Lab3: Data Frames

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Question 0

(a) Delete all sample code from the R markdown file.

> Done

(b) For each question, insert a new chunk and label the question number.

> Done

Question 1

(a) Read the inflation consumer file into R and call it Inflation.df.

```
Inflation.df <- read.csv("inflation_consumer.csv")
```

(b) How many observations (rows) are in this dataset? How many variables (columns)?

```
num_rows <- nrow(Inflation.df)
num_cols <- ncol(Inflation.df)
num_rows
```

```
## [1] 11014
```

```
num_cols
```

```
## [1] 4
```

(c) What is the mean value for the Year column? Does this value have any meaning?

```
mean_year <- mean(Inflation.df$Year)
mean_year
```

```
## [1] 1992.21
```

(d) Determine which country has the lowest inflation and the corresponding year.

```
min_inflation <- Inflation.df[which.min(Inflation.df$Inflation),]
min_inflation
```

```
##        Country Country.Code Year Inflation
## 5869 Indonesia          IDN 1966     -98.7
```

(e) Determine which country has the highest inflation and the corresponding year.

```
max_inflation <- Inflation.df[which.max(Inflation.df$Inflation),]
max_inflation
```

```
##               Country Country.Code Year Inflation
## 4023 Congo, Dem. Rep.          COD 1994  26762.02
```

Question 2

(a) Create a new data frame that contains all countries with inflation over 7.00 and save it to Sub Inflation.

```
Sub_Inflation <- Inflation.df[Inflation.df$Inflation > 7.00,]
```

(b) Determine the average of the inflation column and save this to a variable called avg.inflation.

```
avg.inflation <- mean(Sub_Inflation$Inflation)
avg.inflation
```

```
## [1] 62.77688
```

(c) Use Sub Inflation to determine the number of country counts with inflation over 15.00 and print out the value.

```
num_overfifteen_countries <- nrow(Sub_Inflation[Sub_Inflation$Inflation > 15.00,])
num_overfifteen_countries
```

```
## [1] 1737
```

(d) Create a vector named Inflation Status which contains two levels: High and Low. All countries in Sub Inflation with inflation over 15.00 should be labeled as High, otherwise named as Low.

```
Sub_Inflation$Inflation_Status <- ifelse(Sub_Inflation$Inflation > 15, "High", "Low")
```

(e) Use the Inflation Status vector to print out the number of country counts with Inflation over that 15.00. This number should be the same as in part (c).

```
num_high_inflation_status_countries <- sum(Sub_Inflation$Inflation_Status == "High")
num_high_inflation_status_countries
```

```
## [1] 1737
```

Question 3

Once you make sure all the code works in the R markdown file, knit it to either an HTML or Word file. Make sure the file contains all answers to the questions. Then open the knitted file and print it as a PDF file. The name of the file should be Stat123 Lab03 YourLastName.pdf. Then submit the pdf file to the appropriate Brightspace folder.

> Done