

## CSES Problem Set

## Permutations

TASK | [STATISTICS](#)**Time limit:** 1.00 s **Memory limit:** 512 MB

A permutation of integers  $1, 2, \dots, n$  is called *beautiful* if there are no adjacent elements whose difference is 1.

Given  $n$ , construct a beautiful permutation if such a permutation exists.

**Input**

The only input line contains an integer  $n$ .

**Output**

Print a beautiful permutation of integers  $1, 2, \dots, n$ . If there are several solutions, you may print any of them. If there are no solutions, print "NO SOLUTION".

**Constraints**

- $1 \leq n \leq 10^6$

**Example 1**

Input:  
5

Output:  
4 2 5 3 1

**Example 2**

Input:  
3

Output:  
NO SOLUTION

**Introductory Problems**

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