

RWork-sheet_jalando-on#4b

Ralyn Queen Jalando-on

2024-10-30

USING FOR LOOP FUNCTION

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.

```
matrixVA <- matrix(0, nrow = 5, ncol = 5)
vectorA <- c(1, 2, 3, 4, 5)

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

print(matrixVA)
```

```
##      [,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

```
rows <- 5

for (i in 1:rows) {
  cat(rep(" '*'", i), "\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.

USING BASIC GRAPHICS (plot(),barplot(),pie(),hist())

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

```
library(readr)
data <- read_csv("/cloud/project/shoesizes.csv")

## New names:
## Rows: 14 Columns: 6
## -- Column specification
## ----- Delimiter: "," chr
## (2): Gender...3, Gender...6 dbl (4): Shoe size...1, Height...2, Shoe size...4,
## Height...5
## i Use `spec()` to retrieve the full column specification for this data. i
## Specify the column types or set `show_col_types = FALSE` to quiet this message.
## * `Shoe size` -> `Shoe size...1`
## * `Height` -> `Height...2`
## * `Gender` -> `Gender...3`
## * `Shoe size` -> `Shoe size...4`
## * `Height` -> `Height...5`
## * `Gender` -> `Gender...6`
```

```
data

## # A tibble: 14 x 6
##   `Shoe size...1` Height...2 Gender...3 `Shoe size...4` Height...5 Gender...6
##   <dbl> <dbl> <chr> <dbl> <dbl> <chr>
## 1      6.5      66 F      13      77 M
## 2       9      68 F     11.5     72 M
## 3      8.5      64 F      8.5     59 F
## 4      8.5      65 F       5     62 F
## 5     10.5      70 M      10     72 M
## 6       7      64 F      6.5     66 F
## 7      9.5      70 F      7.5     64 F
## 8       9      71 F      8.5     67 M
## 9      13      72 M     10.5     73 M
## 10      7.5      64 F      8.5     69 F
## 11     10.5      74 M     10.5     72 M
## 12      8.5      67 F      11     70 M
## 13      12      71 M       9     69 M
## 14     10.5      71 M      13     70 M
```

- 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, Male = "M")

## Warning: In subset.data.frame(data, Male = "M") :
## extra argument 'Male' will be disregarded

Female_data <- subset(data, Female = "F")

## Warning: In subset.data.frame(data, Female = "F") :
## extra argument 'Female' will be disregarded

num_Male <- nrow(Male_data)
num_Female <- nrow(Female_data)

cat("Number of observations in Male:", num_Male, "\n")
```

```
## Number of observations in Male: 14
```

```
cat("Number of observations in Female:", num_Female, "\n")
```

```
## Number of observations in Female: 14
```