

# Problem C. Permutations

**Time limit** 1000 ms

**Mem limit** 524288 kB

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