Problem C
Binary Grid

You are given an array A containing N non-negative integers. You have to construct a binary grid of size $N \times M$ such that:

- for any cell with value 1, any of its adjacent cells, i.e. cells that share one of its four sides, must **not** have the value 1.
- the number of cells with value 1 in row i is exactly A_i.

Find any such binary grid or tell that it's impossible to construct.

Input

The first line contains two integers N and M ($1 \leq N, M \leq 1000$). The next line contains N integers containing A_i ($0 \leq A_i \leq M$).

Output

Output N lines, each containing M characters of either 0 or 1 representing the binary grid you constructed. If multiple construction exists, you may output any of them. If such a grid does not exist, output -1.

Sample Input 1	Sample Output 1
6 7 4 3 2 2 3 4	1010101 0101010 1010000 0000101 0101010 1010101

Sample Input 2	Sample Output 2
2 2 2 2	-1

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