Worksheet 3.b

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1.Create a data frame using the table below.

    a. Write the codes.

```
Table1 <- data.frame(
            Respondents = seq(1:20),
            Sex = rep(c(2,1,2,1,2,1,2),c(2,1,7,1,7,1,1)),
            Fathers_Occupation = c(1,3,3,3,1,2,3,1,1,1,3,2,1,3,3,1,3,1,2,1),
            Persons = c(5,7,3,8,5,9,6,7,8,4,7,5,4,7,8,8,3,11,7,6),
            Siblings= c(6,4,4,1,2,1,5,3,1,2,3,2,5,5,2,1,2,5,3,2),
            Houses = c(1,2,3,1,1,3,3,1,2,3,2,3,2,2,3,3,3,3,3,2)
            )
Table1
```

```
##    Respondents Sex Fathers_Occupation Persons Siblings Houses
## 1            1   2                  1       5        6      1
## 2            2   2                  3       7        4      2
## 3            3   1                  3       3        4      3
## 4            4   2                  3       8        1      1
## 5            5   2                  1       5        2      1
## 6            6   2                  2       9        1      3
## 7            7   2                  3       6        5      3
## 8            8   2                  1       7        3      1
## 9            9   2                  1       8        1      2
## 10          10   2                  1       4        2      3
## 11          11   1                  3       7        3      2
## 12          12   2                  2       5        2      3
## 13          13   2                  1       4        5      2
## 14          14   2                  3       7        5      2
## 15          15   2                  3       8        2      3
## 16          16   2                  1       8        1      3
## 17          17   2                  3       3        2      3
## 18          18   2                  1      11        5      3
## 19          19   1                  2       7        3      3
## 20          20   2                  1       6        2      2
```

```
names(Table1) <- list("Respondents","Sex","Fathers Occupation","Persons at Home",
                "Siblings at school","Types of houses")
Table1
```

```
##    Respondents Sex Fathers Occupation Persons at Home Siblings at school
## 1            1   2                  1               5                  6
## 2            2   2                  3               7                  4
## 3            3   1                  3               3                  4
## 4            4   2                  3               8                  1
## 5            5   2                  1               5                  2
## 6            6   2                  2               9                  1
## 7            7   2                  3               6                  5
## 8            8   2                  1               7                  3
## 9            9   2                  1               8                  1
## 10          10   2                  1               4                  2
## 11          11   1                  3               7                  3
## 12          12   2                  2               5                  2
## 13          13   2                  1               4                  5
## 14          14   2                  3               7                  5
## 15          15   2                  3               8                  2
## 16          16   2                  1               8                  1
## 17          17   2                  3               3                  2
## 18          18   2                  1              11                  5
## 19          19   1                  2               7                  3
## 20          20   2                  1               6                  2
##    Types of houses
## 1                1
## 2                2
## 3                3
## 4                1
## 5                1
## 6                3
## 7                3
## 8                1
## 9                2
## 10               3
## 11               2
## 12               3
## 13               2
## 14               2
## 15               3
## 16               3
## 17               3
## 18               3
## 19               3
## 20               2
```

b. Describe the data. Get the structure or the summary of the data

```
#The Sex, Fathers Occupation, and Siblings at school column shows a data with
#numbers and each numbers correspond to a value also known as their legends.
summary(Table1)
```

```
##    Respondents          Sex        Fathers Occupation Persons at Home
```

```
##   Min.   : 1.00   Min.   :1.00   Min.   :1.00      Min.   : 3.0
##   1st Qu.: 5.75   1st Qu.:2.00   1st Qu.:1.00      1st Qu.: 5.0
##   Median :10.50   Median :2.00   Median :2.00      Median : 7.0
##   Mean   :10.50   Mean   :1.85   Mean   :1.95      Mean   : 6.4
##   3rd Qu.:15.25   3rd Qu.:2.00   3rd Qu.:3.00      3rd Qu.: 8.0
##   Max.   :20.00   Max.   :2.00   Max.   :3.00      Max.   :11.0
##   Siblings at school Types of houses
##   Min.   :1.00       Min.   :1.0
##   1st Qu.:2.00       1st Qu.:2.0
##   Median :2.50       Median :2.5
##   Mean   :2.95       Mean   :2.3
##   3rd Qu.:4.25       3rd Qu.:3.0
##   Max.   :6.00       Max.   :3.0
```

   c. Is the mean number of siblings attending is 5?

```
# NO. The Mean of the number of siblings attending is 2.95.
```

