

RWorksheet_Cartoja#4

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

```
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,
              13.0,11.5,8.5,5.0,10.0,
              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")

dataframe <- data.frame(Shoesize,Height,Gender)
dataframe
```

##	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	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(dataframe)
```

```
##      Shoesize      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
```

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

-Yes, there is. Sometimes, your shoe size varies on your height. The higher the height, the greater 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. Consider data consisting of the names of months:

```
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?

```
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(1,4,3)
```

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

```
print(new_order_data)
```

```
## [1] <NA> <NA> <NA>
```

```
## Levels: East West North
```

#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.

```
data_tab <- read.table("/cloud/project/import_march.csv", header=TRUE, sep = ",")
data_tab
```

```
## 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
```

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

```
data_tab <- read.csv("/cloud/project/import_march.csv")
data_tab
```

```
## 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
```