

RMarkdown Lesson Plan

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Set-up

Make new RMarkdown document. Discuss yaml header, code chunk, and prose

Save RMarkdown document in analysis folder

Confirm everyone is in Source mode

```
gapminder_df <- read.csv("data/gapminder.csv")  
  
getwd()
```

```
## [1] "/Users/augustuspendleton/Desktop/Schmidt_Lab/Markdown_Lesson"
```

Discuss knitting directory - knitting chunks might have a different working directory than your r session!

Discuss chunk output in console vs. in document - look at yaml header

Assign read.csv to gapminder_df

Adding new prose with markdown settings

Headers

Keep getting smaller

As we add hash tags Point out how we can navigate document

We can make lists with asterisks or hyphens

List 1:

- Item 1
- Item 2
- Item 3

List 2:

- Other Item 1
- Other Item 2

We can make numbered list with numbers:

1. Numbered thing 1
2. Numbered thing 2

And we can make more complex lists:

1. Numbered thing 1
 - Sub list

- Sub list
2. Numbered thing 2

We can make text **bold** or *italic*

We can incorporate greek symbols like μ or Δ

We can make hyperlinks

Knit again

Let's insert another R chunk

```
# Find the median population
median(gapminder_df$pop)
```

```
## [1] 7023596
```

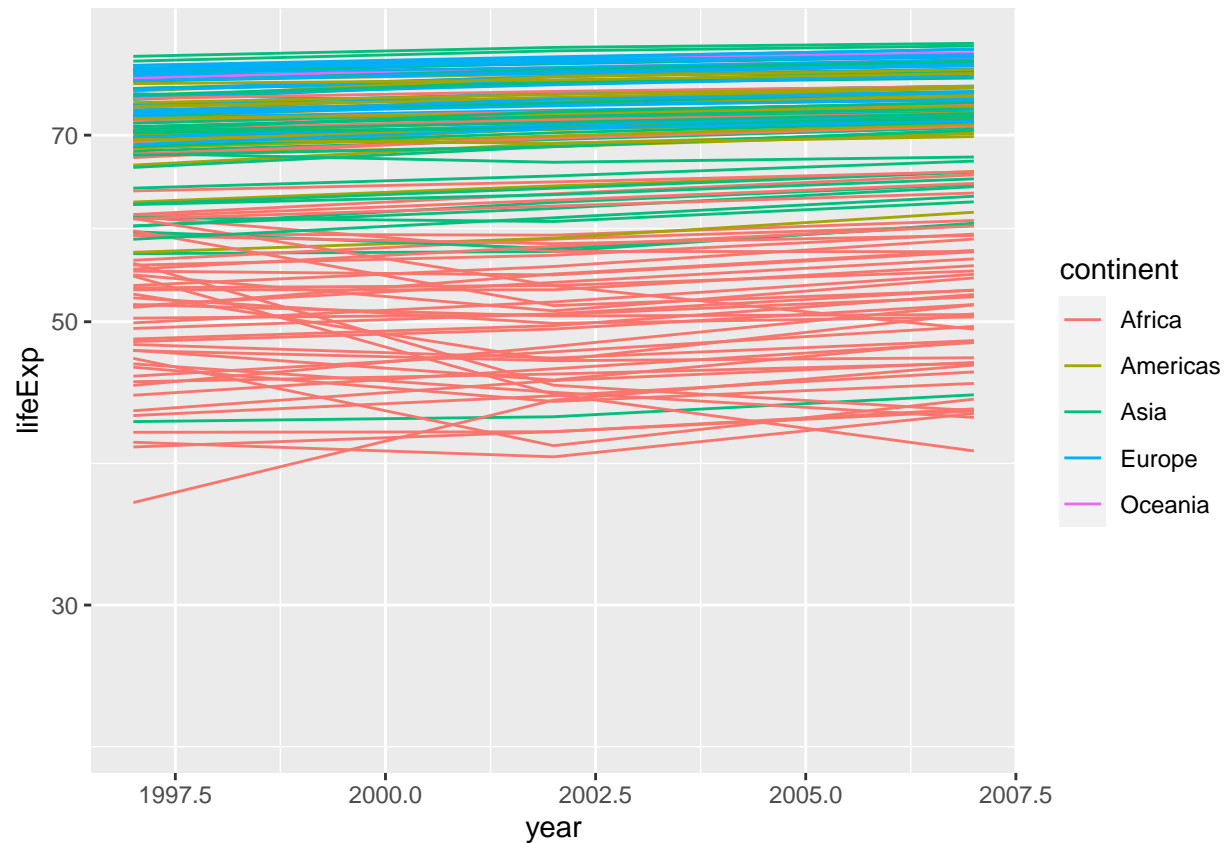
This is okay, but especially if people can't read understand our code, it's not that helpful. It would be better if we contextualized these numbers in writing.

