Problem G. Game of Geniuses

Time limit: 2 seconds
Memory limit: 1024 megabytes

Two geniuses are playing the following game. They have a square $n \times n$ board filled with integers. Players take turns making moves. The first player's move is to cross out a selected row that hasn't been crossed out yet. The second player's move is to cross out a selected column that hasn't been crossed out yet. After each player makes $n - 1$ moves, exactly one integer will remain uncrossed. The first player aims to maximize this number, while the second player aims to minimize it.

Given a board, determine the value of the one uncrossed number at the end of the game. As the two players are geniuses, they play optimally.

Input

The first line of the input contains a single integer n ($2 \le n \le 50$), representing the size of the board. The following n lines of the input describe the rows of the board: the i-th line contains n integers $a_{i1}, a_{i2}, \ldots, a_{in}$ ($1 \le a_{ij} \le 2500$), representing the numbers in the i-th row.

Output

Output a single integer, the value of the one uncrossed number at the end of the game when both players play optimally.

Example

standard input	standard output
3 1 4 9 8 4 2 7 5 7	5

Note

