ST 555:
Statistical Programming I

R Markdown

Bo “Paul” Ning

Dr. Reneé H. Moore

Outline

- What is R Markdown?
- Why use R Markdown?
- Use R Markdown to generate report

What is R Markdown?

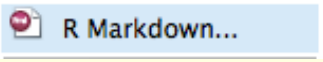
- R Markdown is a dynamic document for R
- It combines the core syntax of markdown (an easy-to-write plain text format) with embedded R code chunks that are run so their output can be included in the final document.

(from http://rmarkdown.rstudio.com)

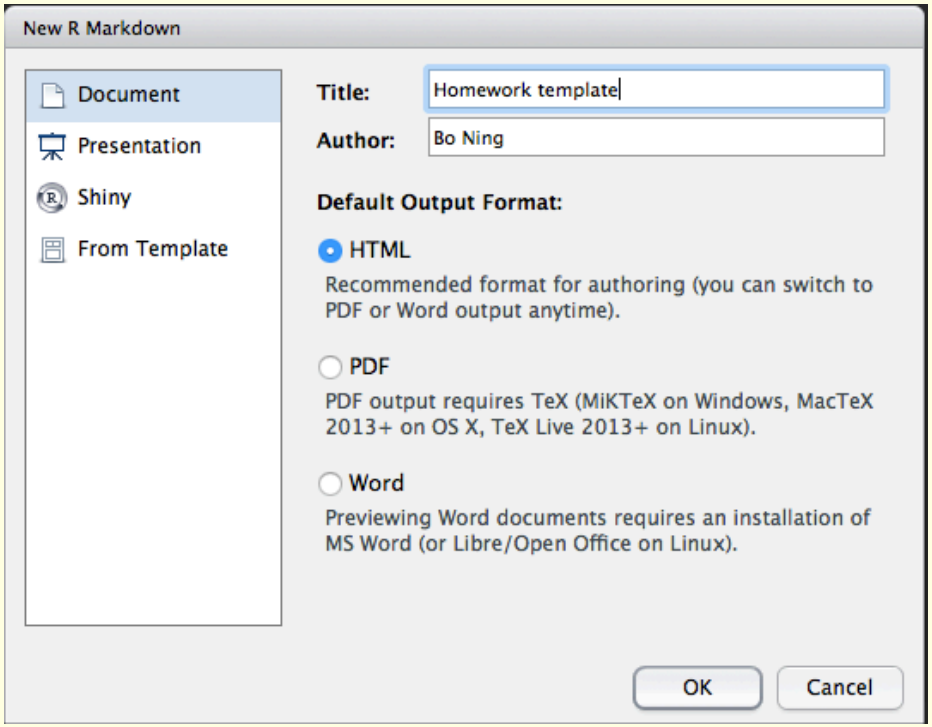
Why use R Markdown?

- New technology, widely used
- Integrate texts, R code and output together in one document in a nice looking way
- Automatically generate dynamic report for R programming
- Homework requires you to use R Markdown

