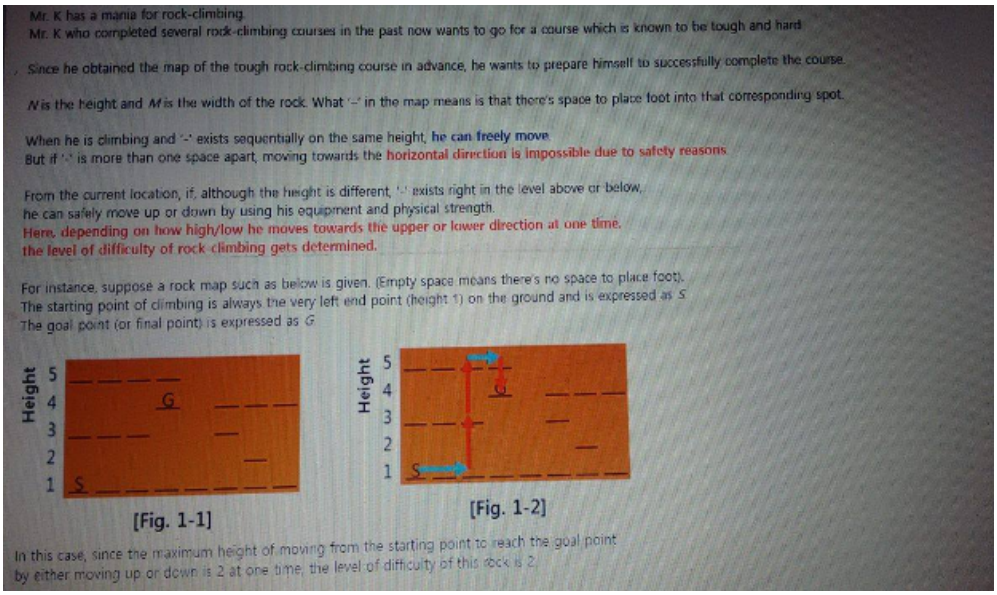
Rock Climbing

Raka wants to climb a rock from a starting point to the destination point. Given a map of the rock mountain which N = height, M = width. In the map, character '-' is the possible foot place spot (where he can climb). He can freely move up/down at vertical spots which '-' exists sequentially. It's impossible to move horizontally in case '-' is not consecutive in the same height level. The maximum height of moving from the starting point to the destination point is the level of difficulty of rock climbing . The total distance of movement is not important. There is more than one path from the starting point to the destination point. Output: The minimum level of difficulty of all rock climbing paths level.

Hint: Start with difficulty level 0 and then keep increasing it one by one. **Raka always starts from bottom left position.**



Input Format

First line contains n,m number of rows, columns respectively Next n lines each containg m integers. interger 3 represenets goal point, interger 1 represent '-', 0 represent "no step".

Constraints

1 <= N,M <= 10

Output Format

Single interger "level"

Sample Input 0

```
5 8
1 1 1 1 0 0 0 0
0 0 0 3 0 1 1 1
1 1 1 0 0 1 0 0
0 0 0 0 0 0 1 0
1 1 1 1 1 1 1 1
```

Sample Output 0

```
2
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