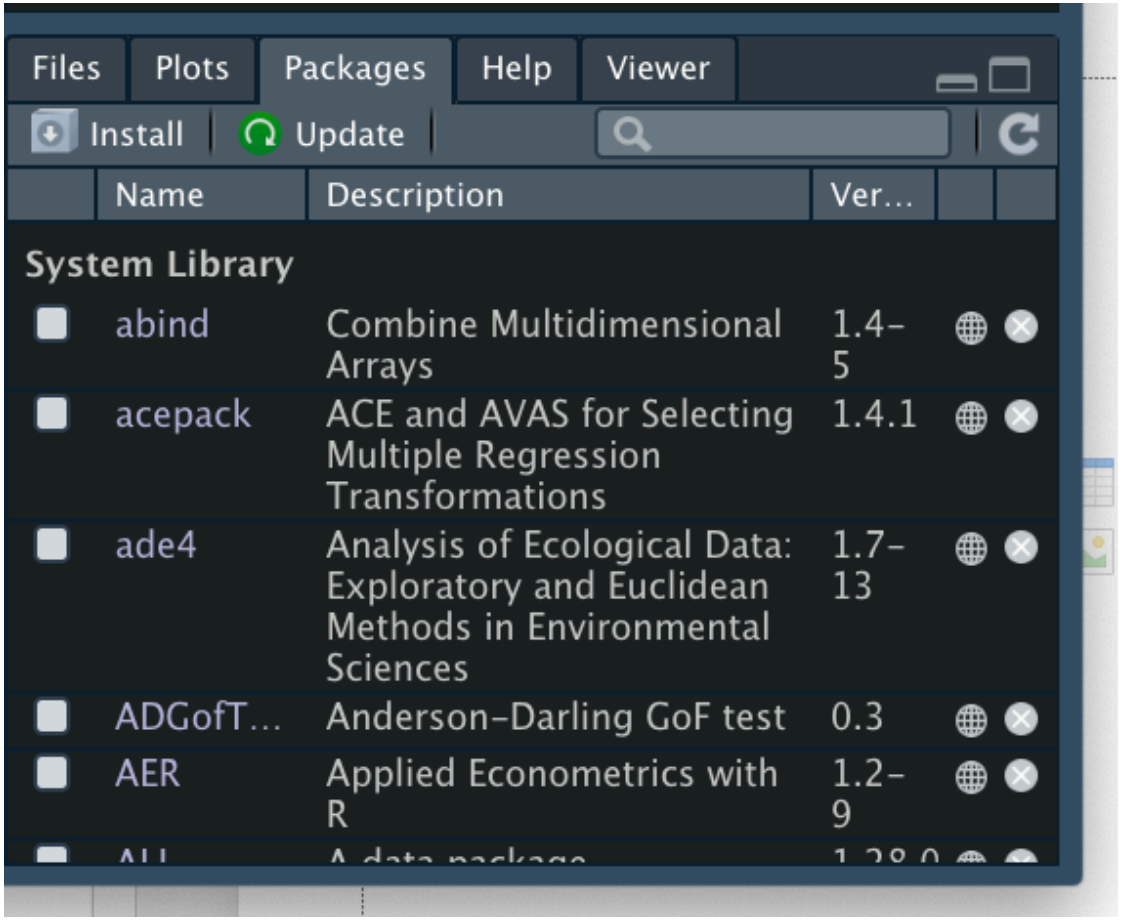
  ```
  setwd("~/path/to/my/folder")
  ```

