Y. Spiral

time limit per test: 5 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Given an $n * m$ matrix.

Print all it's elements in spiral order.

See the figure below for more clarification.

Input
The first line contains two integers n, m represent the number of rows and columns of the matrix respectively where $(1 \leq n, m \leq 10^3)$.

The next n lines each line cointain m integers A_{ij} where each element $(-10^{18} \leq A_{ij} \leq 10^{18})$.

Output
Print the elements of the matrix in spiral order.

Example

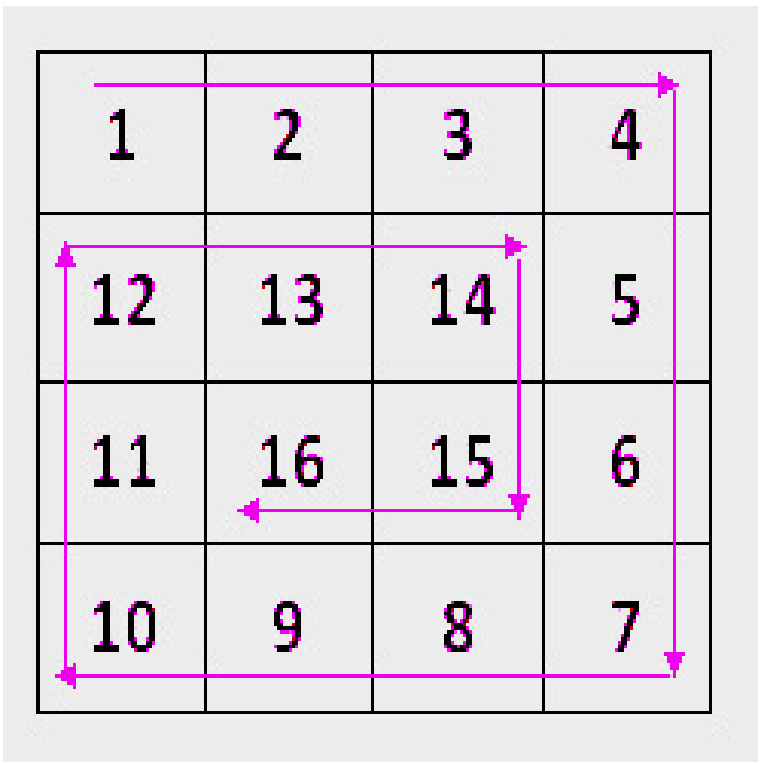
input Copy

```
4 4
1 2 3 4
12 13 14 5
11 16 15 6
10 9 8 7
```

output Copy

```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
```

Note
This image describe the spiral order of a $4 * 4$ matrix



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Sheet #10 (General Hard)

Finished

Practice

→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.