

# Matrix

## Objective

The objective of this problem is to ensure that students know how to use 2 dimensional array and simple looping technique.

## Problem Description

Given a 2 dimensional array of size **N** x **M** containing 1 or 0 and a query (ROW or COLUMN), determine the sum of the numbers in the array corresponding to the query. For example, query “ROW 3” means sum all the elements in the 3<sup>rd</sup> row of the array.

## Input

The first line of the input contains two integers, **N** ( $1 \leq N \leq 100$ ) and **M** ( $1 \leq M \leq 100$ ). The next line is an array with size **N** x **M**. The next line is the query with format “ROW **x**“, ( $1 \leq x \leq N$ ) or “COLUMN **y**“, ( $1 \leq y \leq M$ ).

## Output

Output the answer to the query.

## Sample Input

```
4 5
1 0 1 0 1
0 1 0 1 0
1 1 1 0 1
0 0 1 0 0
ROW 3
```

## Sample Output

```
4
```

## Explanation

```

1 0 1 0 1
0 1 0 1 0
ROW 3    1 1 1 0 1
0 0 1 0 0
```

The sum of numbers in row 3 is 4

## Note

The main Java class must be called Matrix, and be in the source file Matrix.java.