RWorksheet_Camarista#4b

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#Using Loop Function ##for() loop 1. 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)
matrixA <- matrix(0, nrow = 5, ncol = 5)

for(i in 1:5){

    matrixA[i, ] <- abs(vectorA - i)
}
matrixA
```

```
##      [,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){

    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.

```
#There's an error during knitting in this particular chunk. So I just commented the prompt script an in
#start <- as.integer(readline(prompt = "Enter the starting number: "))
start <- 4
```

```r
a <- start
b <- start + 1

cat(a, "\n")
```

```
## 4
```

```r
repeat {
  cat(b, "\n")

  next_term <- a + b

  if (next_term > 500) {
    break
  }

  a <- b
  b <- next_term
}
```

```
## 5
## 9
## 14
## 23
## 37
## 60
## 97
## 157
## 254
## 411
```