The transpose of a matrix

Cost: 2 | Solved: 79

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

You are given a matrix. Write its transpose.

To transpose a matrix means to swap its rows and columns.

Input:

The first line contains two natural numbers n and m ($n \le 1000$, $m \le 100$) – the quantity of rows and columns of the matrix.

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

Output:

Transpose the matrix and then output it.

Example:

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

2 3	1 4
1 2 3	2 5
4 5 6	3 6