RWorksheets_Madayag#3B

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1

```
## A
data <- data.frame(
  Respondents = 1:20,
  Sex = c(2,2,1,2,2,2,2,2,2,2,1,2,2,2,2,2,2,2,1,2),
  Fathers_Occupaton = c(1,3,3,3,1,2,3,1,1,1,3,2,1,3,3,1,3,1,2,1),
  Persons_at_Home = c(5,7,3,8,5,9,6,7,8,4,7,5,4,7,8,8,3,11,7,6),
Siblings_at_School = c(6,4,4,1,2,1,5,3,1,2,3,2,5,5,2,1,2,5,3,2),
Types_of_Houses =c(1,2,3,1,1,3,3,1,2,3,2,3,2,2,3,3,3,3,3,2)
)
data
```

```
##    Respondents Sex Fathers_Occupaton 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
str(data)
```

```
## 'data.frame':    20 obs. of  6 variables:
##  $ Respondents       : int  1 2 3 4 5 6 7 8 9 10 ...
##  $ Sex               : num  2 2 1 2 2 2 2 2 2 2 ...
##  $ Fathers_Occupaton : num  1 3 3 3 1 2 3 1 1 1 ...
##  $ Persons_at_Home   : num  5 7 3 8 5 9 6 7 8 4 ...
##  $ Siblings_at_School: num  6 4 4 1 2 1 5 3 1 2 ...
##  $ Types_of_Houses   : num  1 2 3 1 1 3 3 1 2 3 ...
```

```
summary(data)
```

```
##   Respondents          Sex       Fathers_Occupaton 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
mean_for_siblings <- mean(data$Siblings_at_School)
mean_for_siblings
```

```
## [1] 2.95
```

```
#D
subset_data <- subset(data, Respondents <= 2)

subset_data
```

```
##   Respondents Sex Fathers_Occupaton 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
subset_rows_e <- data[c(3, 5), c(2, 4)]
subset_rows_e
```

```
##   Sex Persons_at_Home
## 3   1               3
## 5   2               5
```

```
## F

types_houses <- data$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
males_farmers <- data[data$Sex == 1 & data$Fathers_Occupaton,]
males_farmers
```

```
##    Respondents Sex Fathers_Occupaton Persons_at_Home Siblings_at_School
## 3            3   1                 3               3                  4
## 11          11   1                 3               7                  3
## 19          19   1                 2               7                  3
##    Types_of_Houses
## 3                3
## 11               2
## 19               3
```

```
## H
female_siblings <- data[data$Sex == 2 & data$Siblings_at_School >= 5,]

female_siblings
```

```
##    Respondents Sex Fathers_Occupaton Persons_at_Home Siblings_at_School
## 1            1   2                 1               5                  6
## 7            7   2                 3               6                  5
## 13          13   2                 1               4                  5
## 14          14   2                 3               7                  5
## 18          18   2                 1              11                  5
##    Types_of_Houses
## 1                1
## 7                3
## 13               2
## 14               2
## 18               3
```

2

```
df = data.frame(Ints=integer(),

Doubles=double(), Characters=character(),
Logicals=logical(),
Factors=factor(),
stringsAsFactors=FALSE)
```

```r
print("Structure of the empty dataframe:")
```

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

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

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

```r
##A. The data described an empty data frame with 0 obs of 5 variables while maintaining the data types.
```

