RWorkSheet_Calopez#3b

2023-10-11

```
#1a

dfRespo <- c(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20)
dfSex <- c(2,2,1,2,2,2,2,2,2,2,1,2,2,2,2,2,2,2,1,2)
dfFathersOccu <- c(1,3,3,3,1,2,3,1,1,1,3,2,1,3,3,1,3,1,2,1)
dfPerson_At_Home <- c(5,7,3,8,5,9,6,7,8,4,7,5,4,7,8,8,3,11,7,6)
dfSiblingsatSchool <- c(6,4,4,1,2,1,5,3,1,2,3,2,5,5,2,1,2,5,3,2)
dfTypesofHouses <- c(1,2,3,1,1,3,3,1,2,3,2,3,2,2,3,3,3,3,3,2)

dfHouseholdData <- data.frame("Respondents" = dfRespo,
                              "Sex" = dfSex,
                              "Fathers Occupation" = dfFathersOccu,
                              "Persons at Home" = dfPerson_At_Home,
                              "Siblings at School" = dfSiblingsatSchool,
                              "Types of Houses" = dfTypesofHouses)
dfHouseholdData
```

```
##    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
```

```
#1b
#the data is about a Household occupants

summary(dfHouseholdData)
```

```
##   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

#no, its 2.95

#d

#first_second <- dfHouseholdData[1:2,]
#first_second
first_second <- head(dfHouseholdData, 2)
first_second
```

```
##   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
third5and2nd4 <- dfHouseholdData[c(3,5),c(2,4)]
third5and2nd4
```

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

```
#f
types_houses <- dfHouseholdData$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

dfMaleFatherOccu <- dfHouseholdData[dfHouseholdData$Sex == 1 & dfHouseholdData$Fathers.Occupation == 1,
dfMaleFatherOccu
```

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

```
#h

dfFemaleSiblings <- dfHouseholdData[dfHouseholdData$Sex == 2 & dfHouseholdData$Siblings.at.School >= 5,
dfFemaleSiblings
```

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

```
#2


dfofNum2 = 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(dfofNum2))
```

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

```
#it prints the structure of the dataframe

#3. Create a .csv file of this. Save it as HouseholdData.csv

newRespondent <- c(1:10)
```

```
newSex <- c("Male", "Female", "Female", "Male", "Male", "Female", "Female", "Male", "Female", "Male")
newFathersOccupation <- c(1,2,3,3,1,2,2,3,1,3)
newPersonsAtHome <- c(5,7,3,8,6,4,4,2,11,6)
newSiblingsAtSchool <- c(2,3,0,5,2,3,1,2,6,2)
newTypesHouses <- c("Wood", "Congrete", "Congrete", "Wood", "Semi-congrete", "Semi-congrete", "Wood", "S

HouseholdData <- data.frame(
  Respondents = newRespondent,
  Sex = newSex,
  FatherOccupation = newFathersOccupation,
  PersonsAtHome=newPersonsAtHome,
  SiblingsAtSchool=newSiblingsAtSchool,
  TypesOfHouses=newTypesHouses)
HouseholdData
```

```
##    Respondents    Sex FatherOccupation PersonsAtHome SiblingsAtSchool
## 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
##    TypesOfHouses
## 1           Wood
## 2       Congrete
## 3       Congrete
## 4           Wood
## 5  Semi-congrete
## 6  Semi-congrete
## 7           Wood
## 8  Semi-congrete
## 9  Semi-congrete
## 10      Congrete
```

```
write.csv(HouseholdData, file ="HouseholdData.csv")

#a.Import the csv file into the R environment. Write the codes.

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

```
##     X Respondents    Sex FatherOccupation PersonsAtHome SiblingsAtSchool
## 1   1           1   Male                1             5                2
## 2   2           2 Female                2             7                3
## 3   3           3 Female                3             3                0
## 4   4           4   Male                3             8                5
## 5   5           5   Male                1             6                2
## 6   6           6 Female                2             4                3
## 7   7           7 Female                2             4                1
## 8   8           8   Male                3             2                2
## 9   9           9 Female                1            11                6
```

```
## 10 10          10   Male               3             6               2
##    TypesOfHouses
## 1           Wood
## 2       Congrete
## 3       Congrete
## 4           Wood
## 5  Semi-congrete
## 6  Semi-congrete
## 7           Wood
## 8  Semi-congrete
## 9  Semi-congrete
## 10      Congrete
```

```
#b. Convert the Sex into factor using factor() function and change it into integer.[Legend: Male = 1 an

imported$Sex <- factor(imported$Sex, levels = c("Male", "Female"))
imported$Sex<- as.integer(imported$Sex)
imported$Sex
```

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

```
# c. Convert the Type of Houses into factor and change it into integer. [Legend: Wood = 1; Congrete = 2

imported$HouseType <- factor(imported$TypesOfHouses, levels = c("Wood", "Congrete", "Semi-congrete"))
imported$HouseType <- as.integer(imported$HouseType)
imported$HouseType
```

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

```
#d.On father's occupation, factor it as Farmer = 1; Driver = 2; and Others = 3. What is the R code and

imported$FatherOccupation <- factor(imported$FatherOccupation, levels = c(1,2,3), labels = c("Farmer",
imported$FatherOccupation
```

```
##  [1] Farmer Driver Others Others Farmer Driver Driver Others Farmer Others
## Levels: Farmer Driver Others
```

```
# e. Select only all females respondent that has a father whose occupation is driver. Write the codes a

femaleDriver <- imported[imported$Sex == 2 & imported$FatherOccupation == "Driver",]
femaleDriver
```

```
##   X Respondents Sex FatherOccupation PersonsAtHome SiblingsAtSchool
## 2 2           2   2           Driver             7               3
## 6 6           6   2           Driver             4               3
## 7 7           7   2           Driver             4               1
##   TypesOfHouses HouseType
## 2      Congrete         2
## 6 Semi-congrete         3
## 7          Wood         1
```

```
# f. Select the respondents that have greater than or equal to 5 number of siblings attending school. W
upper_five <- imported[imported$SiblingsAtSchool >= 5,]
upper_five
```

```
##   X Respondents Sex FatherOccupation PersonsAtHome SiblingsAtSchool
## 4 4           4   1           Others             8               5
## 9 9           9   2           Farmer            11               6
```

```
##   TypesOfHouses HouseType
## 4          Wood         1
## 9 Semi-congrete         3
```

```
#4
# The majority of the other sentiments on this day, July 14, are negative. This indicates that some sub

# Even though all attitudes increased on this day, July 15, the negative sentiment is still at its grea

# On these days, negative attitudes are still prevalent on July 17 and July 18, but neutral and positiv

# On July 20, all sentiments reached their lowest points, although there were still more negative feeli

# All emotions are higher on this day, July 21, with the negative still dominating. This could imply th

#This information can lead us to the conclusion that public opinion is subject to outside influences an
```