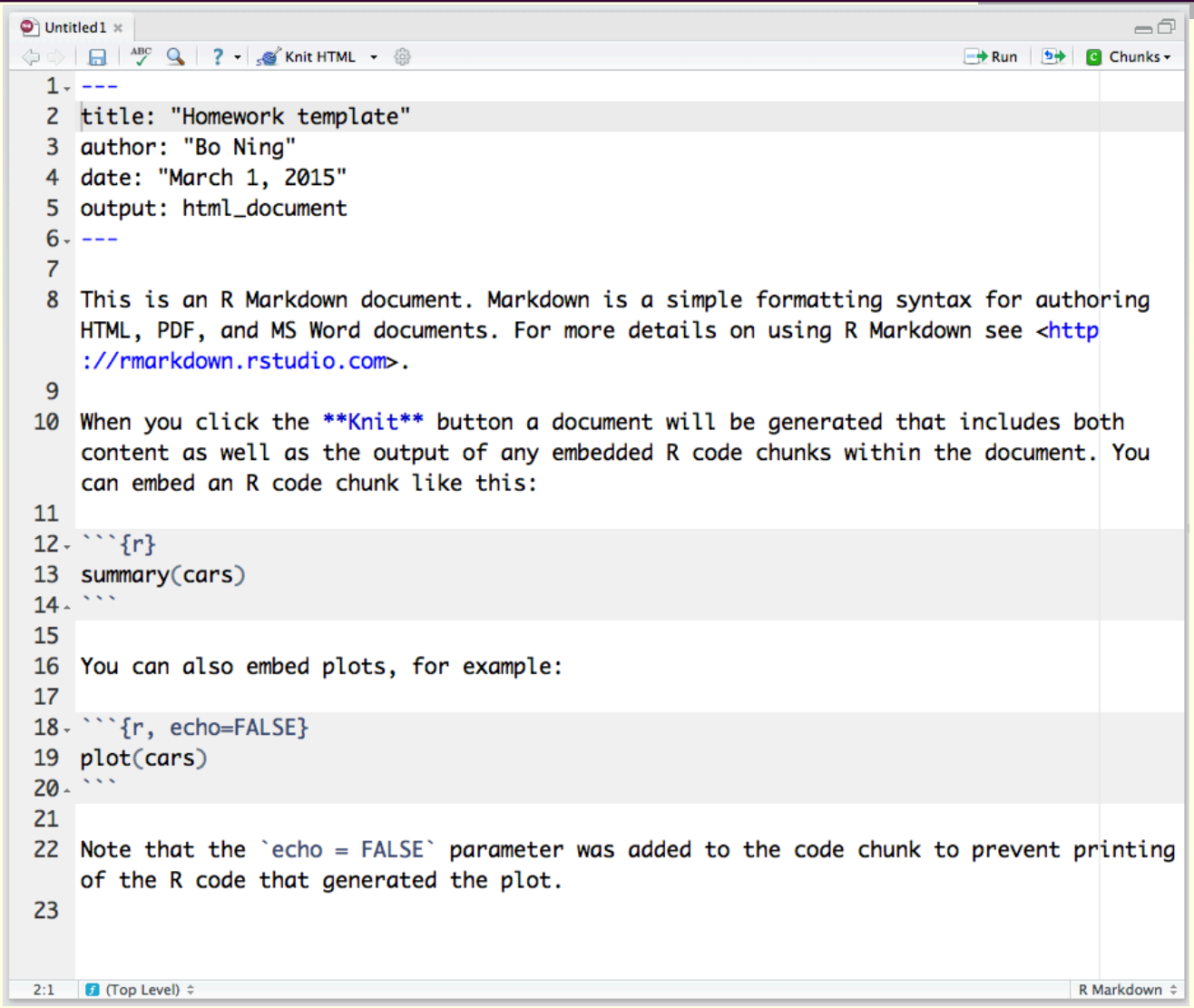
Open R Markdown

- Find out  button in the left upper side of RStudio.
- Click  , then click 

- Choose “Document”, enter “Title” with “Homework name” , enter your name, and choose format. Any format is fine. Then click “OK”.

