RWorksheet_Lumauag#3b

Matt Andrei Lumauag

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```
#1
#a
FamData <- read.csv("C:/RPROJS/Worksheet#3/FAMILY.csv")
#b
str(FamData)
```

```
## 'data.frame':    20 obs. of  6 variables:
##  $ Respondents       : int  1 2 3 4 5 6 7 8 9 10 ...
##  $ Sex               : int  2 2 1 2 2 2 2 2 2 2 ...
##  $ Fathers.Occupation: int  1 3 3 3 1 2 3 1 1 1 ...
##  $ Persons.at.home   : int  5 7 3 8 5 9 6 7 8 4 ...
##  $ Siblings.at.school: int  6 4 4 1 2 1 5 3 1 2 ...
##  $ Types.of.houses   : int  1 2 3 1 1 3 3 1 2 3 ...
```

```
summary(FamData)
```

```
##   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
mean_siblings <- mean(FamData$Siblings.at.school, na.rm = TRUE)
print(mean_siblings)
```

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

```
#d
firstTwoRows <- FamData[1:2, ]
firstTwoRows
```

```
##   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
three_fiveRow_two_fourCol <- FamData[c(3, 5), c(2, 4)]
three_fiveRow_two_fourCol
```

```
##   Sex Persons.at.home
## 3   1               3
## 5   2               5
```

```
#f
types_houses <- FamData$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
male_farmer <- FamData[FamData$Sex == 1 & FamData$Fathers.Occupation == 1, ]
male_farmer
```

```
## [1] Respondents        Sex                Fathers.Occupation Persons.at.home
## [5] Siblings.at.school Types.of.houses
## <0 rows> (or 0-length row.names)
```

```
#h
female_resp <- FamData[FamData$Sex == 2 & FamData$Siblings.at.school >= 5, ]
female_resp
```

```
##    Respondents Sex Fathers.Occupation 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)

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 The empty data frame contains five columns (Ints, Doubles, Characters, Logicals, and Factors), each
```

```
#3
#a
HouseholdData <- read.csv("C:/RPROJS/Worksheet#3/HouseholdData.csv")
str(HouseholdData)
```

```
## 'data.frame':    10 obs. of  6 variables:
##  $ Respondents       : int  1 2 3 4 5 6 7 8 9 10
##  $ Sex               : chr  "Male" "Female" "Female" "Male" ...
##  $ Fathers.Occupation: int  1 2 3 3 1 2 2 3 1 3
##  $ Persons.at.home   : int  5 7 3 8 6 4 4 2 11 6
##  $ Siblings.at.school: int  2 3 0 5 2 3 1 2 6 2
##  $ Types.of.houses   : chr  "Wood" "Congrete" "Congrete" "Wood" ...
```

```
#b
HouseholdData$Sex <- as.factor(HouseholdData$Sex)
levels(HouseholdData$Sex) <- list("1" = "Male", "2" = "Female")

str(HouseholdData)
```

```
## 'data.frame':    10 obs. of  6 variables:
##  $ Respondents       : int  1 2 3 4 5 6 7 8 9 10
##  $ Sex               : Factor w/ 2 levels "1","2": 1 2 2 1 1 2 2 1 2 1
##  $ Fathers.Occupation: int  1 2 3 3 1 2 2 3 1 3
##  $ Persons.at.home   : int  5 7 3 8 6 4 4 2 11 6
##  $ Siblings.at.school: int  2 3 0 5 2 3 1 2 6 2
##  $ Types.of.houses   : chr  "Wood" "Congrete" "Congrete" "Wood" ...
```

```
print(HouseholdData)
```

```
##    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
HouseholdData$Types.of.houses <- as.factor(HouseholdData$Types.of.houses)
levels(HouseholdData$Types.of.houses) <- list("1" = "Wood", "2" = "Congrete", "3" = "Semi-congrete")
print(HouseholdData)
```

```
##    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                3
## 6                3
## 7                1
## 8                3
## 9                3
## 10               2
```

```
str(HouseholdData)
```

```
## 'data.frame':    10 obs. of  6 variables:
##  $ Respondents       : int  1 2 3 4 5 6 7 8 9 10
```

```
##  $ Sex               : Factor w/ 2 levels "1","2": 1 2 2 1 1 2 2 1 2 1
##  $ Fathers.Occupation: int  1 2 3 3 1 2 2 3 1 3
##  $ Persons.at.home   : int  5 7 3 8 6 4 4 2 11 6
##  $ Siblings.at.school: int  2 3 0 5 2 3 1 2 6 2
##  $ Types.of.houses   : Factor w/ 3 levels "1","2","3": 1 2 2 1 3 3 1 3 3 2
```

```
#d
HouseholdData$Fathers.Occupation <- as.factor(HouseholdData$Fathers.Occupation)
levels(HouseholdData$Fathers.Occupation) <- list("Farmer" = "1", "Driver" = "2", "Others" = "3")
print(HouseholdData)
```

```
##    Respondents Sex Fathers.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
```

```
str(HouseholdData)
```

```
## 'data.frame':    10 obs. of  6 variables:
##  $ Respondents       : int  1 2 3 4 5 6 7 8 9 10
##  $ Sex               : Factor w/ 2 levels "1","2": 1 2 2 1 1 2 2 1 2 1
##  $ Fathers.Occupation: Factor w/ 3 levels "Farmer","Driver",..: 1 2 3 3 1 2 2 3 1 3
##  $ Persons.at.home   : int  5 7 3 8 6 4 4 2 11 6
##  $ Siblings.at.school: int  2 3 0 5 2 3 1 2 6 2
##  $ Types.of.houses   : Factor w/ 3 levels "1","2","3": 1 2 2 1 3 3 1 3 3 2
```

```
#e
femaleRespondents <- FamData[FamData$Sex == 2 & FamData$Fathers.Occupation == 2, ]
femaleRespondents
```

```
##    Respondents Sex Fathers.Occupation Persons.at.home Siblings.at.school
## 6            6   2                  2               9                  1
## 12          12   2                  2               5                  2
##    Types.of.houses
## 6                3
## 12               3
```

```r
#f
Respondents <-FamData[FamData$Siblings.at.school >= 5, ]
Respondents
```

```
##    Respondents Sex Fathers.Occupation 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
```

```r
#4
#The data table includes demographic information about ten respondents, detailing their sex, fathers' o
```