

R Markdown Cheat Sheet

learn more at rmarkdown.rstudio.com

rmarkdown 0.2.50 Updated: 8/14



1. Workflow R Markdown is a format for writing reproducible, dynamic reports with R. Use it to embed R code and results into slideshows, pdfs, html documents, Word files and more. To make a report:

i. Open - Open a file that uses the .Rmd extension.

ii. Write - Write content with the easy to use R Markdown syntax

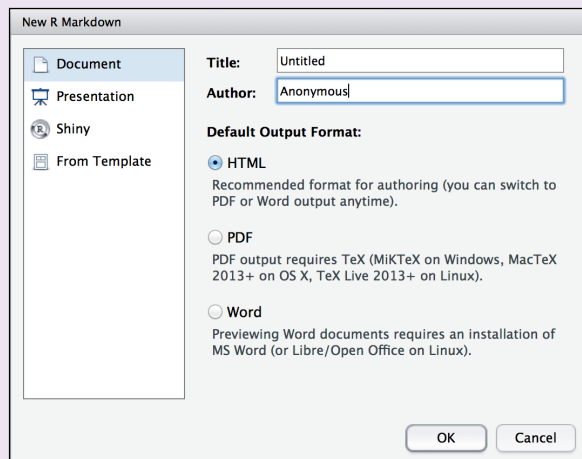
iii. Embed - Embed R code that creates output to include in the report

iv. Render - Replace R code with its output and transform the report into a slideshow, pdf, html or ms Word file.



2. Open File Start by saving a text file with the extension .Rmd, or open an RStudio Rmd template

- In the menu bar, click **File ► New File ► R Markdown...**
- A window will open. Select the class of output you would like to make with your .Rmd file
- Select the specific type of output to make with the radio buttons (you can change this later)
- Click OK



3. Markdown Next, write your report in plain text. Use markdown syntax to describe how to format text in the final report.

syntax

Plain text
End a line with two spaces to start a new paragraph.
italics and `_italics_`
bold and `__bold__`
superscript²
~~strikethrough~~
`[link](www.rstudio.com)`

Header 1
Header 2
Header 3
Header 4
Header 5
Header 6

endash: --
emdash: ---
ellipsis: ...
inline equation: $A = \pi * r^2$
image: ``

horizontal rule (or slide break):

> block quote

* unordered list
* item 2
+ sub-item 1
+ sub-item 2

1. ordered list
2. item 2
+ sub-item 1
+ sub-item 2

Table Header	Second Header
Table Cell	Cell 2
Cell 3	Cell 4

becomes

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End a line with two spaces to start a new paragraph.
italics and *italics*
bold and **bold**
superscript²
~~strikethrough~~
[link](#)

Header 1
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- item 2
 - sub-item 1
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Table Header	Second Header
Table Cell	Cell 2
Cell 3	Cell 4

4. Choose Output Write a YAML header that explains what type of document to build from your R Markdown file.

YAML

A YAML header is a set of key: value pairs at the start of your file. Begin and end the header with a line of three dashes (- - -)

```
---  
title: "Untitled"  
author: "Anonymous"  
output: html_document  
---  
  
This is the start of my  
report. The above is metadata  
saved in a YAML header.
```

The RStudio template writes the YAML header for you

The output value determines which type of file R will build from your .Rmd file (in Step 6)

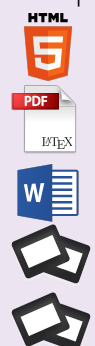
output: html_document html file (web page)

output: pdf_document pdf document

output: word_document Microsoft Word .docx

output: beamer_presentation beamer slideshow (pdf)

output: ioslides_presentation ioslides slideshow (html)

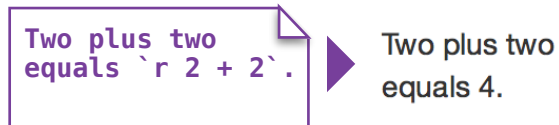


5. Embed Code

Use knitr syntax to embed R code into your report. R will run the code and include the results when you render your report.

