Week 3 Lab Markdown

Madison DiGirolamo

9/11/2024

```
knitr::opts_chunk$set(echo = TRUE)


knitr::opts_knit$set(root.dir = "C:/Users/madid/OneDrive/Documents/Desktop/RCourseExamples/R-Class-2024/
```

#Creating the directory structure by adding folders

```
if (!file.exists('data')) dir.create('data') #creates the file because it does not exist in the locatio
if (!file.exists('src')) dir.create('src')
if (!file.exists('analysis')) dir.create('analysis')
if (!file.exists('figures')) dir.create('figures')
if (!file.exists('report')) dir.create('report')
```

I created a script called "driver.R" in the src folder and a second script called "EditDataframe.R" in src.

```
read.csv("C:/Users/madid/OneDrive/Documents/Desktop/RCourseExamples/R-Class-2024/WK03_Reproducibility/da
```

```
##                temp      size growthRate
## 1           10-pop1  1.384599   5.613318
## 2           10-pop2  2.395160  10.268475
## 3  10-population 1  4.289772  12.114865
## 4          ten-pop1  5.272461  15.512647
## 5          ten-pop2  6.262187  19.130367
## 6           10-pop1  6.356605  20.752934
## 7           10-pop2  7.645260  23.987027
## 8           10-pop1  9.523740  28.016266
## 9           10-pop2 10.077175  31.173620
## 10 10-population 2 11.362994  33.544465
## 11          20-pop1  1.248444  13.976872
## 12          20-pop2  2.116875  17.250495
## 13          20-pop1  4.148324  20.532920
## 14          20-pop2  4.154233  23.230503
## 15     twenty-pop1  5.432108  26.190196
## 16     twenty-pop2  6.023827  29.338499
## 17          20-pop1  8.457856  32.817640
## 18          20-pop2  9.874049  35.464449
## 19 20-population 1  9.448778  37.776259
## 20 20-population 2 10.965281  40.065019
```

#Checkpoint 1 In the temperature column there are multiple formats that were used to indicate which population each sample is from. This is not ready for analysis because these need to be uniform to actually allow the system to identify each sample as the right population.

#Checkpoint 2

###Need to put in edit data frame code

#Checkpoint 3 We separated the editing of the data frame to be a separate script to streamline the driver. This means that if someone opens just the driver they would need to run everything that happened in the editing of the data frame. The "source" line at the beginning of driver.R does this, simultaneously streamlining the driver script but ensuring repeatability.

#Checkpoint 4 Each test is checking how the factor impacts growth rate. Neither temp or population significantly impacts growth rate. Additionally, temp and population combined does not significantly impact growth rate. (All P-Values are high)

#Checkpoint 5 The organization system and steps we used is easy to follow and reproduce because the driver shows the chronology and all steps are annotated and included in the other scripts.

#Checkpoint 6