Final Contest

(Adv.) Competitive Programming

Submit until end of contest, via the judge interface

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Problem: area52 (2 second timelimit)

Congratulations! Thanks to your good work on air space monitoring you got promoted to coffee delivery person! And you get to do this in the even more secret Area 52! How exciting!

The job is not as easy, as you would have thought, however. You are working in a square-shaped building, in which all the also square-shaped-rooms form a grid and all neighboring rooms are connected. The coffee machine is in the upper left corner and the office of the CEO in the lower right. All rooms have differing amounts of coffee drinkers in them.

Now, the most important thing is to bring the CEO coffee. Otherwise he will become unhappy and start firing people, starting with recent hires. (Hint: This includes you.) And he likes is coffee warm, so you must use the shortest path between the coffee machine and his office. Same for the way back to the coffee machine, because he drinks lots of coffee and wants his next one really soon. Obviously, since the rooms form a grid pattern, there are lots of shortest paths. Therefore you have a bit of choice, how to get there.

DP

Going to the other end of the building for just one cup of coffee is quite a waste of time, so you should deliver coffee to as many other coffee drinkers as possible when you are passing through their rooms.

twice

What is the maximum amount of coffee drinkers you can deliver coffee to on one return trip? If you pass a room multiple times, you can only bring them coffee once. Otherwise they might feel annoyed about frequent interruptions.

Next step on the promotion ladder is paint drying process inspector, so start making coffee already!

Input The first line contains the number $1 \leq n \leq 100$, the number of rooms in each row and column. The following n lines contain n integers each. In the i-th line there are n integers $a_{i,1}, \ldots, a_{i,n}$ $(0 \leq a_{i,j} \leq 100)$ (space separated). Number $a_{i,j}$ denotes the number of coffee drinkers on the i-th row and j-th column of rooms, counting rows from the top and columns from the left. E.g., the coffee machine's room contains $a_{1,1}$ coffee drinkers.

Output Please print the largest number of coffee drinkers you can deliver coffee to. The CEO himself is neither included in the input nor should be counted in the output.

Sample input

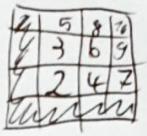
```
4
0 5 0 10
5 5 0 0
1 0 0 0
0 0 0 1
```

Sample output

```
26
```

```
3
2 1 0
2 2 0
1 2 0
```

```
10
```

Greedy DP klappt doch nicht...
vielleicht aber doch mit (1)  ?