Dont use Elevator

Submit solution

All submissions
Best submissions

Points: 100 (partial)
Time limit: 0.7s
Memory limit: 256M

Author:
admin

Problem type

Allowed languages
C, C++

Don't use Elevator

- Vindya City is rectangular. It can be divided into $N \times M$ grid, each cell (R, C) representing a 1-acre square plot. $(1 \leq R \leq N, 1 \leq C \leq M)$.
- Each cell (R, C) has height $H(R, C)$ given to it.
- From cell (R, C), a person can move only to cells $(R+1, C)$, $(R-1, C)$, $(R, C+1)$ and $(R, C-1)$ (given those positions lie in the Grid).
- For moving between two cells of different heights, usage of the elevator is needed. The elevator is not needed to move between two cells with the same height.
- Starting at $(1, 1)$, what is the minimum number of times the elevator needs to be used to reach (N, M)?

Input Format

- First line contains the number of test cases T. $1 \leq T \leq 5$
- First line of each test case contains N, M defining the dimensions of Vindya City $1 \leq N, M \leq 10^3$
- Next N lines of the test case contain M integers representing the height of cells in the grid.
- The j^{th} element at the i^{th} line represents the height of cell (i, j).
- **inputting by `short int` might be faster**

Output Format

Batches

- Batch 1: $T = 1, 1 \leq N, M \leq 10$ (20 Points)
- Batch 2: $T = 1, 1 \leq N, M \leq 100$ (30 Points)
- Batch 3: $T = 1, 1 \leq N, M \leq 1000$ (40 Points)
- Batch 4: $T \leq 5, 1 \leq N, M \leq 1000$ (10 Points)

use `short int` for Height. Taking input will be faster.

Sample Testcases

Sample 1

Input

```
1
2 2
1 1
1 1
```

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Output

```
0
```

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Sample 2

Input

```
1
2 3
1 2 3
4 5 6
```

Copy

Output

```
3
```

Copy

Hello, **2024101067**.

Input

```
1
6 6
1 2 1 3 3 3
1 1 1 3 5 3
1 7 4 5 3 3
1 9 2 6 4 4
11 10 12 13 4 8
11 10 12 13 4 4
```

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Output

```
2
```

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Diagram

(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)
(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)

Indexing of Vindya

1	2	1	3	3	3
1	1	1	3	5	3
1	7	4	5	3	3
1	9	2	6	4	4
11	10	12	13	4	8
11	10	12	13	4	4

Passwords with Path (In green)

Sample 4

Input

```
5 5
1 2 2 2 3
1 2 1 3 3
1 1 1 3 3
1 5 6 3 8
3 4 7 4 4
```

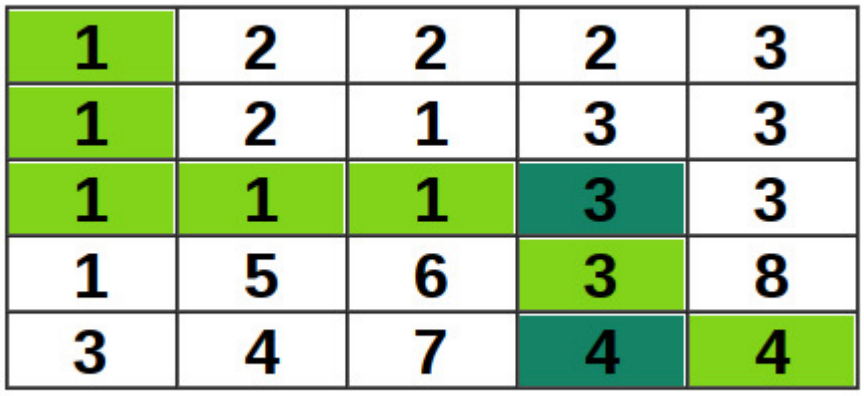
Copy

Hello, **2024101067**.

```
2
```

Copy

Diagram



Clarifications

Request clarification

No clarifications have been made at this time.