

Worksheet-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")

df <- data.frame(ShoeSize,Height,Gender)
df
```

##	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(df)
```

```
##      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
```

```
mean(ShoeSize)
```

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

```
# SHOESIZE: Mean   : 9.411
# HEIGHT:   Mean   :68.57
```

#c. Is there a relationship between shoe size and height? Why? : Yes there is a relationship between shoe size and height because the higher height will give a higher 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.

```
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_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
```

#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? : Yes both are very useful in this case because both will display different data that are relevant

```
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.

```
factor_data<- c(1,4,3)
```

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

```
print(newdt)
```

```
## [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.

```
getwd()
```

```
## [1] "C:/Users/JANIX/Desktop/Worksheet-4"
```

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

```
##      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
```

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

```
View(excel)
```