Rworksheet#4

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2022-11-22

Worksheet-4 in R Worksheet for R Programming

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

```
daframe <- data.frame(shoesize = 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
                      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,
                      gender = c("F","F","F","F","M","F","F","F","M","F","M","F","M","M","M","M","F","F
daframe
```

```
##    shoesize 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      F
## 8       9.0   71.0      F
## 9      13.0   72.0      M
## 10      7.5   64.0      F
## 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      F
## 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
```

```
names(daframe) <- list("Shoe size", "Height", "Gender")
daframe
```

```
##    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      F
## 8        9.0   71.0      F
## 9       13.0   72.0      M
## 10       7.5   64.0      F
## 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      F
## 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
```

a. Describe the data. - The data shows the different shoe size among male and female in different heights.

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

```
mean(daframe$`Shoe size`)
```

```
## [1] 9.410714
```

height mean

```
mean(daframe$Height)
```

```
## [1] 68.57143
```

c. Is there a relationship between shoe size and height?Why? Yes there is a relationship between shoe size and height, I can imagine that if your shoe size is large, you are also tall. The bigger the height, the taller the person is.

Using factor() examples

```
Gender <- c("M","F","F","M")
factor_Gender <- factor(Gender)
factor_Gender
```

```
## [1] M F F M
## Levels: F M
```

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.

```
vector_months <- c("March","April","January","November","January","September","October","September","No

factor_months_vector <- factor(vector_months)
factor_months_vector
```

```
##  [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?

```
summary(vector_months)
```

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

```
summary(factor_months_vector)
```

```
##     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'))
print(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. Write the code.

```
install.packages("readxl")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.2'
## (as 'lib' is unspecified)
```

```
getwd()
```

```
## [1] "/cloud/project/Rworksheet#4"
```

```
setwd("/cloud/project/Rworksheet#4")
```

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

```
##   Students strategy.1 strategy.2 strategy.3
## 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
## 7                  NA         NA         NA
```

#b. View the dataset. Write the code and its result.

```
View(import)
```

```
## Warning in View(import): unable to open display
```

```
## Error in .External2(C_dataviewer, x, title): unable to start data viewer
```