RMarkdown_Somosera#4b

2023-11-08

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

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

print(matA)
```

```
##      [,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
```

```
asterisks <- ""
for(i in 1:5){
asterisks <- paste(asterisks, "*")

cat(asterisks, "\n")
}
```

```
##  *
##  * *
##  * * *
##  * * * *
##  * * * * *
```

```
# Get input from user
n <- as.integer(readline(prompt="Enter the number of terms: "))
```

```
## Enter the number of terms:
```

```
# Initialize variables
a <- 0
b <- 1

# Print Fibonacci sequence
print(b)  # first term of the sequence
```

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

```
repeat {
  c <- a + b
  if (c > 500) {  # exit loop if next term is greater than 500
```

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