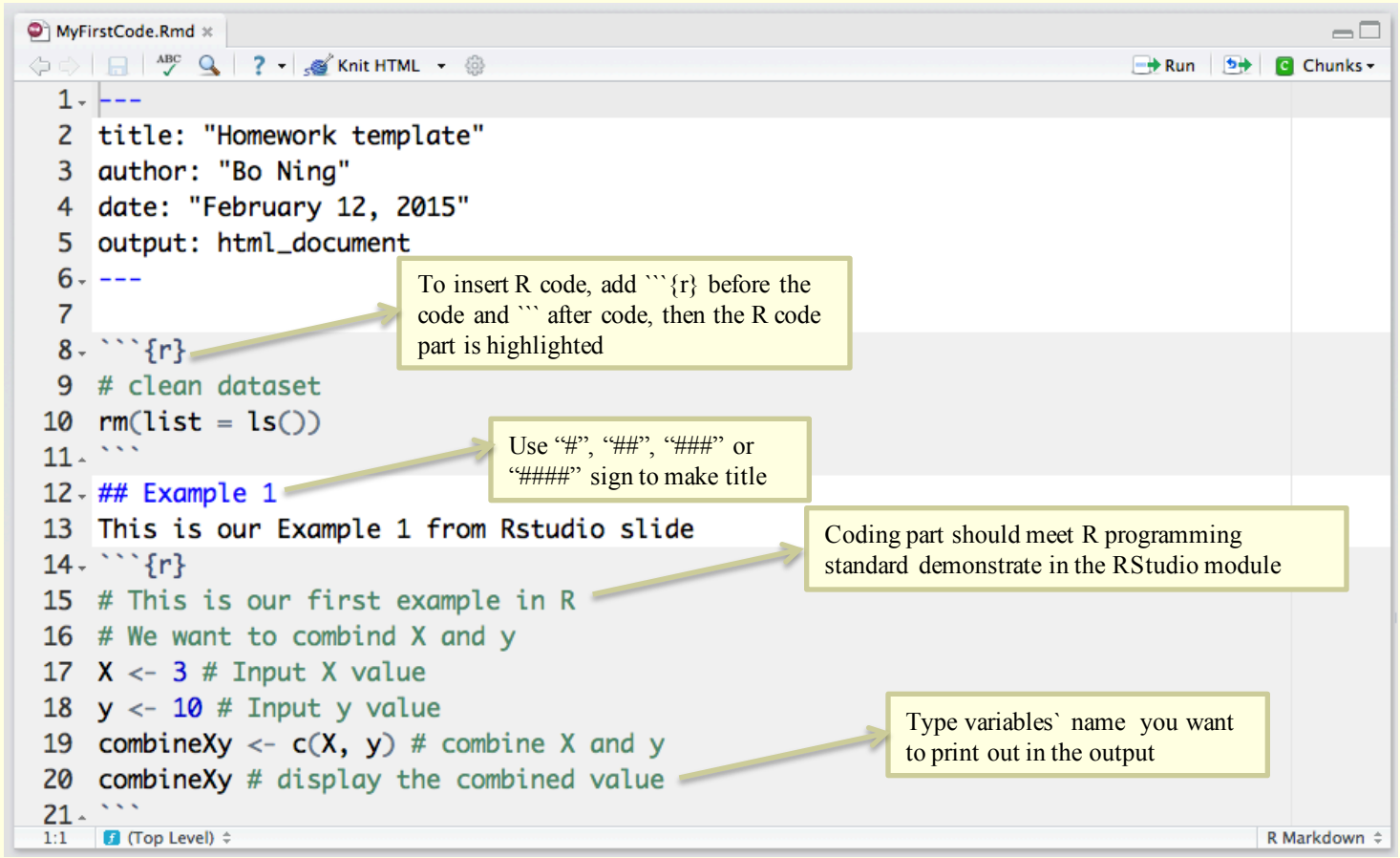


Open R Markdown

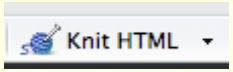


Write code in R Markdown

- Let`s start to write our first R Markdown file
- Includes title (question number) and "rm(list = ls())"



Generate report

- To generate a report, in the editor window, find out 

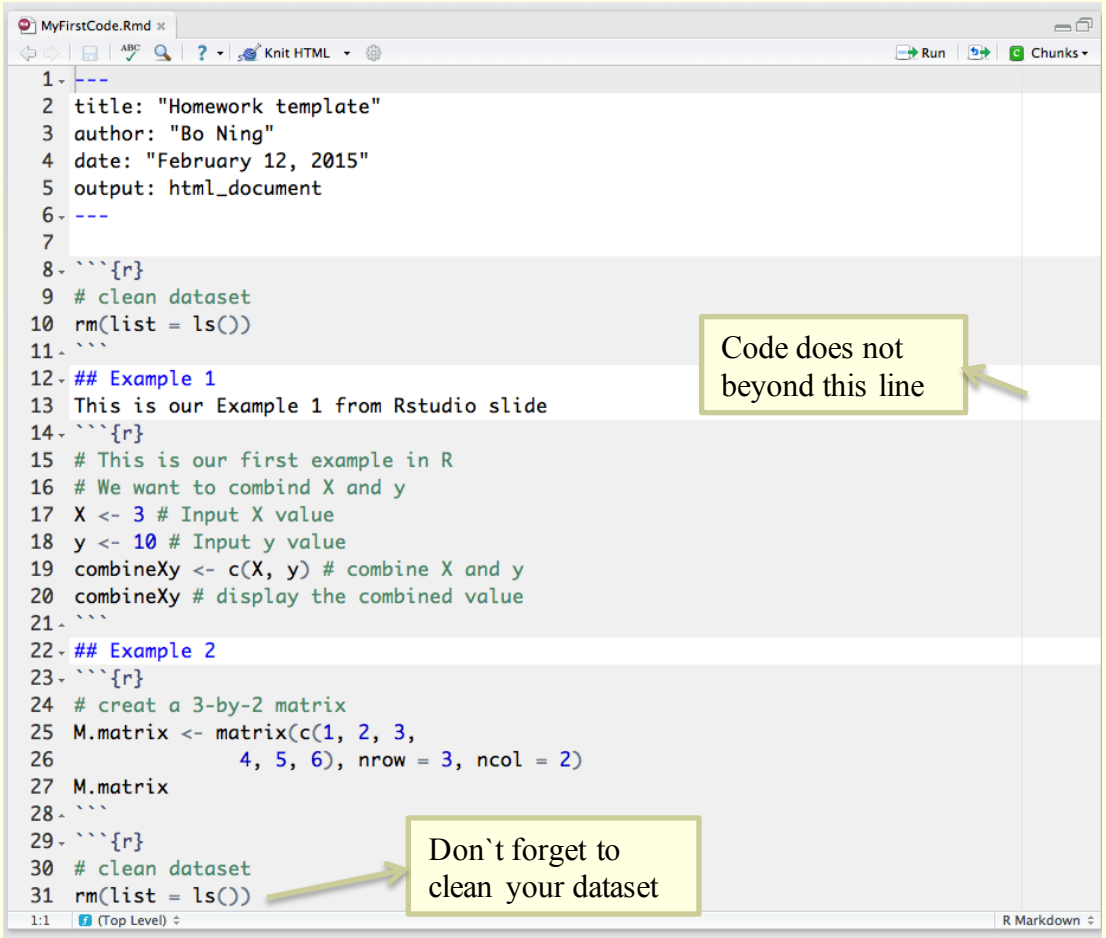
.
- There are three formats you could choose for your report. Knit HTML gives you a .html format report; Knit PDF, gives you a .pdf format report; Knit Word, gives you a .doc/.docx format report.
- Knit PDF may require you to install LaTeX, which you could download from the website: http://latex-project.org
- If you don`t wish to install LaTeX, Knit HTML and Knit Word are the options for you. (In the homework, you are free to use any of the three forms)

