

Rworksheet_DeGuzman#4a

Arjay

2023-10-25

#1.

```
HouseholdData <-data.frame(
Shoesize = c(6.5,9.0,8.5,8.5,10.5,7.0,9.5,9.0,13.0,7.5,10.5,8.5,12.0,10.5,13.0,11.5,8.5,5.0,10.0,6.5,7.5,
Height = c(66.0,68.0,64.5,65.0,70.0,64.0,70.0,71.0,72.0,64.0,74.5,67.0,71.0,71.0,77.0,72.0,59.0,62.0,72.0,65.0,67.0,
Gender = c("F", "F", "F", "F", "M", "F", "F", "F", "M", "F", "M", "F", "M", "M", "M", "M", "F", "F", "M", "F", "F", "M", "M",
)
HouseholdData
```

##	Shoesize	Height	Gender
## 1	6.5	66.0	F
## 2	9.0	68.0	F
## 3	8.5	64.5	F
## 4	8.5	65.0	F
## 5	10.5	70.0	M
## 6	7.0	64.0	F
## 7	9.5	70.0	F
## 8	9.0	71.0	F
## 9	13.0	72.0	M
## 10	7.5	64.0	F
## 11	10.5	74.5	M
## 12	8.5	67.0	F
## 13	12.0	71.0	M
## 14	10.5	71.0	M
## 15	13.0	77.0	M
## 16	11.5	72.0	M
## 17	8.5	59.0	F
## 18	5.0	62.0	F
## 19	10.0	72.0	M
## 20	6.5	66.0	F
## 21	7.5	64.0	F
## 22	8.5	67.0	M
## 23	10.5	73.0	M
## 24	8.5	69.0	F
## 25	10.5	72.0	M
## 26	11.0	70.0	M
## 27	9.0	69.0	M
## 28	13.0	70.0	M

#A. The data is a dataframe called "HouseholdData" with three variables: "Shoesize", "Height", and "Gen".

#B.

```
Male <- subset(HouseholdData, Gender == "M")
Male
```

```
##      Shoesize Height Gender
## 5         10.5   70.0      M
## 9         13.0   72.0      M
## 11        10.5   74.5      M
## 13        12.0   71.0      M
## 14        10.5   71.0      M
## 15        13.0   77.0      M
## 16        11.5   72.0      M
## 19        10.0   72.0      M
## 22         8.5   67.0      M
## 23        10.5   73.0      M
## 25        10.5   72.0      M
## 26        11.0   70.0      M
## 27         9.0   69.0      M
## 28        13.0   70.0      M
```

```
#Output
```

```
#MaleData
```

```
#      Shoesize Height Gender
```

```
#14        10.5   71.0      M
```

```
#15        13.0   77.0      M
```

```
#16        11.5   72.0      M
```

```
#19        10.0   72.0      M
```

```
#22         8.5   67.0      M
```

```
#23        10.5   73.0      M
```

```
#25        10.5   72.0      M
```

```
#26        11.0   70.0      M
```

```
#27         9.0   69.0      M
```

```
#28        13.0   70.0      M
```

```
Female <- subset(HouseholdData, Gender == "F")
```

```
Female
```

```
##      Shoesize Height Gender
## 1         6.5   66.0      F
## 2         9.0   68.0      F
## 3         8.5   64.5      F
## 4         8.5   65.0      F
## 6         7.0   64.0      F
## 7         9.5   70.0      F
## 8         9.0   71.0      F
## 10        7.5   64.0      F
## 12        8.5   67.0      F
## 17        8.5   59.0      F
## 18         5.0   62.0      F
## 20        6.5   66.0      F
## 21        7.5   64.0      F
## 24        8.5   69.0      F
```

```
#Output
```

```
# Shoesize Height Gender
```

```
#1         6.5   66.0      F
```

```
#2         9.0   68.0      F
```

```
#3         8.5   64.5      F
```

```
#4         8.5   65.0      F
```

```
#6         7.0   64.0      F
```

```
#7      9.5   70.0    F
#8      9.0   71.0    F
#10     7.5   64.0    F
#12     8.5   67.0    F
#17     8.5   59.0    F
#18     5.0   62.0    F
#20     6.5   66.0    F
#21     7.5   64.0    F
#24     8.5   69.0    F
```

```
#C.
mean_shoe <- mean(HouseholdData$Shoesize)
cat("Mean shoe size:", mean_shoe)
```

```
## Mean shoe size: 9.410714
```

```
#Output:
#Mean shoe size: 9.410714
```

```
mean_height <- mean(HouseholdData$Height)
cat("Mean height:", mean_height)
```

```
## Mean height: 68.57143
```

```
#Output:
#Mean height: 68.57143
```