  WINDOWS

  ```
  setwd("C:/path/to/my/folder")
  ```

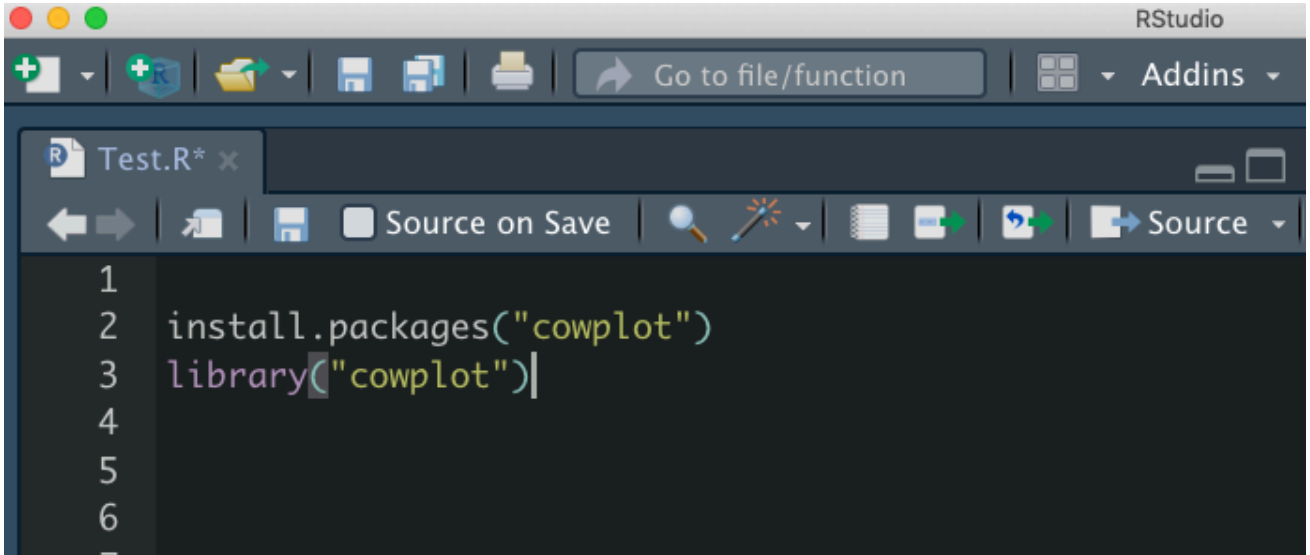


Installing packages



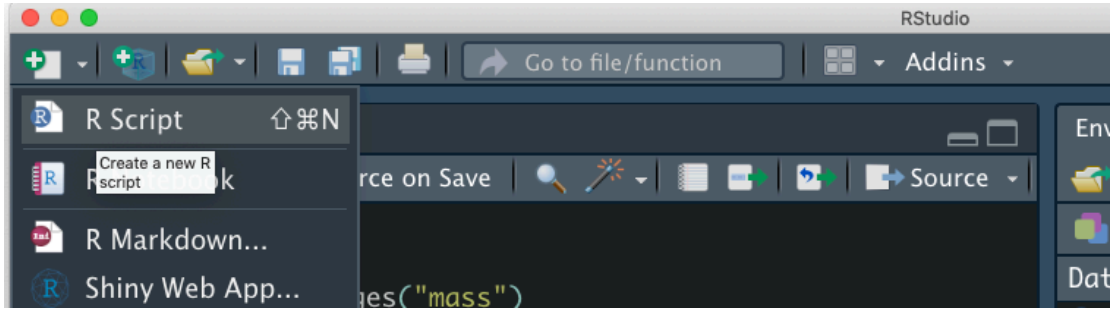
Installing packages 2

- Or use the command (with cowplot as example)
  - `install.packages("cowplot")`
- Installed packages can be loaded with the command
  - `Library("cowplot")`

