N-Queens

Given a chess board having $N \times N$ cells, you need to place *N* queens on the board in such a way that no queen attacks any other queen.

Input:
The only line of input consists of a single integer denoting *N*.

Output:
If it is possible to place all the *N* queens in such a way that no queen attacks another queen, then print "YES" (without quotes) in first line, then print *N* lines having *N* integers. The integer in i^{th} line and j^{th} column will denote the cell (i, j) of the board and should be *1* if a queen is placed at (i, j) otherwise *0*. If there are more than way of placing queens print any of them.

If it is not possible to place all *N* queens in the desired way, then print "NO" (without quotes).

Constraints:
$1 \leq N \leq 10$.

SAMPLE INPUT	SAMPLE OUTPUT
4	YES 0 1 0 0 0 0 0 1 1 0 0 0 0 0 1 0