Generate report

- Here is the report generated by “Knit HTML”. See what happened?

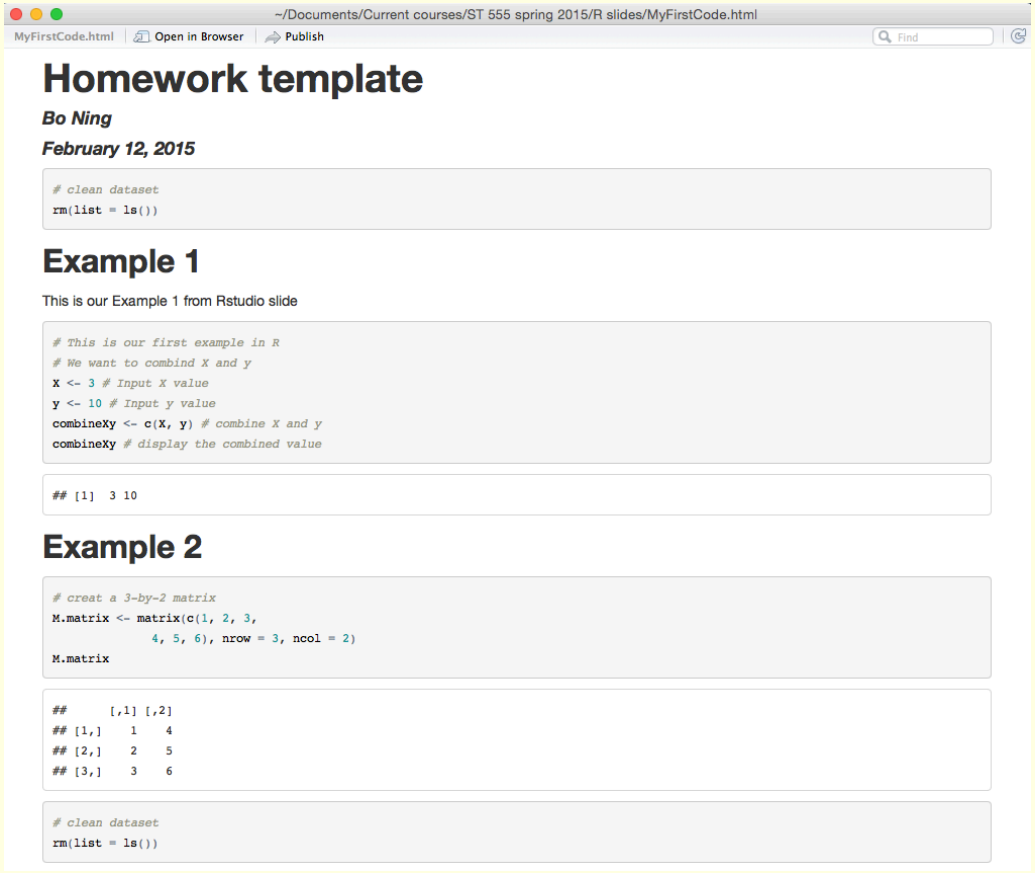
Generate report

- Suppose our homework template has 2 examples, here is the final version of the code.



Generate report

- Let`s Knit HTML again.



R Markdown supplements

- The advantage for R Markdown is that it incorporates LaTeX.
- If you want to know more about how to incorporates LaTeX code in R Markdown, please google it, or go to Yihui Xie`s blog (http://yihui.name)
- For each homework, please submit a R Markdown file (.Rmd file) and the corresponding output file (.html file, .pdf file or a word file).