spiral123   100 points

Source code: **spiral123.c, spiral123.cpp, spiral123.pas**
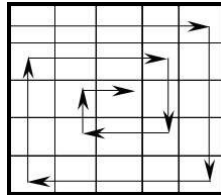Input file: **spiral123.in**
Output file: **spiral123.out**
Time limit: **1.0 s**
Memory limit: **64 MB**

We shall name a square matrix as *spiral123* if it has the following properties:
- its elements are from the {0, 1, 2, 3} set;
- each row and column contains each of the values 1, 2 and 3, exactly once and all the other values are 0;
- starting from the upper-left corner going right, moving in spiral, the non-zero values will appear in the following order 1, 2, 3, 1, 2, 3, ... , 1, 2, 3.

For example a 5x5 spiral123 matrix is the following:

Task
For a given natural number n, you should generate a n x n spiral123 matrix.

Description of input
The spiral123.in file contains only one natural number n on the first line.

Description of output
If there is solution, the spiral123.out file must contain n lines, each with n numbers separated with one space, representing the required matrix. If there is no solution, on the single line of the output file, the -1 value will be written.

Constrains
- 5 ≤ n ≤ 200;
- There can be many solutions, any of them can be written.

Example

spiral123.in	spiral123.out	remarks
5	0 1 0 2 3 0 2 3 0 1 1 3 0 0 2 3 0 2 1 0 2 0 1 3 0	another correct solution would be: 0 1 2 3 0 2 3 0 0 1 0 0 3 1 2 1 0 0 2 3 3 2 1 0 0