#D. #Most People who has a shoe size of 10 and above are tall people so it has some relationship between shoe size and height

```
#2.
```

```
Months <- c("March", "April", "January", "November", "January", "September", "October", "September", "November")
```

```
Factor_Months_Vector <- factor(Months)
Factor_Months_Vector
```

```
## [1] March      April      January    November   January    September  October
## [8] September  November   August     January    November   November   February
## [15] May        August     July       December   August     August     September
## [22] November   February   April
## 11 Levels: April August December February January July March May ... September
```

```
#3.
```

```
#Theyre both useful
summary(Months)
```

```
##      Length      Class      Mode
##      24 character character
```

```
summary(Factor_Months_Vector)
```

```
##      April      August  December  February   January      July      March      May
##          2          4          1          2          3          1          1          1
## November   October  September
##          5          1          3
```

```
#4.
```

```
DirVector <- rep(c("East", "West", "North"), times = c(1, 4, 3))
```

```
new_order_data <- factor(DirVector, levels = c("East", "West", "North"))
new_order_data
```

```
## [1] East West West West West North North North
## Levels: East West North
```

```
#5.
#data <- read.table("/cloud/project/Rworksheet_DeGuzman_1-R./Rworksheets#4a", header=TRUE, sep=",")
#read <- read.csv("import_march.csv")
#read
```

```
#6
#randomNum <- readline(prompt = "Enter number from 1 to 50: ")

#if (randomNum > 50) {
# paste("The number selected is beyond the range of 1 to 50")
#} else if (randomNum == 20) {
# paste("TRUE")
#} else {
# paste(randomNum)
#}

# Input number from user
#input_number <- as.integer(readline("Enter a number between 1 and 50: "))

# Check and display appropriate output
#result <- check_number(input_number)
#cat(result, "\n")
```

```
#7.
minimumBills <- function(price) {

  min_bills <- price %/% 50
  paste("The minimum no. of bills:", min_bills)
}

minimumBills(600)
```

```
## [1] "The minimum no. of bills: 12"
```

```
# 8.a
```

```
Grades <-data.frame(
Name = c("Annie","Thea","Steve","Hanna"),
Grade1 = c(85,65,75,95),
Grade2 = c(65,75,55,75),
Grade3 = c(85,90,80,100),
Grade4 = c(100,90,85,90))
```

```
Grades
```

```
##   Name Grade1 Grade2 Grade3 Grade4
## 1 Annie     85     65     85    100
## 2 Thea      65     75     90     90
## 3 Steve     75     55     80     85
## 4 Hanna     95     75    100     90
```

```

# 8.b

Grades$avg <- rowMeans(Grades[,2:5])

subset_avg <- subset(Grades, avg > 90)

mean(subset_avg$avg)

## [1] NaN

# 8.c

first_Test <- sum(Grades$Grade1) / nrow(Grades)
first_Test

## [1] 80

second_Test <- sum(Grades$Grade2) / nrow(Grades)
second_Test

## [1] 67.5

third_Test <- sum(Grades$Grade3) / nrow(Grades)
third_Test

## [1] 88.75

fourth_Test <- sum(Grades$Grade4) / nrow(Grades)
fourth_Test

## [1] 91.25

if (first_Test < 80) {
  paste("The 1st test was difficult.")
} else if(second_Test < 80) {
  paste("The 2nd test was difficult.")
} else if(third_Test < 80) {
  paste("The 3rd test was difficult.")
} else if(fourth_Test < 80) {
  paste("The 4th test was difficult.")
} else {
  paste("No test had an average score less than 80.")
}

## [1] "The 2nd test was difficult."

```