Worksheet-4 in R

Worksheet for R Programming

Instructions:

- Use RStudio or the RStudio Cloud accomplish this worksheet.

- Save the R script as *RWorksheet_lastname#4.R.*
- On your own *GitHub repository*, push the R script, the Rmd file, as well as this pdf worksheet to the repo you have created before.
- Do not forget to comment your Git repo on our VLE
- Accomplish this worksheet by answering the questions being asked and writing the code manually.

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

Shoe size	Height	Gender	Shoe size	Height	Gender
6.5	66.0	F	13.0	77.0	M
9.0	68.0	F	11.5	72.0	M
8.5	64.5	F	8.5	59.0	F
8.5	65.0	F	5.0	62.0	F
10.5	70.0	M	10.0	72.0	M
7.0	64.0	F	6.5	66.0	F
9.5	70.0	F	7.5	64.0	F
9.0	71.0	F	8.5	67.0	M
13.0	72.0	M	10.5	73.0	M
7.5	64.0	F	8.5	69.0	F
10.5	74.5	M	10.5	72.0	M
8.5	67.0	F	11.0	70.0	M
12.0	71.0	M	9.0	69.0	M
10.5	71.0	M	13.0	70.0	M

a. Describe the data.

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

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

Factors

A nominal variable is a categorical variable without an implied order. This means that it is impossible to say that *'one is worth more than the other'*. In contrast, ordinal variables do have a natural ordering.

Example:

```
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.

Consider data consisting of the names of months:
`"March","April","January","November","January",`
`"September","October","September","November","August",`
`"January","November","November","February","May","August",`
`"July","December","August","August","September","November","February","April")`

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?

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

Direction	Frequency
East	1
West	4
North	3

Note: Apply the factor function with required order of the level.

```
new_order_data <- factor(factor_data,levels = c("East","West","North"))
print(new_order_data)
```

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

Students	Strategy 1	Strategy 2	Strategy 3
Male	8	10	8
	4	8	6
	0	6	4
Female	14	4	15
	10	2	12
	6	0	9

Figure 1: Excel File

a. Import the excel file into the *Environment Pane* using `read.table()` function. Write the code.

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