RWorksheet_Elizalde#3b

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2024-09-30

#1. #a.

```
table1 <- data.frame(Respondent = c(1:20),
                     Sex = c(2,2,1,2,2,2,2,2,2,2,1,2,2,2,2,2,2,2,1,2),
                     FathersOccupation = c(1,3,3,3,1,2,3,1,1,1,3,2,1,3,3,1,3,1,2,1),
                     PersonsAtHome = c(5,7,3,8,5,9,6,7,8,4,7,5,4,7,8,8,3,11,7,6),
                     SiblingsAtSchool = c(6,4,4,1,2,1,5,3,1,2,3,2,5,5,2,1,2,5,3,2),
                     TypesOfHouses = c(1,2,3,1,1,3,3,1,2,3,2,3,2,2,3,3,3,3,3,2))
table1
```

```
##    Respondent Sex FathersOccupation PersonsAtHome SiblingsAtSchool
## 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
##    TypesOfHouses
## 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
```

#legend: Male=1 Female=2 Farmer=1 Driver=2 Others=3 Wood=1 Semi-Concrete=2 Concrete=3 #b.

```r
summary(table1)
```

```
##    Respondent          Sex       FathersOccupation PersonsAtHome
##  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
##  SiblingsAtSchool TypesOfHouses
##  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. No, the mean is 2.95

#d.

``` r
table1[1:2,]
```

```
##   Respondent Sex FathersOccupation PersonsAtHome SiblingsAtSchool TypesOfHouses
## 1          1   2                 1             5                6             1
## 2          2   2                 3             7                4             2
```

#e.

```r
table1[c(3,5), c(2,4)]
```

```
##   Sex PersonsAtHome
## 3   1             3
## 5   2             5
```

#f.

```r
types_houses <- table1$TypesOfHouses
types_houses
```

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

#g.

```r
MaleFarmers <- subset(table1, Sex == 1 & FathersOccupation == 1)
MaleFarmers
```

```
## [1] Respondent        Sex               FathersOccupation PersonsAtHome
## [5] SiblingsAtSchool  TypesOfHouses
## <0 rows> (or 0-length row.names)
```

#h.

```
Female_Siblings <- subset(table1, Sex == 2 & SiblingsAtSchool >= 5)
Female_Siblings
```

```
##    Respondent Sex FathersOccupation PersonsAtHome SiblingsAtSchool
## 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
##    TypesOfHouses
## 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)

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. It displays the data type of the object #3. #a.

```
HouseData <- read.csv("/cloud/project/Rworksheet3b/HouseholdData.csv")
```

#b.

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

```
##    Respondents Sex Father.s.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.

```
HouseData$Types.of.Houses <- factor(HouseData$Types.of.Houses, levels = c("Wood", "Congrete", "Semi-cong
HouseData
```

```
##    Respondents Sex Father.s.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                3
## 6                3
## 7                1
## 8                3
## 9                3
## 10               2
```

#d.

```
HouseData$Father.s.Occupation <- factor(HouseData$Father.s.Occupation, levels = c(1,2,3), label = c("Fa
HouseData
```

```
##    Respondents Sex Father.s.Occupation Persons.at.Home Siblings.at.School
## 1            1   1              Farmer                5                   2
## 2            2   2              Driver                7                   3
## 3            3   2              Others                3                   0
## 4            4   1              Others                8                   5
## 5            5   1              Farmer                6                   2
```

```
## 6            6   2             Driver               4                  3
## 7            7   2             Driver               4                  1
## 8            8   1             Others               2                  2
## 9            9   2             Farmer              11                  6
## 10          10   1             Others               6                  2
##    Types.of.Houses
## 1                1
## 2                2
## 3                2
## 4                1
## 5                3
## 6                3
## 7                1
## 8                3
## 9                3
## 10               2
```

#e.

```
Female_DriverDad <- subset(HouseData, Sex == 2 & Father.s.Occupation == "Driver")
Female_DriverDad
```

```
##   Respondents Sex Father.s.Occupation Persons.at.Home Siblings.at.School
## 2           2   2             Driver               7                  3
## 6           6   2             Driver               4                  3
## 7           7   2             Driver               4                  1
##   Types.of.Houses
## 2               2
## 6               3
## 7               1
```

#f.

```
manysibs <- subset(HouseData, Respondents & Siblings.at.School >= 5)
manysibs
```

```
##   Respondents Sex Father.s.Occupation Persons.at.Home Siblings.at.School
## 4           4   1             Others               8                  5
## 9           9   2             Farmer              11                  6
##   Types.of.Houses
## 4               1
## 9               3
```

#4. The graph represents the data of Sentiments of Tweets Per Day in the month of July. It shows the positve, neutral, and negative tweets per day.