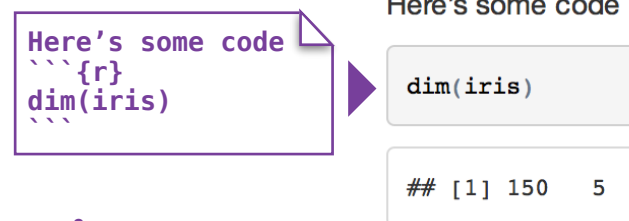
inline code

Surround code with back ticks and `r`. R replaces inline code with its results.



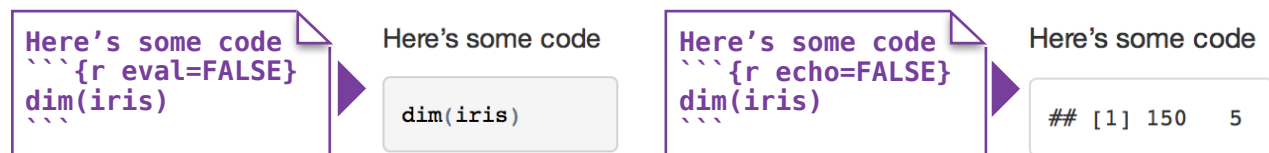
code chunks

Start a chunk with ````{r}`. End a chunk with `````.



display options

Use knitr options to style the output of a chunk. Place options in brackets above the chunk.



option	default	effect
<code>eval</code>	TRUE	Whether to evaluate the code and include its results
<code>echo</code>	TRUE	Whether to display code along with its results
<code>warning</code>	TRUE	Whether to display warnings
<code>error</code>	FALSE	Whether to display errors
<code>message</code>	TRUE	Whether to display messages
<code>tidy</code>	FALSE	Whether to reformat code in a tidy way when displaying it
<code>results</code>	"markup"	"markup", "asis", "hold", or "hide"
<code>cache</code>	FALSE	Whether to cache results for future renders
<code>comment</code>	"###"	Comment character to preface results with
<code>fig.width</code>	7	Width in inches for plots created in chunk
<code>fig.height</code>	7	Height in inches for plots created in chunk

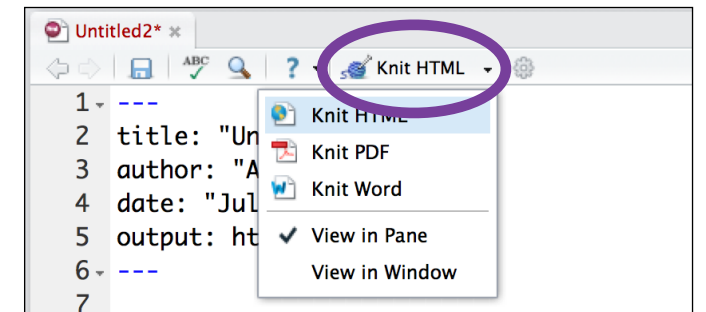
For more details visit yihui.name/knitr/

6. Render

Use your .Rmd file as a blueprint to build a finished report.

