

## A. Coder

time limit per test

1 second

memory limit per test

256 megabytes

input

standard input

output

standard output

Iahub likes chess very much. He even invented a new chess piece named Coder. A Coder can move (and attack) one square horizontally or vertically. More precisely, if the Coder is located at position  $(x, y)$ , he can move to (or attack) positions  $(x + 1, y)$ ,  $(x - 1, y)$ ,  $(x, y + 1)$  and  $(x, y - 1)$ . Iahub wants to know how many Coders can be placed on an  $n \times n$  chessboard, so that no Coder attacks any other Coder.

### Input

The first line contains an integer  $n$  ( $1 \leq n \leq 1000$ ).

### Output

On the first line print an integer, the maximum number of Coders that can be placed on the chessboard.

On each of the next  $n$  lines print  $n$  characters, describing the configuration of the Coders. For an empty cell print an '.', and for a Coder print a 'C'.

If there are multiple correct answers, you can print any.

### Examples

#### input

Copy

2

#### output

Copy

2

C.

.C