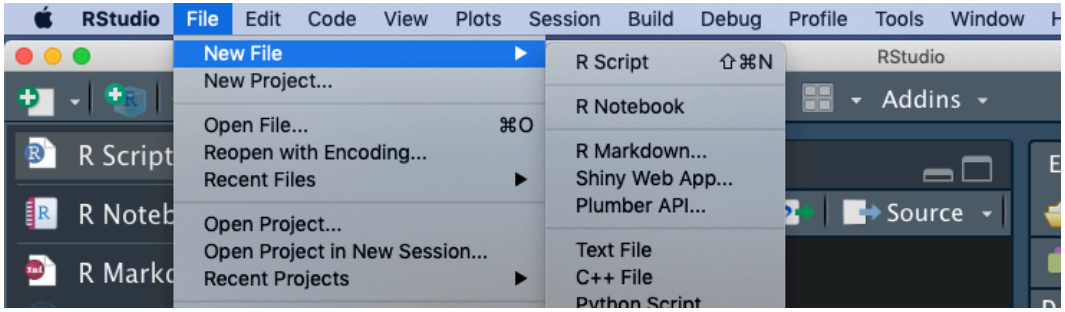


Using Scripts

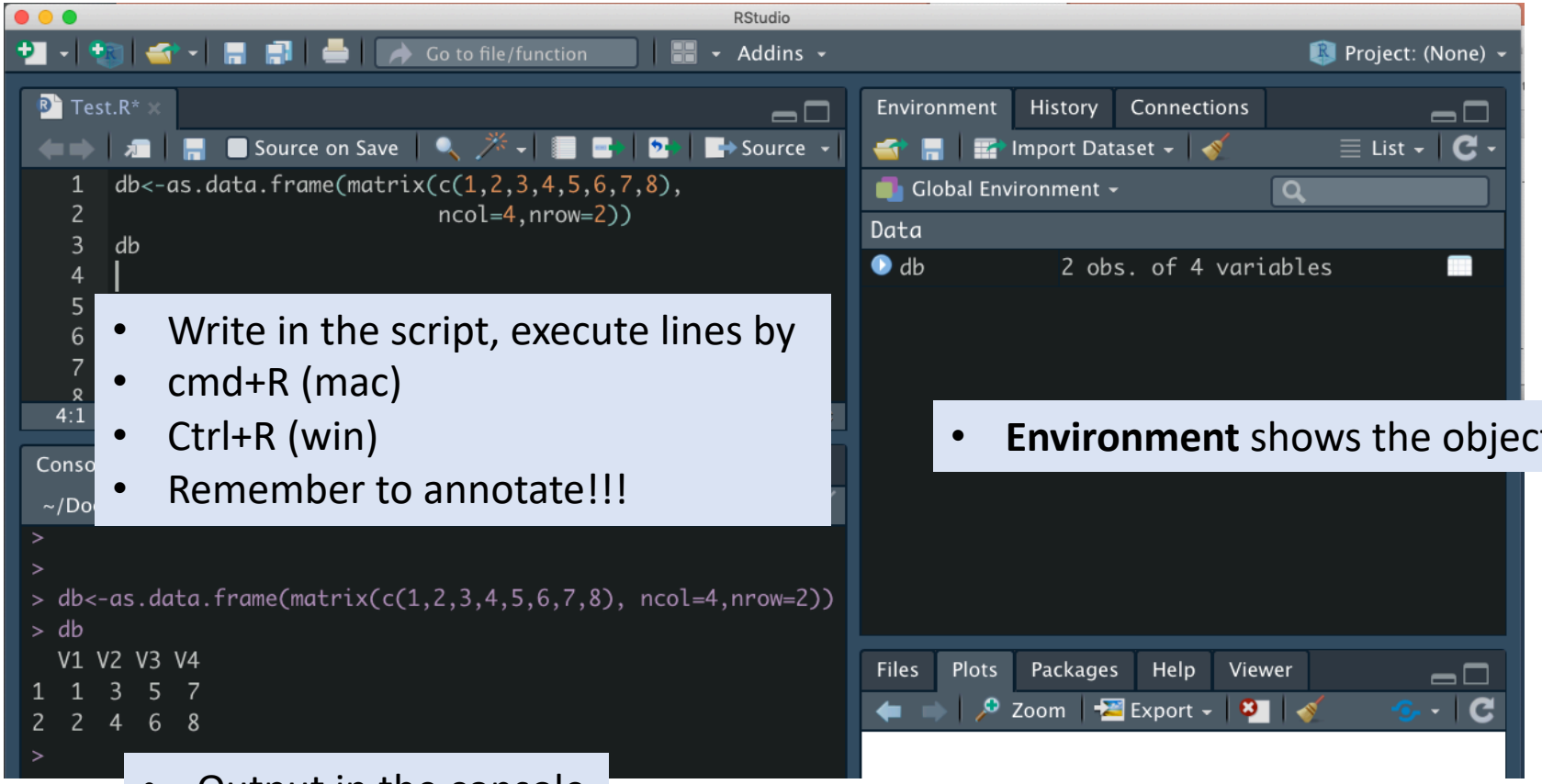
