Coding Arena

<C*deVita/>
the TCS Coding Contest

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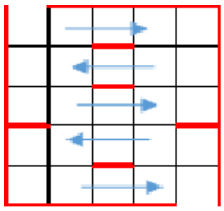
Problem : Trap Door

The trap door game is similar to snakes and ladders. The board has size N x N, where N is odd, and is divided into N^2 squares and there are trap doors on the row boundaries through which you fall through to further rows until you hit a floor without a trapdoor.

For example, in the following board, trap doors are at the floor of the cells (1, 3),(2,3), (3, 1), (3, 5), (4, 3)



The game is played with a six faced die with markings 1, 2, 3,4,5,6 on its faces. You start the game at the top left corner. You roll the die and move by the number of cells shown on the die. If you end up in a cell with a trap door, you fall till you hit a floor. For example, rolling a 2 from S you will reach the cell (1, 3), from where you will fall through (2,3) to (3,3). In the odd numbered rows you move from left to right and on even numbered rows you move from right to left (as shown by the arrows).

The objective is to find the least number of throws of the die that will get you to the end point (the bottom right corner), assuming that luck favors you, and the die has exactly the right number you need.

Input Format:

The first line gives the size of the board, N

The next N lines have a comma separated string of N numbers (0 or 1) each representing the corresponding row on the board. If the number is 1, the corresponding cell has a trapdoor, and if it is 0, there is no trapdoor.

Output Format:

One line containing a number which represents the minimum number of rolls of the die that will get you to the destination

Constraints:
None

Example 1

Input
5
0,0,1,0,0
0,0,1,0,0
1,0,0,0,1
0,0,1,0,0
0,0,0,0,0

Output
3

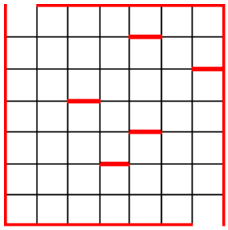
Explanation
N is 5. The position is as represented in the figure above. The minimal rolls of the die are 2,5,2

Example 2

Input
7
0,0,0,0,1,0,0
0,0,0,0,0,0,1
0,0,1,0,0,0,0
0,0,0,0,1,0,0
0,0,0,1,0,0,0
0,0,0,0,0,0,0
0,0,0,0,0,0,0

Output
6

Explanation
There are 7 rows. A minimal sequence of die rolls 1,6,3,4,6,6 will reach the end. Hence the output is 6



Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from <conio.h> / <process.h> as these files do not exist in gcc

Note:

For C and C++, return type of main() function should be int.

Submit Answer

I , **SOURAV KUMAR** confirm that the answer submitted is my own.
I would like to provide attribution to the following sources.

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