Assignment_1

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```
# Load my Data
library(readxl)
Cereals <- read_excel("~/Desktop/BA64060/Cereals.xlsx")
```

Quantitative Variable: Calories

I grouped the calories of Cereal brands by variable.

```
summary(Cereals$calories)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    50.0   100.0   110.0   106.9   110.0   160.0
```

Findings: The Cereal brands with the fewest calories has 50 calories. 25% of cereals have 100 or fewer calories. Half of the cereals are greater or fewer than 110 calories. Average calories across most brands are 106.9 and 75% of cereals have 110 or fewer calories.

Categorical Variable: Manufacturer

I grouped the manufacturer variable

```
table(Cereals$mfr)
```

```
##
##  A  G  K  N  P  Q  R
##  1 22 23  6  9  8  8
```

Findings: The majority of Cereal brands are manufactured by Kellogg & General Mills. Smaller manufacturers like A and N are not as represented in the data, as they appear once.

Variable Transformation

I transformed Cereal names into all lowercase.

```r
Cereals$name_lower<- tolower(Cereals$name)
head(Cereals[, c("name", "name_lower")], 10)
```

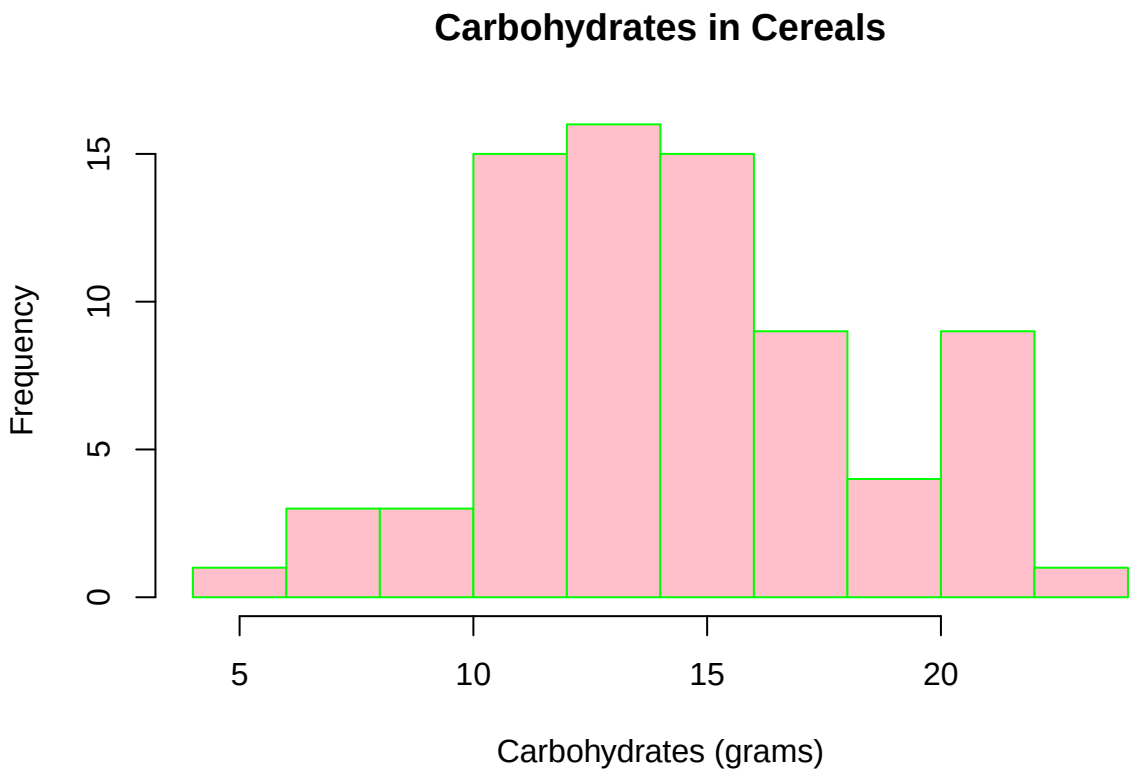
```
## # A tibble: 10 x 2
##    name                        name_lower
##    <chr>                       <chr>
##  1 100%_Bran                   100%_bran
##  2 100%_Natural_Bran           100%_natural_bran
##  3 All-Bran                    all-bran
##  4 All-Bran_with_Extra_Fiber   all-bran_with_extra_fiber
##  5 Almond_Delight              almond_delight
##  6 Apple_Cinnamon_Cheerios     apple_cinnamon_cheerios
##  7 Apple_Jacks                 apple_jacks
##  8 Basic_4                     basic_4
##  9 Bran_Chex                   bran_chex
## 10 Bran_Flakes                 bran_flakes
```

Findings: The original cereal names reveal lower case versions.

Quantitative Variable Plot

Histogram of carbohydrates (`carbo`)