Over 1704 observations, there was a median population of 0.7023596 million people.

Let's make a plot

```
library(ggplot2)

ggplot(gapminder_df, aes(x = year, y = lifeExp, group = country, color = continent)) +
  geom_line() +
  scale_y_log10() +
  scale_x_continuous(limits = c(1997, 2007))
```



```
#+ geom_bar()
```

Adding information to code chunks

First add `echo = FALSE`

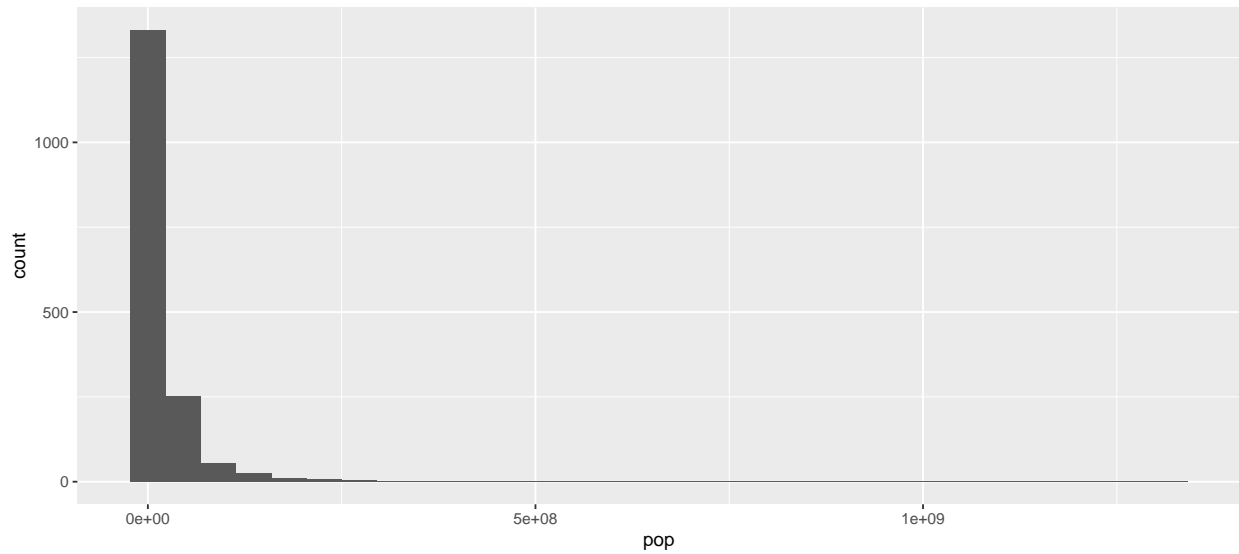
Next, add `eval = FALSE`

Next, add `warning = FALSE`

Next, simulate what happens when you have an error - can't knit

Make another type of plot

```
ggplot(gapminder_df, aes(x = pop)) +  
  geom_histogram()
```



Next, add message = FALSE

Finally, change figure width

Add some new yaml code code_folding: hide toc: yes toc_float: yes

Transition to git lesson

Why do we use version control?

Etherpad - how do you collaborate and share documents now?

How do you integrate figures and statistical analyses into writing?