

**Queens (3)**

**P38211\_en**

Write a program to print the lexicographically smallest way to place  $n$  queens on an  $n \times n$  chessboard so that no queen threatens another queen.

**Input**

Input consists of a natural number  $n > 0$ .

**Output**

Mark the queens with a 'Q', and the empty positions with a dot. Print the lexicographically smallest way (by rows, from top to bottom, and assuming that a 'Q' is smaller than a dot) to place  $n$  queens on an  $n \times n$  chessboard so that no queen threatens another queen. If there is no solution, print "NO SOLUTION".

**Sample input 1**

20

**Sample output 1**

```
Q.....  
..Q.....  
...Q.....  
.Q.....  
...Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....  
.....Q.....
```

**Sample input 2**

3

**Sample output 2**

```
NO SOLUTION
```

**Problem information**

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