   d. Extract the 1st two rows and then all the columns using the subsetting functions. Write the codes and its output.

```
subset_one <- subset(Table1[1:2,])
subset_one
```

```
##   Respondents Sex Fathers Occupation Persons at Home Siblings at school
## 1           1   2                  1               5                  6
## 2           2   2                  3               7                  4
##   Types of houses
## 1               1
## 2               2
```

   e. Extract 3rd and 5th row with 2nd and 4th column. Write the codes and itsresult.

```
subset_two <- subset(Table1[c( 3, 5 ),c(2,4)])
subset_two
```

```
##   Sex Persons at Home
## 3   1               3
## 5   2               5
```

f. Select the variable types of houses then store the vector that results as types_houses. Write the codes.

```
types_houses <- c(Table1$`Types of houses`)
types_houses
```

```
##  [1] 1 2 3 1 1 3 3 1 2 3 2 3 2 2 3 3 3 3 3 2
```

g. Select only all Males respondent that their father occupation was farmer. Writethe codes and its output.

```
Table2 <- data.frame(
  Respondents = seq(1:20),
  Sex = rep(c(2,1,2,1,2,1,2),c(2,1,7,1,7,1,1)),
  Fathers_Occupation = c(1,3,3,3,1,2,3,1,1,1,3,2,1,3,3,1,3,1,2,1),
  Persons = c(5,7,3,8,5,9,6,7,8,4,7,5,4,7,8,8,3,11,7,6),
  Siblings= c(6,4,4,1,2,1,5,3,1,2,3,2,5,5,2,1,2,5,3,2),
  Houses = c(1,2,3,1,1,3,3,1,2,3,2,3,2,2,3,3,3,3,3,2)
)
Table2
```

```
##    Respondents Sex Fathers_Occupation Persons Siblings Houses
## 1            1   2                  1       5        6      1
## 2            2   2                  3       7        4      2
## 3            3   1                  3       3        4      3
## 4            4   2                  3       8        1      1
## 5            5   2                  1       5        2      1
## 6            6   2                  2       9        1      3
## 7            7   2                  3       6        5      3
## 8            8   2                  1       7        3      1
## 9            9   2                  1       8        1      2
## 10          10   2                  1       4        2      3
## 11          11   1                  3       7        3      2
## 12          12   2                  2       5        2      3
## 13          13   2                  1       4        5      2
## 14          14   2                  3       7        5      2
## 15          15   2                  3       8        2      3
## 16          16   2                  1       8        1      3
## 17          17   2                  3       3        2      3
## 18          18   2                  1      11        5      3
## 19          19   1                  2       7        3      3
## 20          20   2                  1       6        2      2
```

```
MaleFar <- subset(Table2, Sex == '1' & Fathers_Occupation == '1')
MaleFarNames <- MaleFar[c(2,3)]
MaleFarNames
```

```
## [1] Sex                Fathers_Occupation
## <0 rows> (or 0-length row.names)
```

h. Select only all females respondent that have greater than or equal to 5 number of siblings attending school. Write the codes and its outputs

```
MaleFar2 <- subset(Table2,Sex == '2' & Siblings >= '5')
MaleFarNames2 <- MaleFar2[c(2,5)]
MaleFarNames2
```

```
##     Sex Siblings
## 1    2         6
## 7    2         5
## 13   2         5
## 14   2         5
## 18   2         5
```

2. Write a R program to create an empty data frame. Using the following codes:

```
df = data.frame(Ints=integer(),
                Doubles=double(), Characters=character(),
                Logicals=logical(),
                Factors=factor(),
                stringsAsFactors=FALSE)
print("Structure of the empty dataframe:")
```

```
## [1] "Structure of the empty dataframe:"
```

```
print(str(df))
```

```
## 'data.frame':    0 obs. of  5 variables:
##  $ Ints      : int
##  $ Doubles   : num
##  $ Characters: chr
##  $ Logicals  : logi
##  $ Factors   : Factor w/ 0 levels:
## NULL
```

a. Describe the results.

```
# The results display the internal structure of the 'df' data frame.
# It shows that the data frame has null or empty structure.
```

3. Interpret the graph.

```
# The graph shows the 'Sentiments of Tweets per day- Donald Trumo'. It shows a
#barplot with legend,y-axis containing the 'Count of Sheet' data,x-axis containing
#the corresponding legends of each bar , and an abline that created a vertical
#lines to a graph and the date that was put above the daily data sentiments to highlight it.

#The graph shows that Donald Trump receives a lot more negative tweet sentiments
#than positive tweet sentiments every day.There are also a bit
#lesser neutral sentiments compared to the first mentioned two
```