N. Pumbaa And Apples

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Pop stores some secret information about a farm with $n * m$ apples represents a rectangle. Each apple has it's own number. The order of apples in the farm is changing. That's why **Pop** receives the following instructions:

-The instruction to swap two rows of the farm;

-The instruction to swap two columns of the farm;

-The instruction to obtain the number of the apple that exists in some cell.

As **Pop** is not clever, he asked **Alice** to execute these instructions.

Input

The first line contains three space-separated integers n, m and k $(1 \le n, m \le 1000, 1 \le k \le 10^6)$ — the number of farm rows and columns and the number of instructions, correspondingly.

Next n lines contain m space-separated numbers each — the initial state of the farm. Each number p in the table is an integer and satisfies the inequality $(0 \le p \le 10^6)$.

Next k lines contain instructions in the format "s_i x_i y_i", where s_i is one of the characters "c", "r" or "g", and x_i, y_i are two integers.

-If s_i = "c", then the current instructions is to swap columns with indexes x_i and y_i $(1 \le x, y \le m, x \ne y)$;

-If s_i = "r", then the current instruction is to swap rows with indexes x_i and y_i $(1 \le x, y \le n, x \ne y)$;

-If s_i = "g", then the current instruction is to obtain the number that located in the x_{th} row and in the y_{th} column $(1 \le x \le n, 1 \le y \le m)$.

The farm rows are considered to be indexed from top to bottom from 1 to n, and the farm columns — from left to right from 1 to m.

Output

For each instruction to obtain a number $(s_i =$" g "$)$ print the required number. Print the answers to the instructions in the order of the instruction in the input.

Examples

input Copy

```
3 3 5
1 2 3
4 5 6
7 8 9
g 3 2
r 3 2
c 2 3
g 2 2
g 3 2
```

output Copy

```
8
9
6
```

input Copy

```
2 3 3
1 2 4
3 1 5
c 2 1
r 1 2
g 1 3
```

output Copy

```
5
```


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- Sheet #10 (General Hard)
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- Contest #2
- Sheet #2 (Loops)
- Contest #1
- Sheet #1 (Data type - Conditions)

Sheet #9 (General medium)

Finished

Practice

→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the

Note

Let's see how the farm changes in the second test case.

After the first instruction is fulfilled, the table looks like that:

2 1 4

1 3 5

After the second instruction is fulfilled, the table looks like that:

1 3 5

2 1 4

So the answer to the third instruction (the number located in the first row and in the third column) will be 5.

time limit cannot be more than 30 seconds. Read the details by the link.

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
202548519	Apr/18/2023 02:41	Accepted
202548213	Apr/18/2023 02:34	Accepted
202546645	Apr/18/2023 02:01	Time limit exceeded on test 3