Driving Madness

by matfah

Problem Submissions Discussions

Dory and Hank have hijacked the truck to Cleveland and are trying to get back to the Ocean. Dory has a map of the local interstate system represented by a 2x2 grid of integers. Here is the legend for the map:

0 => Un passable area (you cannot pass!) 1 => Interstate (takes 1 second to travel) 2 => Road (takes 2 seconds to travel) 3 => Ocean (where you want to go to)

For example, you could be given the following map:

00000000
32222111
30000100
30000100
31111122

If your starting row is 1, and your starting column is 7 (indicated by the arrow), then the fastest route would take you 10 seconds to reach the ocean (indicated by the other arrow)

00000000
32222111 <---
30000100
30000100
31111122
^
|
|

The Ocean does NOT need to be touching the side of the map (there might be an underground connection you can't see).

Help Dory read the map and get back to the Ocean as fast as possible!

https://drive.google.com/open?id=0BxxolsFkwnDqTkJKTjNfSGcyb3c

Input Format

Line 1 will contain positive integers r and c, representing the starting row and column on the map, separated by a space Line 2 will contain positive integers m and n, representing the number of rows and columns in the map, separated by a space The next m lines will contain n integers between 0 and 3, with no separation

Constraints

1 <= m,n <= 2000 r and c are on the map, and correspond to a 1 or 2

Output Format

The shortest amount of time it takes to reach the Ocean, or NOT REACHABLE if the ocean cannot be reached

Sample Input 0

```
1 7
5 8
00000000
32222111
30000100
30000100
31111122
```

Sample Output 0

```
10
```

Sample Input 1

```
3 3
4 4
3000
0000
1000
1111
```

Sample Output 1

```
NOT REACHABLE
```

Submissions: 23
Max Score: 5

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Current Buffer (saved locally, editable) BASH

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Upload Code as File Test against custom input Run Code Submit Code