The clockwise spiral traversal of a matrix

Cost: 4 | Solved: 35
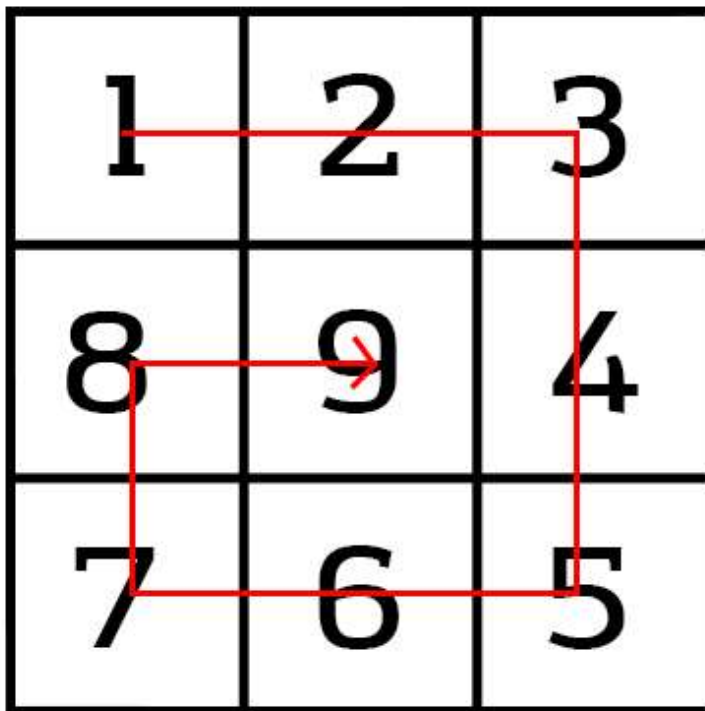
Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

You are given a matrix. You need to go through all the matrix elements, moving in a spiral clockwise and output them all. You start at the position (1, 1).

Input:

The first line contains two natural numbers n and m ($1 \le n,m \le 10^4$) – the quantity of rows and columns of a matrix.

The next n lines contains m numbers – the values of matrix elements ($1 \le element_{i,j} \le 10^9$).

Output:

All the matrix elements after going through it in a spiral clockwise.

Example:

Input	Output
3 3 1 2 3 8 9 4 7 6 5	1 2 3 4 5 6 7 8 9
2 3 4 5 6 8 3 0	4 5 6 0 3 8