Click icon with a document and a + sign



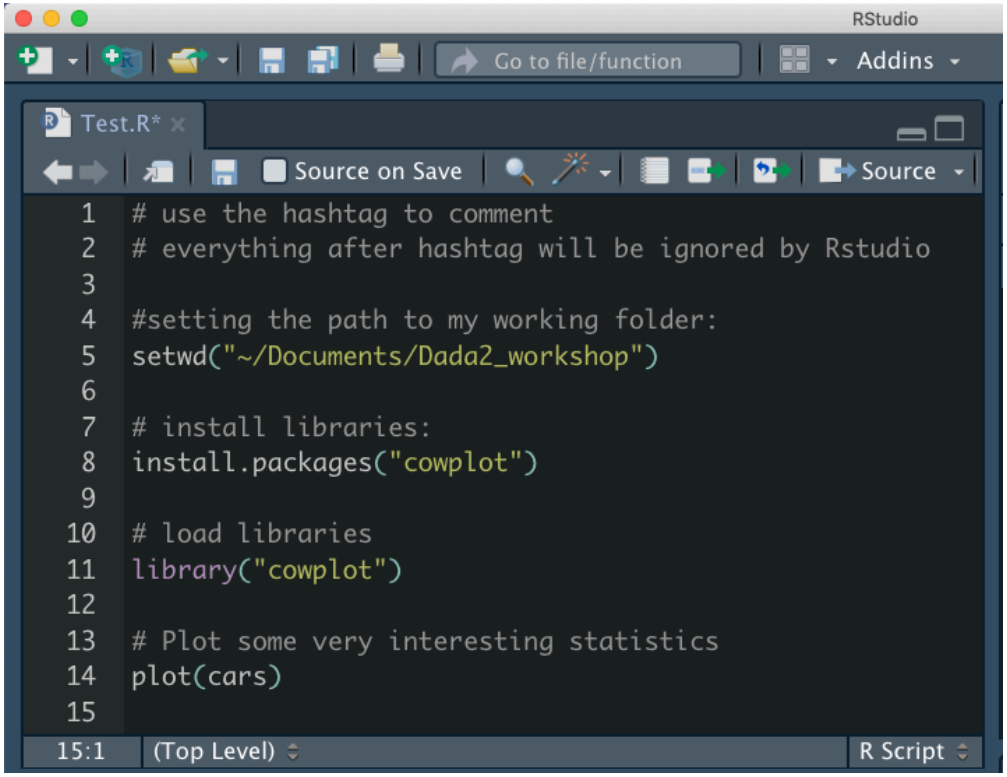
OR click File -> New File -> R Script



