rmarkdown

Set render options with YAML

When you render, R Markdown
1. runs the R code, embeds results and text into .md file with knitr
2. then converts the .md file into the finished format with pandoc

Rmd → knitr → md → pandoc

Set a document's default output format in the YAML header:

```
---
output: html_document
---
# Body
```

sub-option	html	pdf	word	odt	rtf	md	github	ioslides	slidy	beamer	description
citation_package		X								X	The LaTeX package to process citations, natbib, biblatex or none
code_folding	X										Let readers to toggle the display of R code, "none", "hide", or "show"
colortheme										X	Beamer color theme to use
css	X							X	X		CSS file to use to style document
dev	X	X	X	X				X	X	X	Graphics device to use for figure output (e.g. "png")
duration								X	X		Add a countdown timer (in minutes) to footer of slides
fig_caption	X	X	X	X	X			X	X	X	Should figures be rendered with captions?
fig_height, fig_width	X	X	X	X	X			X	X	X	Default figure height and width (in inches) for document
highlight	X	X						X	X	X	Syntax highlighting: "tango", "pygments", "kate","zenburn", "textmate"
includes	X	X	X	X	X			X	X	X	File of content to place in document (in_header, before_body, after_body)
incremental								X	X	X	Should bullets appear one at a time (on presenter mouse clicks)?
keep_md	X		X			X	X	X	X		Save a copy of .md file that contains knitr output
keep_tex		X								X	Save a copy of .tex file that contains knitr output
latex_engine		X								X	Engine to render latex, "pdflatex", "xelatex", or "lualatex"
lib_dir	X							X	X		Directory of dependency files to use (Bootstrap, MathJax, etc.)
mathjax	X							X	X		Set to local or a URL to use a local/URL version of MathJax to render equations
md_extensions	X	X	X	X	X	X	X	X	X	X	Markdown extensions to add to default definition or R Markdown
number_sections	X	X								X	Add section numbering to headers
pandoc_args	X	X	X	X	X	X	X	X	X	X	Additional arguments to pass to Pandoc
preserve_yaml						X					Preserve YAML front matter in final document?
reference_docx			X								docx file whose styles should be copied when producing docx output
self_contained	X							X	X		Embed dependencies into the doc
slide_level										X	The lowest heading level that defines individual slides
smaller								X			Use the smaller font size in the presentation?
smart	X	X						X	X	X	Convert straight quotes to curly, dashes to em-dashes, ... to ellipses, etc.
template	X	X						X	X	X	Pandoc template to use when rendering file quarterly_report.html).
theme	X									X	Bootswatch or Beamer theme to use for page
toc	X	X	X	X	X	X	X	X	X	X	Add a table of contents at start of document
toc_depth	X	X	X	X	X	X	X	X	X	X	The lowest level of headings to add to table of contents
toc_float	X										Float the table of contents to the left of the main content

output value — creates

output value	creates
html_document	html
pdf_document	pdf (requires Tex)
word_document	Microsoft Word (.docx)
odt_document	OpenDocument Text
rtf_document	Rich Text Format
md_document	Markdown
github_document	Github compatible markdown
ioslides_presentation	ioslides HTML slides
slidy_presentation	slidy HTML slides
beamer_presentation	Beamer pdf slides (requires Tex)

Customize output with sub-options (listed to the right):

```
---
output: html_document:
  code_folding: hide
  toc_float: TRUE
---
# Body
```

Indent 2 spaces / Indent 4 spaces

html tabsets
Use tablet css class to place sub-headers into tabs

```
# Tabset {.tabset .tabset-fade .tabset-pills}
## Tab 1
text 1
## Tab 2
text 2
### End tabset
```

Tabset

Tab 1 | Tab 2

text 1
End tabset

Pandoc's Markdown

Write with syntax on the left to create effect on right (after render)

