

## J. Planting Trees

time limit per test: 2 seconds  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

Vasya is a [Greencode](#) wildlife preservation society proponent. One day he found an empty field nobody owned, divided it into  $n \times m$  squares and decided to plant a forest there. Vasya will plant  $nm$  trees of all different heights from 1 to  $nm$ . For his forest to look more natural he wants any two trees growing in the side neighbouring squares to have the absolute value of difference in heights to be strictly more than 1. Help Vasya: make the plan of the forest planting for which this condition is fulfilled.

### Input

The first line contains two space-separated integers  $n$  and  $m$  ( $1 \leq n, m \leq 100$ ) — the number of rows and columns on Vasya's field

### Output

If there's no solution, print  $-1$ . Otherwise, print  $n$  lines containing  $m$  numbers each — the trees' planting plan. In every square of the plan the height of a tree that should be planted on this square should be written. If there are several solutions to that problem, print any of them.

### Examples

input
2 3
output
3 6 2 5 1 4

input
2 1
output
-1