R Stats 4 nOObs - PMCB Retreat 2016

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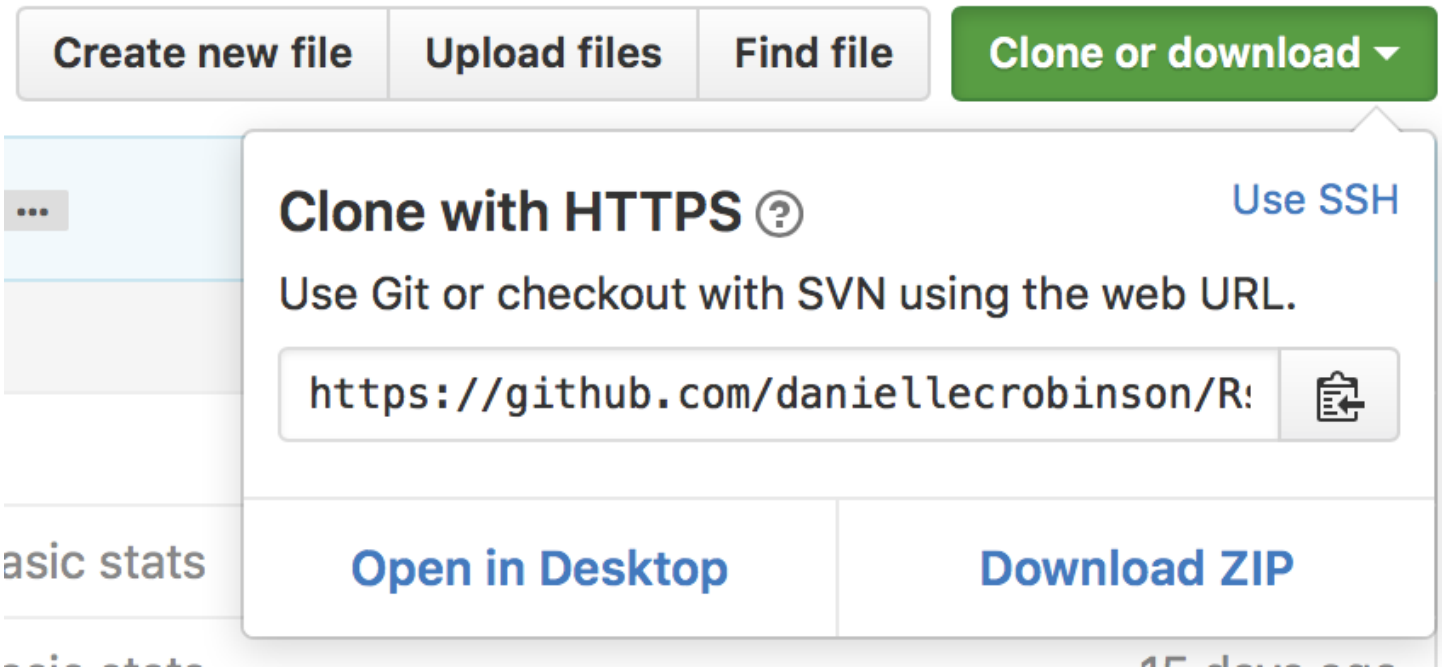
Before we begin

- Download R Studio
  - `https://www.rstudio.com/products/rstudio/download3/`
- Go to our Github page:
  - `https://github.com/daniellecrobinson/Rstats_4_n00bs`



- Click on "Clone or Download"
- Click on "Download Zip"

Why should you use R??

- Collaborative
- Free!
  - unlike Prism, for example
- Can be opened/used on any computer
- You have a ton of control over what you want to do
  - unlike Excel, for example

Basics (1)