Using Scripts



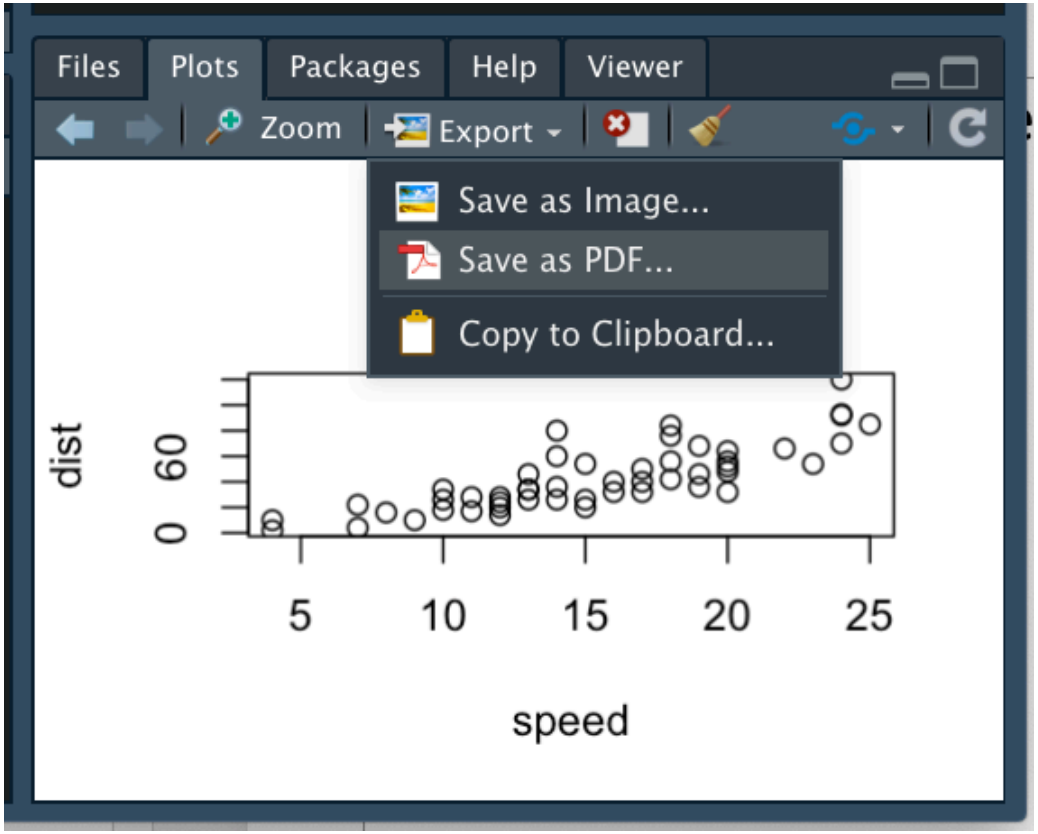
Comment and annotate your script!!!



