

## Problem D. Médio

**Time limit** 1000 ms

**Mem limit** 524288 kB

Given a string, your task is to reorder its letters in such a way that it becomes a palindrome (i.e., it reads the same forwards and backwards).

### Input

The only input line has a string of length  $n$  consisting of characters A–Z.

### Output

Print a palindrome consisting of the characters of the original string. You may print any valid solution. If there are no solutions, print "NO SOLUTION".

### Constraints

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

### Sample

Input	Output
AAAACACBA	AACABACAA