The File Ecosystem

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There are a core set of files that R uses the you'll likely run into and want to know the meaning of.

`.R`

The base of the programming language, the `.R` file is the simplest and most commonly used file for writing a program in R. A set of commands in the file, executed in order by the computer, provides the user with a reproducible way of repeating an analysis.

In `.R` files, all written text is assumed to be written in the syntax and language of R, such as this:

```
x <- 2 + 2
print("x is ", x)
```

To write comments or notes to yourself or other future users of the file, use the pound symbol or "hashtag" (#) to tell R to ignore that part of the text.

Example:

If we wanted to leave ourselves a comment telling us what our code will do we could write

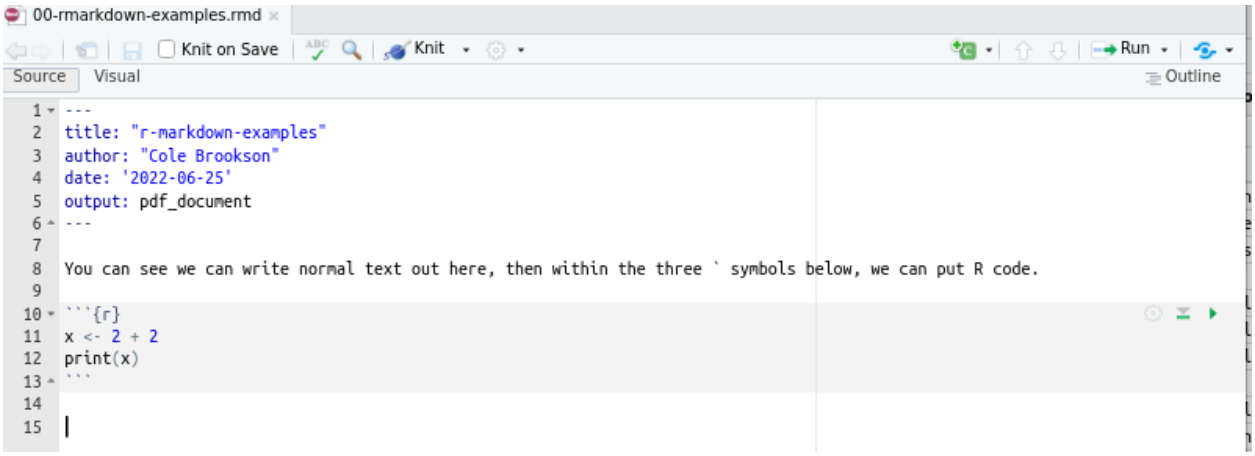
```
x <- 2 + 2
# print the value of x to the console
print(x)
```

`.Rmd`

The `.rmd` file is a special hybrid between an R file `.R` and a markdown file `.md`. This file type gives us flexibility to use both R programming, and write in a normal text editor document like a Microsoft Word doc. Markdown is a lightweight markup language used for creating formatted text.

In short, we can write both normal text (such as methods or results), *and* include chunks of R code in the same file. This is very handy for writing reports and assignments.

To include an R code chunk in a `.rmd` file, we must put the R code inside a special set of characters that looks like this:



`.Rproj`

The last important file you'll use once you're more familiar with R is the `.rproj` file. This file formats an R Project, which is a component of ensuring a reproducible analysis. This file acts to store information about

your R Project #|# LINK TO PROJECTS #|#, as well as point to the directory you have stored your analysis in. This file can also be used as a shortcut for opening the project directly from the filesystem. More about this file type can be found in R Projects.