Cellular Component Constellation

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	1024 megabytes

You are given two integers N and M.

Output, in the format specified in the Output section, an $N \times N$ grid whose cells are colored either white or black and which satisfies the following conditions. If no such grid exists, print `-1`.

- The sizes of the connected components of white cells appearing in the grid consist of exactly M distinct values
- The sizes of the connected components of black cells appearing in the grid consist of exactly M distinct values

If there are multiple solutions, you may output any of them.

Input

The first line contains integers N, M in this order, separated by spaces. ($2 \leq N \leq 2000, 1 \leq M \leq 2000$)

Output

If a grid satisfying the conditions exists, print N lines. On the i-th of these lines ($1 \leq i \leq N$), print a string s_i of length N as follows.

- If the cell in row i, column j ($1 \leq j \leq N$) of the constructed grid is colored white, then the j-th character of s_i must be `.`(dot).
- If the cell in row i, column j ($1 \leq j \leq N$) of the constructed grid is colored black, then the j-th character of s_i must be `#`.

If no grid satisfying the conditions exists, print `-1` on the first line.

Examples

standard input	standard output
4 2	###. ..## ##.# .##.
2 3	-1
12 7	.#..#.#.##.# .#.#..#.##.# .##...#.##.# .#.#..#.##.# .#..#.##..## ......###### ######...... #...##..###. #.##.#.#.... #...##.#.... #.####.#.... #.####..###.

Note

Two white cells $c_1,\ c_2$ are said to be connected if one can move from c_1 to c_2 by repeatedly moving to a vertically or horizontally adjacent cell and passing only through white cells.

A set S of white cells is called a connected component if S satisfies the following conditions.

- Any two cells in S are connected.
- No white cell not contained in S is connected to any cell contained in S.

Connected components of black cells are defined similarly.

For each connected component, its size is defined as the number of cells it contains.

Below is an appendix.

Explanation of Sample Output 1

The sizes of the connected components of white cells are the two distinct values 1 and 2. The sizes of the connected components of black cells are also the two distinct values 4 and 6.

Figure for Sample Output 1

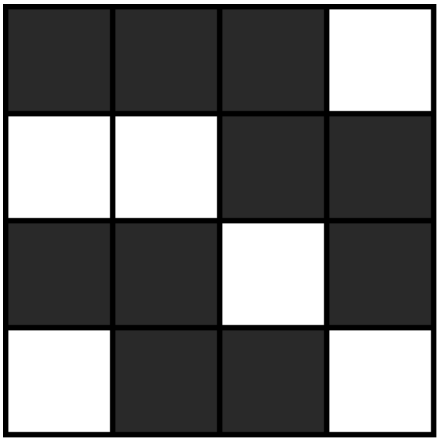

Figure for Sample Output 3