RWorksheet_Almayo#4a

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R Markdown

1.

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

\the data shoes the different measurement of height, and shoesize of the different genders.

```
household_data <- 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, 11.5, 8.5

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, 77.0, 7

gender = c("F","F","F", "F", "M", "F", "F", "F", "M", "F", "M", "F", "M", "M", "M", "M", "F", "F", "M",
)
```

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

```
males <- subset(household_data, gender == "M" & shoesize&height)
females <- subset(household_data, gender == "F" & shoesize&height)
males
```

```
##    shoesize height gender
## 5      10.5   70.0      M
## 9      13.0   72.0      M
## 11     10.5   74.5      M
## 13     12.0   71.0      M
## 14     10.5   71.0      M
## 15     13.0   77.0      M
## 16     11.5   72.0      M
## 19     10.0   72.0      M
## 22      8.5   67.0      M
## 23     10.5   73.0      M
## 25     10.5   72.0      M
## 26     11.0   70.0      M
## 27      9.0   69.0      M
## 28     13.0   70.0      M
```

```
females
```

```
##    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
## 6       7.0   64.0      F
## 7       9.5   70.0      F
## 8       9.0   71.0      F
## 10      7.5   64.0      F
## 12      8.5   67.0      F
## 17      8.5   59.0      F
## 18      5.0   62.0      F
## 20      6.5   66.0      F
## 21      7.5   64.0      F
## 24      8.5   69.0      F
```

```
meanA <- mean(household_data$shoesize)
meanB <- mean(household_data$height)
meanA
```

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

```
meanB
```

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

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

\there is a relationship between height and shoe size, taller individual tends to have larger shoe size because of body proportion.

3. 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?

\yes, since it shows the summary of levels of the months.

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

```
months_vector <- c(months)
months_vector
```

```
##  [1] "March"     "April"     "January"   "November"  "January"   "September"
##  [7] "October"   "September" "November"  "August"    "January"   "November"
## [13] "November"  "February"  "May"       "August"    "July"      "December"
## [19] "August"    "August"    "September" "November"  "February"  "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
```

```
summary(months)
```

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

4.

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

direction
```

```
## [1] "East"  "West"  "North"
```

```
frequency
```

```
## [1] 1 4 3
```

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

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

5.

a.

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

```
##   Students.Strategy1.Strategy2.Strategy3
## 1                                    ,,,
## 2                              Male,8,10,8
## 3                                   ,4,8,6
## 4                                   ,0,6,4
## 5                                    ,,,
## 6                            Female,14,4,15
## 7                                 ,10,2,12
## 8                                   ,6,0,9
```

b.

```
str(import_march)
```

```
## 'data.frame':    8 obs. of  1 variable:
##  $ Students.Strategy1.Strategy2.Strategy3: chr  ",,," "Male,8,10,8" ",4,8,6" ",0,6,4" ...
```

\it shows the structure of the imported csv file that has student, strat1,strat2 and strat3.