BBM204

Take-Home 4

Suppose that you have a maze game that is given as N*N positive integers matrix of blocks. maze[0][0] is the source block(upper leftmost block) and maze[N-1][N-1] is the destination block (lower rightmost block). The goal of the game is to control the movements of a *hero* inside a closed 2D generated maze. The hero will begin the game from a source block and the game will end when the hero finds the shortest path from the source block to the destination, where the length of the path is the sum of the integers in the path. The hero can move only in two directions: **right and down.**

- **Sample input**

```
5
0,4,10,10,10
1,8,1,1,1
1,8,1,10,1
1,1,1,10,1
10,10,10,10,2
```

The first line of the input file holds one integer, N, showing the number of rows and columns (N*N). In the following N lines, weights of blocks are given, N integers in every line.

0	4	10	10	10
1	8	1	1	1
1	8	1	10	1
1	1	1	10	1
10	10	10	10	2

0	1	2	3	4
5	6	7	8	9
10	11	12	13	14
15	16	17	18	19
20	21	22	23	24

Maze which is created according to input.txt is shown left-hand side above. The maze shown on the right-hand side shows the index placement of each block. While creating your output, you have to show your path according to these indices. The shortest path of this maze is shown with the red line. And the shortest path is indicated by indices below.

- **Sample Output**

Print the answer which is the shortest path from source block to destination block.

```
Path:0->5 5->6 6->7 7->8 8->9 9->14 14->19 19->24
```