Render your report in one of two ways

1. Run `rmarkdown::render("<file path>")`
2. Click the **knit HTML** button at the top of the RStudio scripts pane

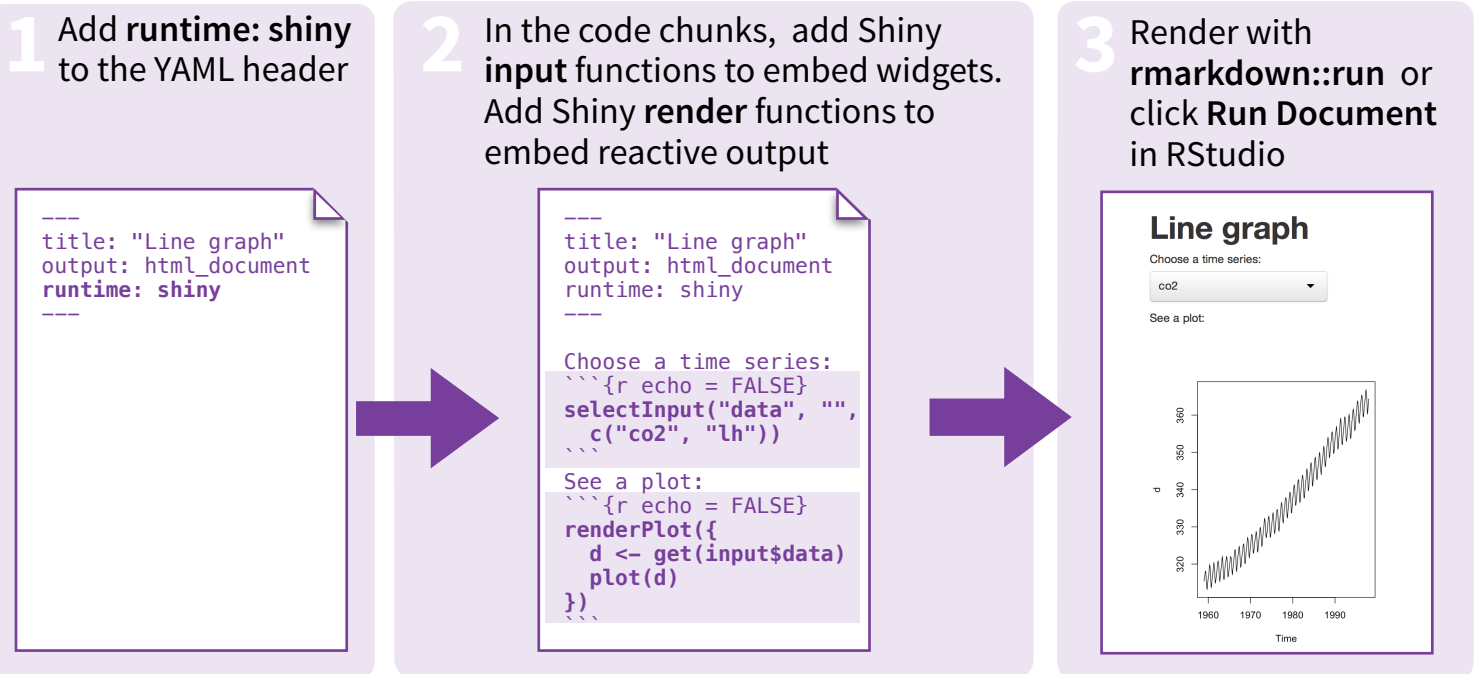


When you render, R will

- execute each embedded code chunk and insert the results into your report
- build a new version of your report in the output file type
- open a preview of the output file in the viewer pane
- save the output file in your working directory

7. Interactive Docs

Turn your report into an interactive Shiny document in 3 steps



* Note: your report will be a Shiny app, which means you must choose an html output format, like `html_document` (for an interactive report) or `ioslides_presentation` (for an interactive slideshow).

8. Publish

Share your report where users can visit it online

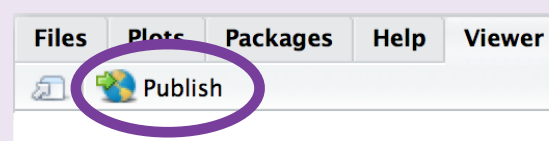
Rpubs.com

Share non-interactive documents on RStudio's free R Markdown publishing site
www.rpubs.com

ShinyApps.io

Host an interactive document on RStudio's server. Free and paid options
www.shinyapps.io

Click the "Publish" button in the RStudio preview window to publish to rpubs.com with one click.



9. Learn More

Documentation and examples - rmarkdown.rstudio.com

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