Problem I. Yazan's game

Time limit	1000 ms
Mem limit	262144 kB
OS	Windows

Yazan created a new game for us hopefully it's easy

You are given a binary grid with n rows and m columns. (each cell is 0 or 1), you can select one cell with value equal to 1 and turn all its neighbors' value to 1, you can only do this operation once (two cells are considered to be neighboring if they have a common **edge or corner**).

If you can turn all values to 1 print `WIN` otherwise print `LOSE`

1	0	0	1
1	1	1	0
1	0	0	1
1	1	1	1

1	1	1	1
1	1	1	1
1	1	1	1
1	1	1	1

In the above example we can select $cell(2, 3)$ and turn all it's neighbors to 1 so all values will be equal to 1 ($cell(i, j)$ represent the cell in the i-th row and j-th column).

Input

The first line contains two positive integers n and m ($1 \leq n, m \leq 500$) the number of rows and the number of columns, respectively.

The following n lines contain m integers each, the j-th element in the i-th line $a_{i,j}$ is the number written in the j-th cell of the i-th row ($0 \leq a_{i,j} \leq 1$).

Output

If you can turn all values to 1 print "WIN" (without quotes). Otherwise print "LOSE".

Sample 1

Input	Output
4 4 1 0 0 1 1 1 1 0 1 0 0 1 1 1 1 1	WIN

Sample 2

Input	Output
2 5 1 0 0 0 1 1 0 0 0 1	LOSE