

R Markdown Tutorial- In an R Markdown File!

YOUR NAME

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Welcome! This is a tutorial on R Markdown, which I've made in an R Markdown file! Now, as you're used to the tutorial format, you may be feeling a bit intimidated by this less structured mode of instruction, but I assure you, you will be doing the same coding you've done thus far, rmd files mostly change your formatting and the way in which your file is stored and exported. (Fun fact, the tutorial based labs you're used to were actually still made using an R Markdown file, it was just modified with a package called learnr. We won't cover how to accomplish that in this course but that's just one example of all the cool things you can do with a mastery of R Markdown.) So, without further ado, let's dive in.

What is R Markdown?

To start, let's talk about what an R Markdown file actually is. Markdown is a kind of file that exists beyond R itself, which allows you to integrate text with code. An Rmd is simply a markdown file made especially to work with R. In RStudio, you can create multiple R Markdown Files within a project, just like you can save multiple R scripts.

Code Chunks

Right now, you are reading text which I have written in the text apparatus of R Markdown. This text is the first half of the basic R Markdown (RMD) structure, the other main component are chunks in which you can write your code. I've put an example of one such chunk below:

```
#within the chunks, we can write and comment code as normal. Let's use a very simple  
→ example to demonstrate how running code in the chunks works  
a<- c(2, 5, 7, 6) #creating a vector called a  
print(a) #printing it
```

```
## [1] 2 5 7 6
```

Observe that the code chunks are grey and bounded by a sequence of 3 back ticks at the top and bottom of the chunk. The top boundary also has curly brackets, which in its most basic form contain just `r`, but you can add additional conditions which impact how the chunk functions, which we will get to later.

To see how the chunks output our code, let's run our chunk. There are few ways to do that. We can use the "Run" button at the top right of the panel we have the Rmd file in. If you click the drop down arrow on the "Run" button you will see there's quite a few options for running chunks, along with keyboard shortcuts for each associated action, in case you get tired of using the buttons. Take a minute now to play around with those buttons, selecting certain lines of code in your chunk to run or running the code in its entirety. There is also a simple way to run the code in the chunk within the chunk itself. The rightmost symbol on the topmost line of the chunk is a green triangle, which when pressed will run the chunk in its entirety. This is the most common way that I run code when I use RMD files, but feel free to try out the different methods and decide which one works best for you.

Now that we've gone over how to run our code chunk, let us turn to the output of running said chunk. In the example above, I created a vector which I named `a` and then `as.numeric()`