

# R markdown tutorial

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## Jist of R Markdown

For those new to R Markdown:

```
#install.packages('rmarkdown') # downloads package  
#library(rmarkdown) # call package  
# you have to use library() function after installing the package
```

R Markdown: Connect to data. Run code. Generate reports. *##* Think of as modern day lab notebook where you capture what you DID and what you were THINKING

3 components 1. YAML metadata (title, author, data, output) ['yet another markup language'] 2. Text 3. Code chunks

Shaded area is called a 'chunk'

Three ways to create 'chunk' 1. (on R script consolue) select Insert (green square with C +) > click 'R' (blue circle) on drop down menu 2. (on tool bar) Code > Insert Chunk 3. Manually make chunk {**r**} a. '**r**' symbol is the same key as ' ~ ' b. type ' ' three times c. add curly brackets '{ }' d. place the letter 'r' inside curly brackets {} - there are other items to put inside curly brackets, but we can discuss that later e. write code f. type " " three times to end the 'chunk'

```
# let's practice running code in 'chunks'  
  
# create variables  
x = 2 # x is storing the value 2  
y = 6 # y is storing the value 6  
  
# solve an equation with known variables  
z = x*y # z will be x times y  
  
print(z) # show the answer for z
```

```
## [1] 12
```

When the assignment is completed 1. Select Save (but you should be saving throughout your progress!) - either 'File > Save' or click the blue save icon on R window 2. Click 'Knit' (blue yarn with needles), select 'Knit to HTML' - Knit will rerun your code starting from the top, so make sure to load all data and create all objects - If there are errors in your code, you may not be able to knit your document until they are fixed - You will see the progress of your save in your 'Console' - If your knit is successful, your knitted document will pop up - it should produce 2 files (1. filename.Rmd , 2. filename.html/pdf)

## What are you suppose to turn in?

Content: 1. Each answer should contain all relevant code to reproduce answer (i.e. loading data, variables, graphs) ~ We will grade on completeness and correctness ~ Each week there is 1 TA who grades all of the assignments to keep grading consistent

Format: 1. Must use R markdown to complete assignments, not R Script like week 1 2. Must save R markdown file as 1) .html or 2) .pdf 3. Keep it nice & neat = happy TA! 4. Upload .html or .pdf file to gauchospace by Wednesday (we will not accept .Rmd files)

## Additional help for Rmarkdown and other R code

1. <https://r4ds.had.co.nz/r-markdown.html> ('R for Data Science' by G. Grolemund and H. Wickham)
2. <https://rmarkdown.rstudio.com/> ('R Markdown from RStudio')
3. R Markdown Cheat Sheet (Gauchospace)
4. Rmarkdown syntax reference (Gauchospace)
5. R Markdown Tutorial (Gauchospace)

Example of Rmarkdown