RWorksheet_Gagante#4b.Rmd

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Using Loop Function for() loop 1. Using the for loop, create an R script that will display a 5x5 matrix as shown in Figure 1. It must contain vectorA = [1,2,3,4,5] and a 5 x 5 zero matrix. Hint: Use abs() function to get the absolute value

```
vectorA <- c(1, 2, 3, 4, 5)
matrix_5x5 <- matrix( nrow = 5, ncol = 5)

for (i in 1:5) {
  for (j in 1:5) {
    matrix_5x5[i, j] <- abs(i - j)
  }
}

print(matrix_5x5)
```

```
##      [,1] [,2] [,3] [,4] [,5]
## [1,]    0    1    2    3    4
## [2,]    1    0    1    2    3
## [3,]    2    1    0    1    2
## [4,]    3    2    1    0    1
## [5,]    4    3    2    1    0
```

2. Print the string "*" using for() function. The output should be the same as shown in Figure

```
for (i in 1:5) {
  line <- rep('"*"', i)
  cat(line, sep = " ")
  cat("\n")
}
```

```
## "*"
## "*" "*"
## "*" "*" "*"
## "*" "*" "*" "*"
## "*" "*" "*" "*" "*"
```

3. Get an input from the user to print the Fibonacci sequence starting from the 1st input up to 500. Use repeat and break statements. Write the R Scripts and its output.

```
# start <- as.integer(readline(prompt = "Enter the starting number: "))

#a <- start
#b <- 1
#cat(a, b, sep = " ")
```

```
#repeat {
 # next_term <- a + b
 # if (!is.na(next_term) && next_term > 500) {
 #   break
#  }
#  cat(next_term, " ")
 # a <- b
#  b <- next_term
  #}
#cat("\n")
```

4. Import the dataset as shown in Figure 1 you have created previously.

a. What is the R script for importing an excel or a csv file? Display the first 6 rows of the dataset? Show your codes and its result.

```
data <- read.csv("Shoe_sizes.csv")

head(data)
```

```
##   Show.Size 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
```

b. Create a subset for gender(female and male). How many observations are there in Male? How about in Female? Write the R scripts and its output.

```
male_data <- subset(data, Gender == "M")
female_data <- subset(data, Gender == "F")

num_males <- nrow(male_data)
num_females <- nrow(female_data)

num_males
```

```
## [1] 14
```

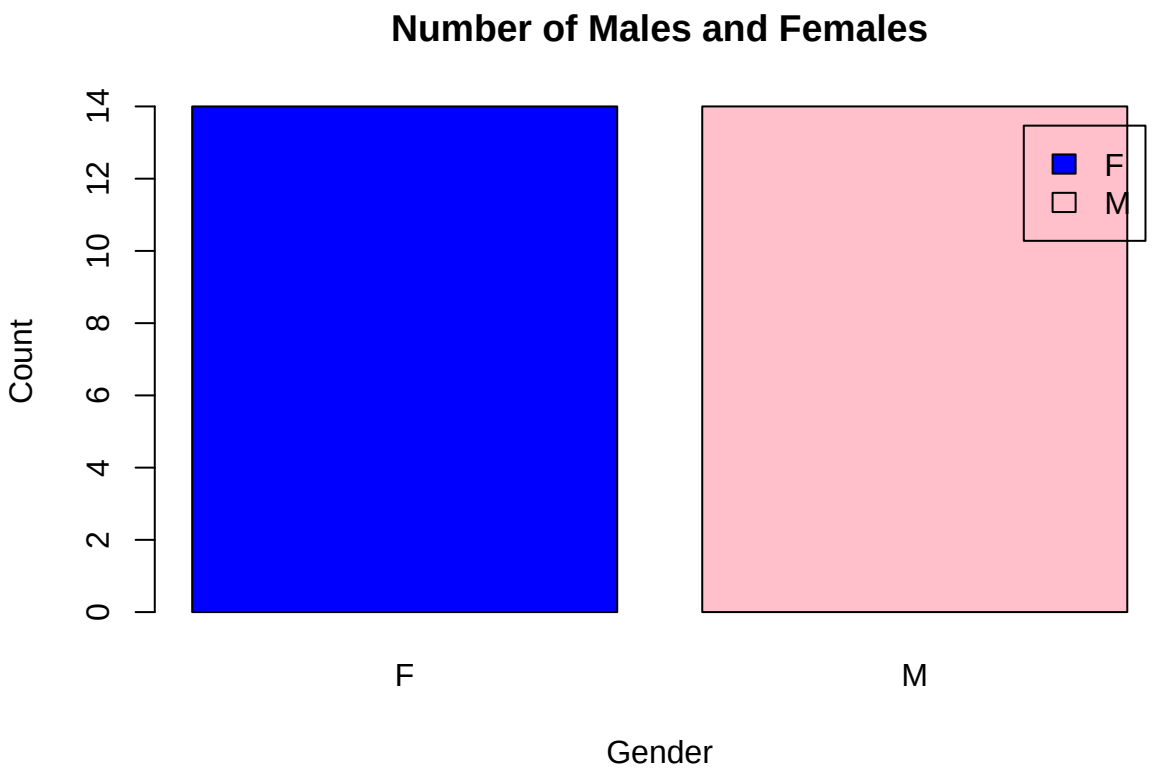
```
num_females
```

```
## [1] 14
```

c. Create a graph for the number of males and females for Household Data. Use plot(), chart type = barplot. Make sure to place title, legends, and colors. Write the R scripts and its result.

```
gender_counts <- table(data$Gender)

barplot(gender_counts,
        main = "Number of Males and Females",
        xlab = "Gender",
        ylab = "Count",
        col = c("blue", "pink"),
        legend = rownames(gender_counts))
```


Number of Males and Females
Count
0
2
4
6
8
10
12
14
F
M
Gender
F
M