RWorksheet_Callanga#4

2022-11-23

#1. The table below shows the data about shoe size and height. Create a data #frame.

#a. Describe the data.

```
Shoe_size <- c(6.5, 9.0, 8.5, 8.5, 10.5, 7.0, 9.5, 9.0, 13.0,
               7.5, 10.5, 8.5, 12.0, 10.5, 13.0, 11.5, 8.5, 5.0,
               10.0, 6.5, 7.5, 8.5, 10.5, 8.5, 10.5, 11.0, 9.0,
               13.0)

Height <- c(66.0, 68.0, 64.5, 65.0, 70.0, 64.0, 70.0, 71.0,
               72.0, 64.0, 74.5, 67.0, 71.0, 71.0, 77.0, 72.0,
               59.0, 62.0, 72.0, 66.0, 64.0, 67.0, 73.0, 69.0,
               72.0, 70.0, 69.0, 70)

Gender <- c("F", "F", "F", "F", "M", "F", "M", "F", "M", "M",
               "M", "F", "M", "M", "M", "M", "F", "F", "M", "F",
               "M", "M", "M", "F", "M", "M", "M", "M")

data <- data.frame(Shoe_size,Height,Gender)
data
```

```
##    Shoe_size Height Gender
## 1        6.5   66.0      F
## 2        9.0   68.0      F
## 3        8.5   64.5      F
## 4        8.5   65.0      F
## 5       10.5   70.0      M
## 6        7.0   64.0      F
## 7        9.5   70.0      M
## 8        9.0   71.0      F
## 9       13.0   72.0      M
## 10       7.5   64.0      M
## 11      10.5   74.5      M
## 12       8.5   67.0      F
## 13      12.0   71.0      M
## 14      10.5   71.0      M
## 15      13.0   77.0      M
## 16      11.5   72.0      M
## 17       8.5   59.0      F
## 18       5.0   62.0      F
## 19      10.0   72.0      M
## 20       6.5   66.0      F
## 21       7.5   64.0      M
## 22       8.5   67.0      M
```

```
## 23      10.5   73.0      M
## 24       8.5   69.0      F
## 25      10.5   72.0      M
## 26      11.0   70.0      M
## 27       9.0   69.0      M
## 28      13.0   70.0      M
```

#b. Find the mean of shoe size and height of the respondents. #Copy the codes and results.

```
  summary(data)
```

```
##    Shoe_size          Height         Gender
##  Min.   : 5.000   Min.   :59.00   Length:28
##  1st Qu.: 8.500   1st Qu.:65.75   Class :character
##  Median : 9.000   Median :69.50   Mode  :character
##  Mean   : 9.411   Mean   :68.57
##  3rd Qu.:10.500   3rd Qu.:71.25
##  Max.   :13.000   Max.   :77.00
```

Mean of Shoe size : 9.411 # Mean of Height :68.57

#c. Is there a relationship between shoe size and height? Why?

Yes, The Higher the height, the bigger the shoe size.

#2. Construct character vector months to a factor with factor() and assign #the result to factor_months_vector. Print out factor_months_vector and #assert that R prints out the factor levels below the actual values

```
    Months <- c("March","April","January","November","January",
                "September","October","September","November","August",
               "January","November","November","February","May","August",
               "July","December","August","August","September","November",
               "February","April")

  factor_Months <- factor(Months)
  factor_Months
```

```
##  [1] March     April     January   November  January   September October
##  [8] September November  August    January   November  November  February
## [15] May       August    July      December  August    August    September
## [22] November  February  April
## 11 Levels: April August December February January July March May ... September
```

#3. Then check the summary() of the months_vector and factor_months_vector. #Interpret the results of both vectors. Are they both equally useful in this #case?

#Answer: #Yes, they are useful because they count the number of repeated data #points in your variable without requiring you to do so manually.

```
  summary(Months)
```

```
##    Length     Class      Mode
##        24 character character
```

```
  summary(factor_Months)
```

```
##     April    August  December  February   January      July     March       May
##         2         4         1         2         3         1         1         1
##  November   October September
##         5         1         3
```

#4. Create a vector and factor for the table below.

```
  factor_data <- c( East = '1', West = '4',North = '3')
  factor_data
```

```
##  East  West North
##   "1"   "4"   "3"
```

```
  new_order_data <- factor(factor_data,levels = c("East" = '1',"West" = '4',
                                                  "North" = '3'))

  new_order_data
```

```
##  East  West North
##     1     4     3
## Levels: 1 4 3
```

#5. Enter the data below in Excel with file name = import_march.csv

#a. Import the excel file into the Environment Pane using read.table() #function.

```
#getwd()

#import <- read.table("import_march.csv", header = TRUE, sep = ",")

#import
```

#b. View the data set. Write the code and its result.

```
  import <- read.table("import_march.csv", header = TRUE, sep = ",")
  import
```

```
##   Students Strategy1 Strategy2 Strategy3
## 1     Male         8        10         8
## 2                  4         8         6
## 3                  0         6         4
## 4   Female        14         4        15
## 5                 10         2        12
## 6                  6         0         9
```