

RWorksheet#4b

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

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

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

```
print(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
```

```
num_lines <- 5
```

```
for (i in 1:num_lines) {
  for (j in 1:i) {
    cat("*")
  }
  cat("\n")
}
```

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

```
input_number <- as.numeric(readline("Enter a number to start the Fibonacci sequence: "))
```

```
## Enter a number to start the Fibonacci sequence:
```

```

assume_number <- 0
a <- 0
b <- 1

repeat {

  if (a > 500) {
    break
  }

  if (a >= assume_number) {
    cat(a, " ")
  }

  temp <- a + b
  a <- b
  b <- temp
}

## 0 1 1 2 3 5 8 13 21 34 55 89 144 233 377
cat("\n")

```