RWorksheet_Quebral#4a

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

```
Shoe_size <- c(6.7,9.0,8.5,8.5,10.5,7.0,9.5,9.0,13.0,7.5,10.5,8.5,12.0,10.5)
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")
Shoe.size <- c(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)
Height2 <- c(77.0,72.0,59.0,62.0,72.0,66.0,64.0,67.0,73.0,69.0,72.0,70.0,69.0,70.0)
Gender2 <- c("M","M","F","F","M","F","F","M","M","F","M","M","M","M")

housedata <- data.frame(Shoe_size,Height,Gender,Shoe.size,Height2,Gender2)
print(housedata)
```

```
##    Shoe_size Height Gender Shoe.size Height2 Gender2
## 1        6.7   66.0      F      13.0      77       M
## 2        9.0   68.0      F      11.5      72       M
## 3        8.5   64.5      F       8.5      59       F
## 4        8.5   65.0      F       5.0      62       F
## 5       10.5   70.0      M      10.0      72       M
## 6        7.0   64.0      F       6.5      66       F
## 7        9.5   70.0      F       7.5      64       F
## 8        9.0   71.0      F       8.5      67       M
## 9       13.0   72.0      M      10.5      73       M
## 10       7.5   64.0      F       8.5      69       F
## 11      10.5   74.5      M      10.5      72       M
## 12       8.5   67.0      F      11.0      70       M
## 13      12.0   71.0      M       9.0      69       M
## 14      10.5   71.0      M      13.0      70       M
```

#b. Create a subset by males and females with their corresponding shoe size and height.What its result? Show the R scripts.

```
male_subdata <- subset(housedata , Gender == "M")
male_subdata
```

```
##    Shoe_size Height Gender Shoe.size Height2 Gender2
## 5       10.5   70.0      M      10.0      72       M
## 9       13.0   72.0      M      10.5      73       M
## 11      10.5   74.5      M      10.5      72       M
## 13      12.0   71.0      M       9.0      69       M
## 14      10.5   71.0      M      13.0      70       M
```

```
female_subdata <- subset(housedata , Gender == "F")
female_subdata
```

```
##    Shoe_size Height Gender Shoe.size Height2 Gender2
```

```
## 1        6.7   66.0      F      13.0      77       M
## 2        9.0   68.0      F      11.5      72       M
## 3        8.5   64.5      F       8.5      59       F
## 4        8.5   65.0      F       5.0      62       F
## 6        7.0   64.0      F       6.5      66       F
## 7        9.5   70.0      F       7.5      64       F
## 8        9.0   71.0      F       8.5      67       M
## 10       7.5   64.0      F       8.5      69       F
## 12       8.5   67.0      F      11.0      70       M
```

#c. Find the mean of shoe size and height of the respondents. Write the R scripts and its result.

```
mean_shoesize <- mean(housedata$Shoe_size)
mean_shoesize
```

```
## [1] 9.335714
```

```
mean_height <- mean(housedata$Height)
mean_height
```

```
## [1] 68.42857
```

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

#2. Construct character vector months to a factor with factor() and assign the result tofactor_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","Septembe
"April")
factor_months_vector <- factor(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
```

#Then check the summary() of the months_vector and factor_months_vector. | Inter-pret the results of both vectors. Are they both equally useful in this case?

```
summary(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.

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

```
## [1] East  West  North
## Levels: East West North
```

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

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

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

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

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

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

#b. View the dataset. Write the R scripts and its result.

```
head(import_march)
```

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