- use # to comment
- "<-" assigns values to a variable

```
x<-1
x
```

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

- functions ()

```
print(x)
```

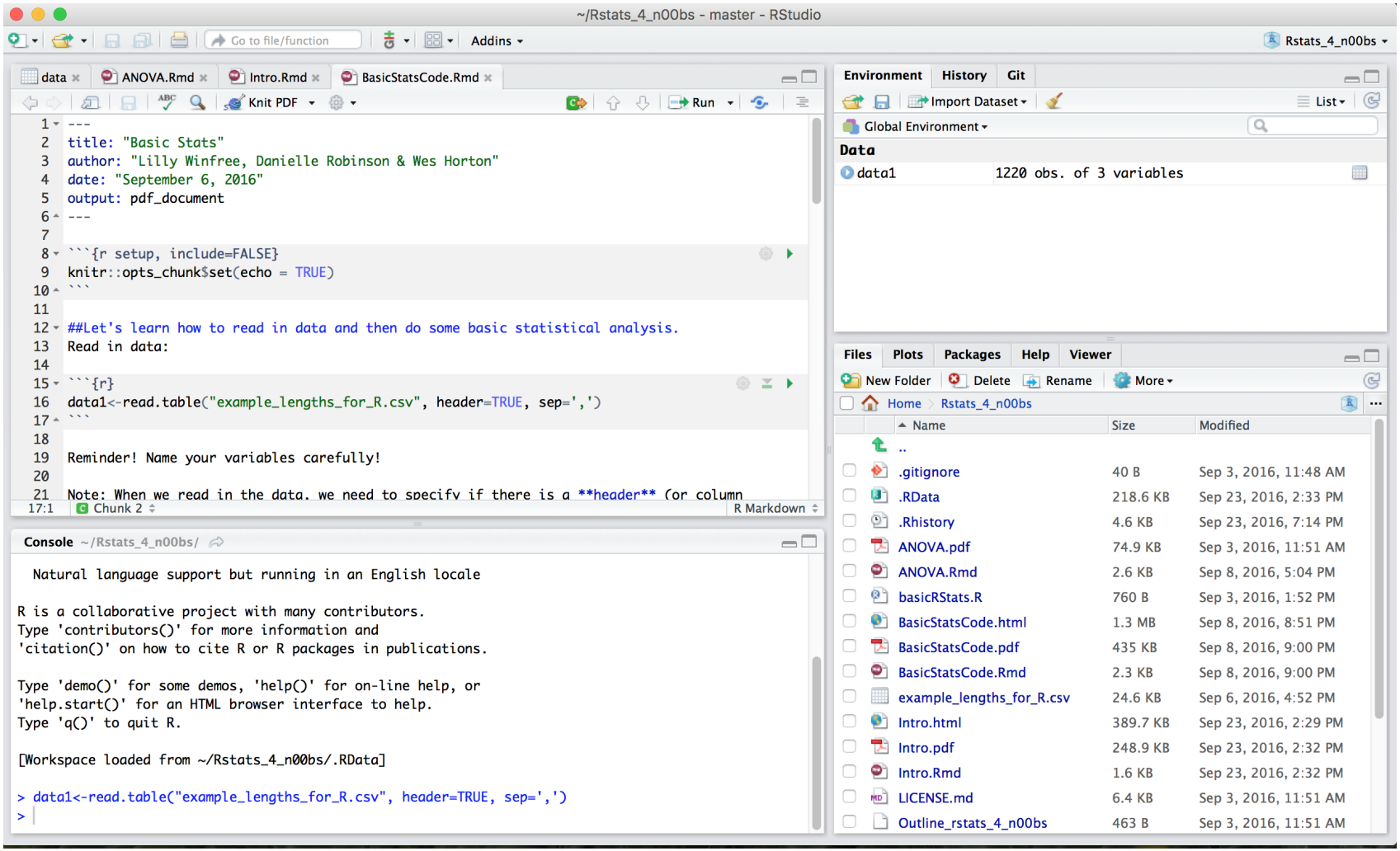
```
## [1] 1
```

Basics (2)

- help() and ?
- in R console, use up arrow to re-type what you just wrote
- variable names can't start with a number
  - eg Data1 not 1Data
- throwing errors is normal! You will create errors *a lot*

R is *stupid* and only knows what *you* input

This is what R Studio looks like:



Resources

- CRAN: `https://cran.r-project.org`
- `http://stackoverflow.com` - like google for coding questions
- R Markdown cheat sheets (rmarkdown.rstudio.com)
- Ted Laderas' R bootcamp: `https://github.com/laderast/r-bootcamp`
- Mozilla study groups: `https://github.com/mozillascience/studyGroupLessons/issues`
- R Open Sci (`https://ropensci.org`)
- R meetup groups (`https://www.meetup.com/portland-r-user-group/`)
- additional plotting abilities with ggplot package (we're not going into this)

Let's go!

From the Github downloaded files, open:

- "example_lengths_for_R.csv"
- "BasicStatsCode.pdf"

We'll start with "BasicStatsCode.pdf"

PLEASE ASK US IF YOU ARE CONFUSED! :-)

~Use your **yellow** sticky note for "confused" and **green** for "ok"~