R Exercises Session 8

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Check your work by knitting the document.

1. Create a level 2 header below in Markdown with the name “Answer 1”.
2. Add an unordered Markdown list of your favorite food dishes and add their ingredients as sub-items in the list. You should enter at least two dishes with two ingredients each.
3. Insert an R code chunk below. Show the summary of the Orange dataset. Run a linear regression using the lm function to predict circumference from age and assign the result. Show the summary of the fit object that you assigned.
4. Add an RMarkdown weblink (in link format) below to your favorite R reference website.
5. Replace the author field in the yaml header with your name and then successfully knit the RMarkdown document into a Word document.
6. Follow the [Pull Request instructions on GitHub](https://help.github.com/en/github/collaborating-with-issues-and-pull-requests/creating-a-pull-request-from-a-fork) to submit your assignment via GitHub as a Pull Request to the [Assignment8](https://github.com/CUNYSPHCode/Assignment8) repository.

## Answer 1

### Favorite food ingredients

* Pizza
  + Dough
  + Sauce
  + Cheese
* Ice Cream
  + Milk
  + Cream
  + Sugar
* Sandwich
  + Bread
  + Meat
  + Cheese
  + Mayo

## Answer 2

data("Orange")  
summary(Orange)

## Tree age circumference   
## 3:7 Min. : 118.0 Min. : 30.0   
## 1:7 1st Qu.: 484.0 1st Qu.: 65.5   
## 5:7 Median :1004.0 Median :115.0   
## 2:7 Mean : 922.1 Mean :115.9   
## 4:7 3rd Qu.:1372.0 3rd Qu.:161.5   
## Max. :1582.0 Max. :214.0

result <-lm(circumference~age, data = Orange)  
summary(result)

##   
## Call:  
## lm(formula = circumference ~ age, data = Orange)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -46.310 -14.946 -0.076 19.697 45.111   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 17.399650 8.622660 2.018 0.0518 .   
## age 0.106770 0.008277 12.900 1.93e-14 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 23.74 on 33 degrees of freedom  
## Multiple R-squared: 0.8345, Adjusted R-squared: 0.8295   
## F-statistic: 166.4 on 1 and 33 DF, p-value: 1.931e-14

## Answer 3

#### R reference website:

[R Tutorial](https://www.tutorialspoint.com/r/index.htm)