R Bridge Week 2 Assignment

Donald Butler

7/30/2021

Select a random dataset

US Macroeconomic Data (1957–2005, Stock & Watson) https://vincentarelbundock.github.io/Rdatasets/doc/AER/USMacroSW.html https://vincentarelbundock.github.io/Rdatasets/csv/AER/USMacroSW.csv

```
# github csv location
csvfile <- 'https://raw.githubusercontent.com/dab31415/SPS-Bridge-R/main/USMacroSW.csv'

df <- read.csv(csvfile)
df$year <- 1957 + floor((df[1]-1)/4)
df$qtr <- ((df[1]-1) %% 4) + 1
```

Exercise #1.

Use the summary function to gain an overview of the data set. Then display the mean and median for at least two attributes.

```
summary(df)
```

```
##        X           unemp            cpi            ffrate
##  Min.   :  1   Min.   : 3.400   Min.   : 27.78   Min.   : 0.930
##  1st Qu.: 49   1st Qu.: 5.000   1st Qu.: 35.87   1st Qu.: 3.480
##  Median : 97   Median : 5.700   Median : 87.93   Median : 5.400
##  Mean   : 97   Mean   : 5.891   Mean   : 91.73   Mean   : 5.953
##  3rd Qu.:145   3rd Qu.: 6.833   3rd Qu.:143.07   3rd Qu.: 7.760
##  Max.   :193   Max.   :10.667   Max.   :192.17   Max.   :19.100
##      tbill            tbond           gbpusd          gdpjp
##  Min.   : 0.830   Min.   : 1.01   Min.   :112.5   Min.   : 10149
##  1st Qu.: 3.500   1st Qu.: 3.91   1st Qu.:159.6   1st Qu.: 57632
##  Median : 5.080   Median : 5.62   Median :185.5   Median :254560
##  Mean   : 5.435   Mean   : 6.04   Mean   :204.9   Mean   :259306
##  3rd Qu.: 6.740   3rd Qu.: 7.55   3rd Qu.:246.9   3rd Qu.:482328
##  Max.   :15.490   Max.   :16.52   Max.   :281.5   Max.   :523638
##       year.X             qtr.X
##  Min.   :1957.0000   Min.   :1.000000
##  1st Qu.:1969.0000   1st Qu.:1.000000
##  Median :1981.0000   Median :2.000000
##  Mean   :1980.6269   Mean   :2.492228
##  3rd Qu.:1993.0000   3rd Qu.:3.000000
##  Max.   :2005.0000   Max.   :4.000000
```

```
sprintf('3-month treasury bill: mean = %.3f; median = %.3f',mean(df$tbill),median(df$tbill))
```

```
## [1] "3-month treasury bill: mean = 5.435; median = 5.080"
```

```
sprintf('1-year treasury bond: mean = %.3f; median = %.3f',mean(df$tbond),median(df$tbond))
```

```
## [1] "1-year treasury bond: mean = 6.040; median = 5.620"
```

Exercise #2.

Create a new data frame with a subset of the columns and rows. Make sure to rename it.

Exercise #3.

Create new column names for the new data frame.

Exercise #4.

Use the summary function to create an overview of your new data frame. Then print the mean and median for the same two attributes. Please compare.

Exercise #5.

For at least 3 values in a column please rename so that every value in that column is renamed. For example, suppose I have 20 values of the letter "e" in one column. Rename those values so that all 20 would show as "excellent".

Exercise #6.

Display enough rows to see examples of all of steps 1-5 above.