- What the code does
- How the code does it
- How to use the code

Plotting plots and other dots

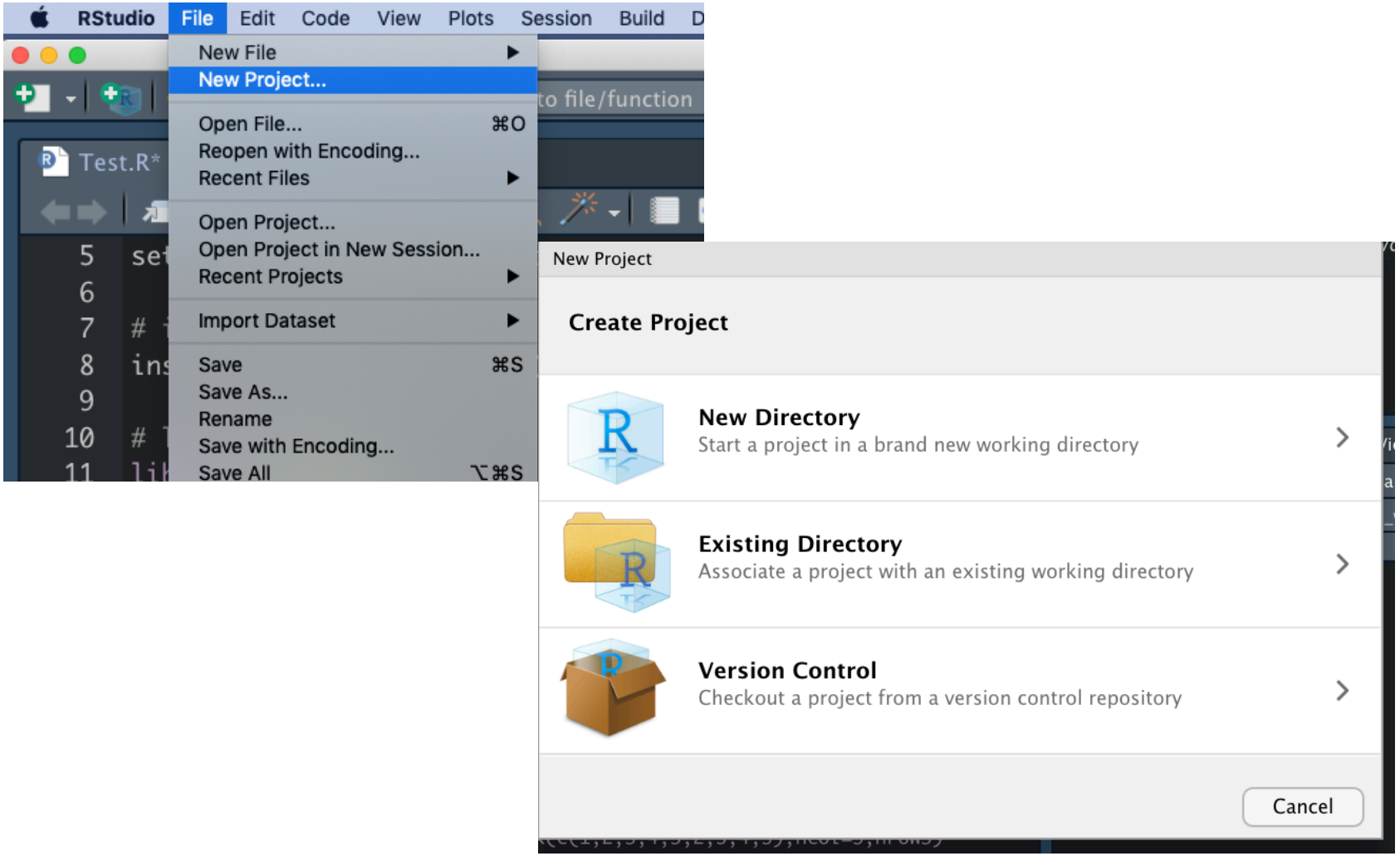
- Plots will appear in the *plots* tab and can be exported in various formats