3.

```r
## A.

HouseHData <- read.csv("HouseholdData.csv")
HouseHData
```

```
##    Respondents    Sex Fathers_Occupation Persons_at_Home Siblings_at_School
## 1            1   Male                  1               5                  2
## 2            2 Female                  2               7                  3
## 3            3 Female                  3               3                  0
## 4            4   Male                  3               8                  5
## 5            5   Male                  1               6                  2
## 6            6 Female                  2               4                  3
## 7            7 Female                  2               4                  1
## 8            8   Male                  3               2                  2
## 9            9 Female                  1              11                  6
## 10          10   Male                  3               6                  2
##    Types_of_Houses
## 1             Wood
## 2         Congrete
## 3         Congrete
## 4             Wood
## 5    Semi-congrete
## 6    Semi-congrete
## 7             Wood
## 8    Semi-congrete
## 9    Semi-congrete
## 10        Congrete
```

```r
## B.

HouseHData$Sex <- factor(HouseHData$Sex, levels = c("Male","Female"), labels = c(1,2))

HouseHData$Sex <-as.integer(HouseHData$Sex)

HouseHData
```

```
##    Respondents Sex Fathers_Occupation Persons_at_Home Siblings_at_School
## 1            1   1                  1               5                  2
```

```
## 2            2   2                  2                7                  3
## 3            3   2                  3                3                  0
## 4            4   1                  3                8                  5
## 5            5   1                  1                6                  2
## 6            6   2                  2                4                  3
## 7            7   2                  2                4                  1
## 8            8   1                  3                2                  2
## 9            9   2                  1               11                  6
## 10          10   1                  3                6                  2
##    Types_of_Houses
## 1             Wood
## 2         Congrete
## 3         Congrete
## 4             Wood
## 5    Semi-congrete
## 6    Semi-congrete
## 7             Wood
## 8    Semi-congrete
## 9    Semi-congrete
## 10        Congrete
```

```
##  C.

HouseHData$Types_of_Houses <- factor(HouseHData$Types_of_Houses, levels = c("Wood", "Congrete", "Semi-C

HouseHData$Types_of_Houses <- as.integer(HouseHData$Types_of_Houses)

HouseHData
```

```
##    Respondents Sex Fathers_Occupation Persons_at_Home Siblings_at_School
## 1            1   1                  1                5                  2
## 2            2   2                  2                7                  3
## 3            3   2                  3                3                  0
## 4            4   1                  3                8                  5
## 5            5   1                  1                6                  2
## 6            6   2                  2                4                  3
## 7            7   2                  2                4                  1
## 8            8   1                  3                2                  2
## 9            9   2                  1               11                  6
## 10          10   1                  3                6                  2
##    Types_of_Houses
## 1                1
## 2                2
## 3                2
## 4                1
## 5               NA
## 6               NA
## 7                1
## 8               NA
## 9               NA
## 10               2
```

```
## D.

HouseHData$Fathers_Occupatio <- factor(HouseHData$Fathers_Occupation, levels = c(1, 2, 3), labels = c("
```

```
HouseHData
```

```
##    Respondents Sex Fathers_Occupation Persons_at_Home Siblings_at_School
## 1            1   1                  1               5                  2
## 2            2   2                  2               7                  3
## 3            3   2                  3               3                  0
## 4            4   1                  3               8                  5
## 5            5   1                  1               6                  2
## 6            6   2                  2               4                  3
## 7            7   2                  2               4                  1
## 8            8   1                  3               2                  2
## 9            9   2                  1              11                  6
## 10          10   1                  3               6                  2
##    Types_of_Houses Fathers_Occupatio
## 1                1           Farmer
## 2                2           Driver
## 3                2           Others
## 4                1           Others
## 5               NA           Farmer
## 6               NA           Driver
## 7                1           Driver
## 8               NA           Others
## 9               NA           Farmer
## 10               2           Others
```

```
## E.
femaleDriverFather <- HouseHData[HouseHData$Sex == 2 & HouseHData$Fathers_Occupation == 2,]

femaleDriverFather
```

```
##   Respondents Sex Fathers_Occupation Persons_at_Home Siblings_at_School
## 2           2   2                  2               7                  3
## 6           6   2                  2               4                  3
## 7           7   2                  2               4                  1
##   Types_of_Houses Fathers_Occupatio
## 2               2           Driver
## 6              NA           Driver
## 7               1           Driver
```

```
## F.

householdFemaleAndFather <- HouseHData[HouseHData$Siblings_at_School >= 5,]

householdFemaleAndFather
```

```
##   Respondents Sex Fathers_Occupation Persons_at_Home Siblings_at_School
## 4           4   1                  3               8                  5
## 9           9   2                  1              11                  6
##   Types_of_Houses Fathers_Occupatio
## 4               1           Others
## 9              NA           Farmer
```

4

```
## The graph shows the distribution of tweet sentiments (Negative, Neutral, and Positive) over a specif
```