Chessboard

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	256 megabytes

Zag has a $n \times m$ chessboard. But due to its age, the left upper position $(1, 1)$ and the right lower position (n, m) of the chessboard have been damaged.

Now Zag wants to know whether there is a path that can pass through all $n \times m - 2$ grids **exactly once**. We can pass from one grid to another grid if and only if two grids have at least one common edge. Please output such a path if there is one, or claim that it does not exist.

Input

The input contains two integers $n, m (2 \leq n, m \leq 1000)$, indicating the size of the chessboard.

Output

If there is a legal path, print a line containing `YES`, and for the next $n * m - 2$ line, print one coordinate for each line, where the $i + 1$ line represents the coordinates of the ith position that the path passes through. If there are multiple paths, output any.

If it does not exist, output `NO`.

Examples

standard input	standard output
2 2	NO
3 2	YES 1 2 2 2 2 1 3 1

Note

The output of this question is large, so you should use faster output methods.