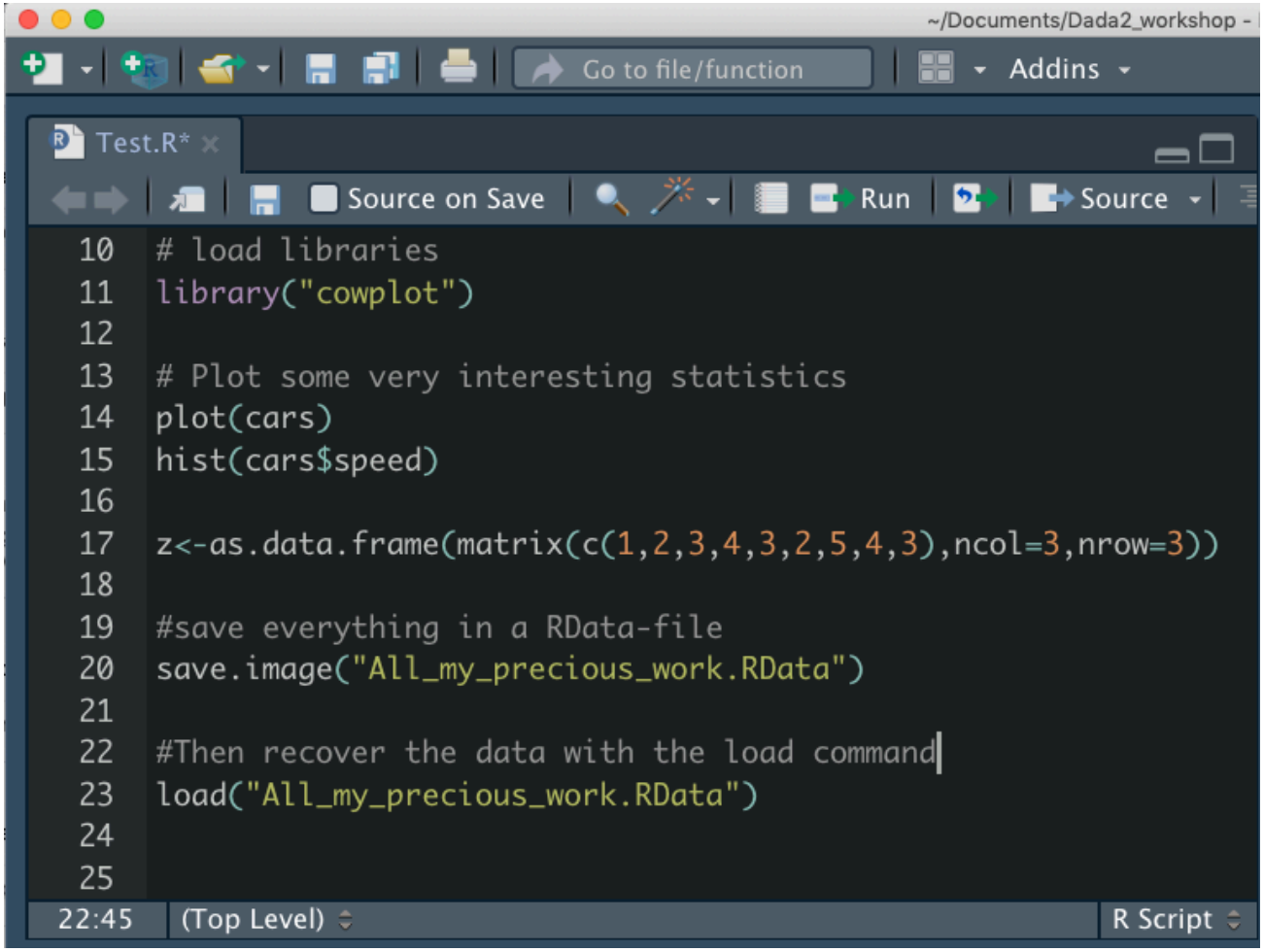
Use R-projects

- This will set the default working directory for the particular project, and makes it easy to save everything in the same folder.
- Very helpful when working on several different projects
- Also very easy to integrate with *github* and version control with the option to push and pull repositories (not covered in this workshop)
- Or for sharing all data with somebody else using Rstudio