```r
hist(Cereals$carbo,
main = "Carbohydrates in Cereals",
xlab = "Carbohydrates (grams)",
col = "pink",
border = "green")
```

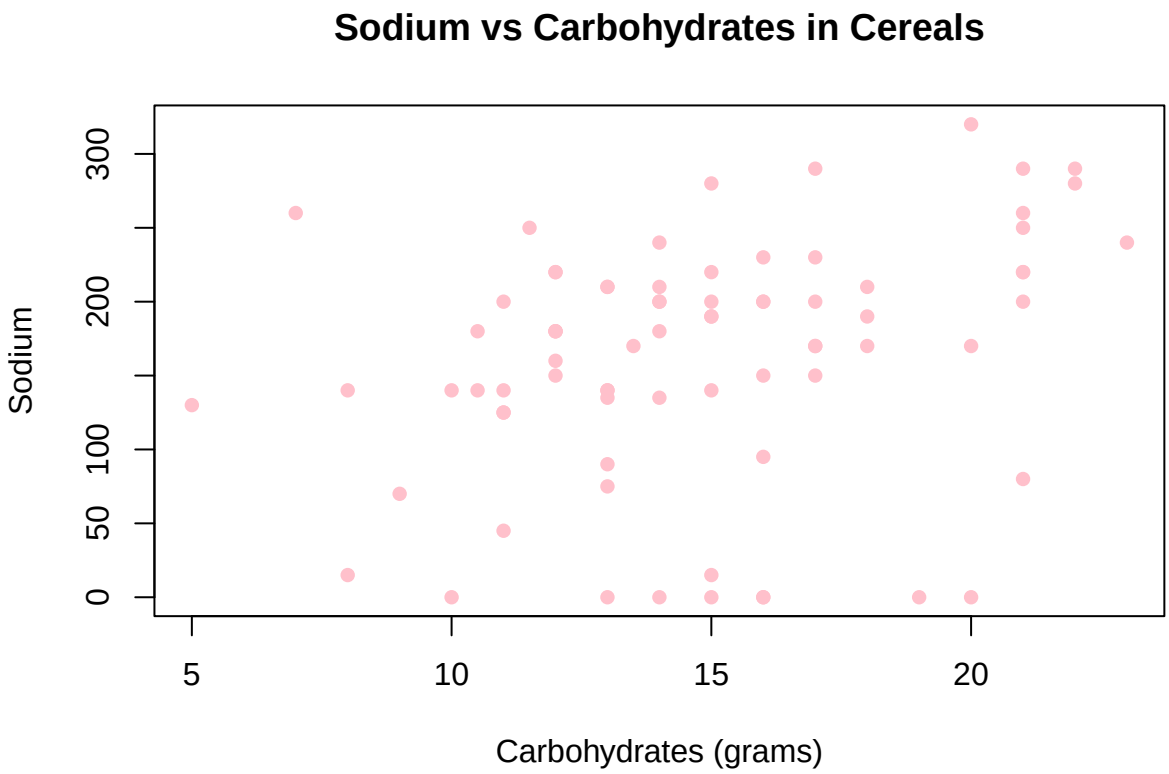


Findings: Most Cereals are in the 10-15g carbohydrate range.

Quantitative Variable Scatterplot

Scatterplot of **Carbohydrates versus Sodium**

```
plot(Cereals$carbo, Cereals$sodium,
main = "Sodium vs Carbohydrates in Cereals",
xlab = "Carbohydrates (grams)",
ylab = "Sodium",
col = "pink",
pch = 16)
```



Findings: Each point represents a Cereal.The findings show if cereals with higher carbohydrates concentration also has more sodium.