



CSES Problem Set

Palindrome Reorder

TASK | [STATISTICS](#)

Time limit: 1.00 s **Memory limit:** 512 MB

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

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

Example

Input:
AAAACACBA

Output:
AACABACAA

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