Use R-projects



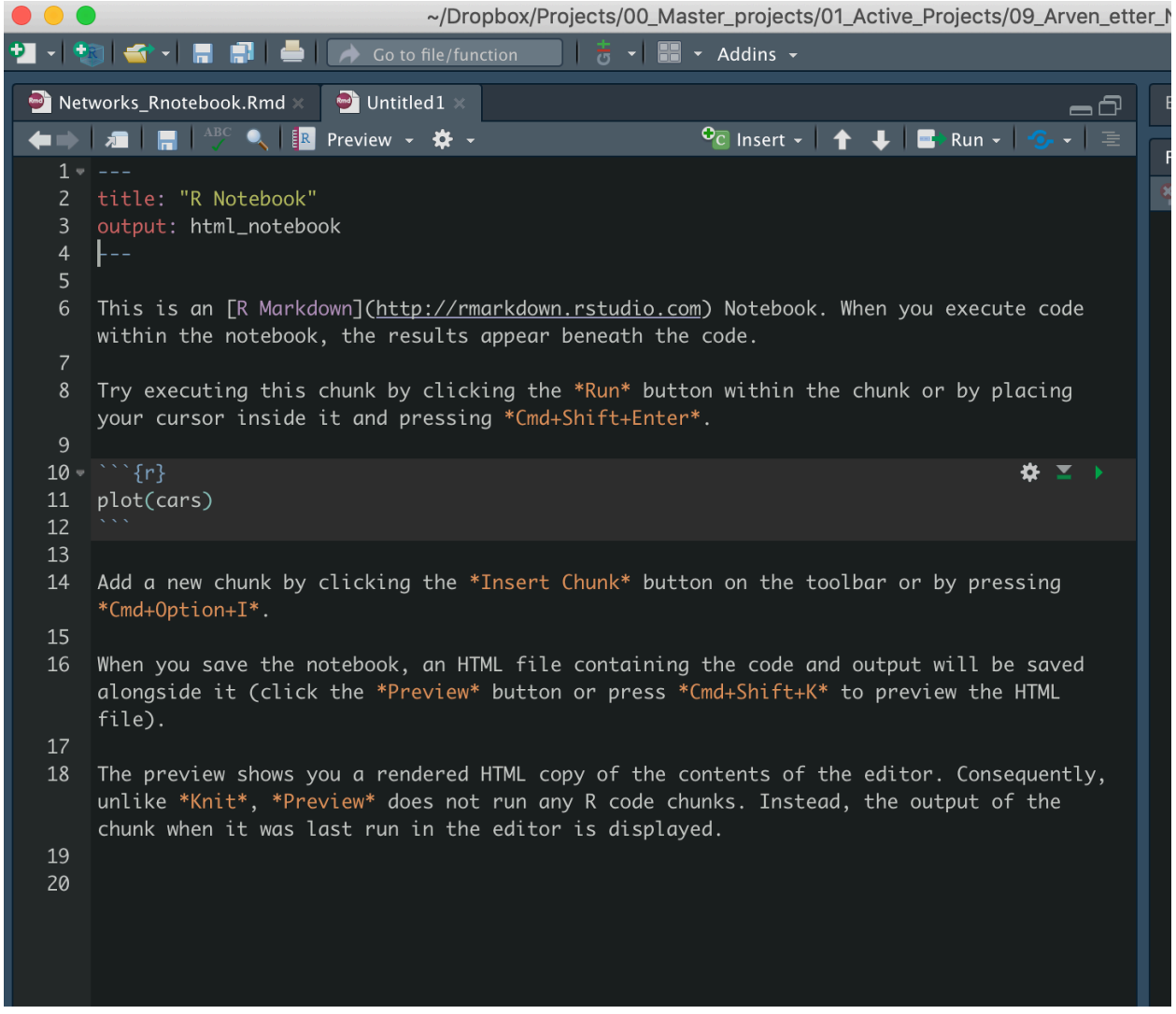
Use R-projects



Markdown and R notebooks

- An alternative to “simple” script in Rstudio.
- Advantage: easy to export in other easy-to-read formats (i.e. html, pdf, word, presentations).
- Markdown language is an easy way of formatting using plain text
- R Notebook is somewhat more powerful with additional options for formatting.
- Can run chunks of code from other languages *within* Rstudio
- **Disadvantage**: Not compatible with (standalone) R, which is often used on clusters and servers.

R Notebook


~/Dropbox/Projects/00_Master_projects/01_Active_Projects/09_Arven_etter_N
Go to file/function
Addins
Networks_Rnotebook.Rmd
Untitled1
Preview
Insert
Run
1 ---
2 title: "R Notebook"
3 output: html_notebook
4 ---
5
6 This is an [R Markdown](http://rmarkdown.rstudio.com) Notebook. When you execute code within the notebook, the results appear beneath the code.
7
8 Try executing this chunk by clicking the *Run* button within the chunk or by placing your cursor inside it and pressing *Cmd+Shift+Enter*.
9
10 ```{r}
11 plot(cars)
12 ```
13
14 Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Cmd+Option+I*.
15
16 When you save the notebook, an HTML file containing the code and output will be saved alongside it (click the *Preview* button or press *Cmd+Shift+K* to preview the HTML file).
17
18 The preview shows you a rendered HTML copy of the contents of the editor. Consequently, unlike *Knit*, *Preview* does not run any R code chunks. Instead, the output of the chunk when it was last run in the editor is displayed.
19
20