Worksheet-4b in R

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#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.

```
vectorA <- c(1, 2, 3, 4, 5)
matrix0 <- matrix (0, nrow = 5, ncol = 5)

for (i in 1:5) {
  for (j in 1:5) {
  matrix0[i, j] <- abs(vectorA[i] - vectorA [j])
  }
}
matrix0
```

```
##      [,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 1.

```
for (i in 1:5) {
  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.

```
a <- 0
b <- 1

c <- readline(prompt = "Enter a number: ")
```

```
## Enter a number:
```

```
repeat {
  c <- a + b
  if (c > 500) break
  a <- b
```

```
  b <- c
  print(c)
}
```

```
## [1] 1
## [1] 2
## [1] 3
## [1] 5
## [1] 8
## [1] 13
## [1] 21
## [1] 34
## [1] 55
## [1] 89
## [1] 144
## [1] 233
## [1] 377
```

#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

#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.