Plain text

End a line with two spaces to start a new paragraph.
italics and **bold**
`verbatim code`
sub/superscript^2^~2~
~~strikethrough~~
escaped: * _ \\
endash: --, emdash: ---
equation: $A = \pi*r^{2}$
equation block:

$$E = mc^{2}$$

→ Plain text
→ End a line with two spaces to start a new paragraph. *italics* and **bold** `verbatim code` sub/superscript$^2_2$ ~~strikethrough~~ escaped: * _ \ endash: –, emdash: — equation: $A = \pi*r^2$

$$E = mc^2$$

> block quote

→ block quote

```
# Header 1 {#anchor}
## Header 2 {#css_id}
### Header 3 {.css_class}
#### Header 4
##### Header 5
###### Header 6
```

→ **Header1**, **Header 2**, **Header 3**, **Header 4**, **Header 5**, Header 6

```
<!--Text comment-->
\textbf{Tex ignored in HTML}
<em>HTML ignored in pdfs</em>
```

→ HTML ignored in pdfs
→ Tex ignored in pdfs

```
<http://www.rstudio.com>
[link](www.rstudio.com)
Jump to [Header 1](#anchor)
```

→ http://www.rstudio.com link
→ Jump to Header 1

image:
`![Caption](smallorb.png)`

→ Caption

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

* item 2
    Continued (indent 4 spaces)

1. ordered list
2. item 2
    i. sub-item 1
        A. sub-sub-item 1

(@) A list whose numbering
continues after
(@) an interruption

Term 1
: Definition 1
```

→
- unordered list
  - sub-item 1
  - sub-item 2
    - sub-sub-item 1
- item 2
  Continued (indent 4 spaces)

1. ordered list
2. item 2
   i. sub-item 1
      A. sub-sub-item 1

(@) A list whose numbering continues after
(@) an interruption

Term 1
Definition 1

```
| Right | Left | Default | Center |
|------:|:-----|---------|:------:|
|   12  |  12  |    12   |   12   |
|  123  |  123 |   123   |  123   |
|    1  |    1 |     1   |    1   |
```

→

Right	Left	Default	Center
12	12	12	12
123	123	123	123
1	1	1	1

```
- slide bullet 1
- slide bullet 2
(>- to have bullets appear on click)

horizontal rule/slide break:
***

A footnote [^1]
[^1]: Here is the footnote.
```

→
- slide bullet 1
- slide bullet 2

(>- to have bullets appear on click)

horizontal rule/slide break:

A footnote [1]

1. Here is the footnote. ↵

Citations and Bibliographies

Create citations with .bib, bibtex, copac, enl, json, .medline, .mods, .ris, .wos, and .xml files

1. **Set bibliography file** and CSL 1.0 Style file (optional) in the YAML header

```
bibliography: refs.bib
csl: style.csl
---
```

2. **Use citation keys in text**

```
Smith cited [@smith04].
Smith cited without author [-@smith04].
@smith04 cited in line.
```

→ Smith cited (Joe Smith 2004).
Smith cited without author (2004).
Joe Smith (2004) cited in line.

3. **Render.** Bibliography will be added to end of document

Learn more in the **stargazer**, **xtable**, and **knitr** packages.

Table Suggestions

Several functions format R data into tables

```
data <- faithful[1:4,]
```

```{r results = 'asis'}
knitr::kable(data, caption = "Table with kable")
```

```{r results="asis"}
print(xtable::xtable(data, caption ="Table with xtable"),
    type = "html", html.table.attributes = "border=0")
```

```{r results = "asis"}
stargazer::stargazer(data, type = "html", title = "Table with stargazer")
```

Table with kable

eruptions	waiting
3.600	79.00
1.80	54.00
3.333	74.00
2.283	62.00

Table with xtable

	eruptions	waiting
1	3.600	79.00
2	1.800	54.00
3	3.333	74.00
4	2.283	62.00

Table with stargazer

	eruptions	waiting
1	3.600	79
2	1.800	54
3	3.333	74
4	2.283	62

Create a Reusable Template

1. **Create a new package** with a inst/rmarkdown/templates directory
2. In the directory, **Place a folder** that contains:
   template.yaml (see below)
   skeleton.Rmd (contents of the template)
   any supporting files
3. **Install the package**
4. **Access template** in wizard at File ▶ New File ▶ R Markdown

template.yaml

```
---
name: My Template
---
```