4 Build-A-Pal

You are a part time worker at the Build-A-Pal© workshop in your town, where kids get to choose from a wide selection of words and form their very own adorable palindromes. The pay stinks, but you hope to use the experience to land an internship somewhere else.

To really show off your computer science skills, you decide to create a program that automates the process of creating palindromes from a list of words.

A palindrome is a sentence that reads the same forwards as it does backward. Spaces and letter case do not affect whether a sentence is a palindrome or not. You will be given a list of words in random order, and it is up to you to reorder all the words so that the resulting sentence forms a palindrome.

If no palindrome can be formed, then there is no solution.

4.1 Input
Input will be a list of unique words, space-separated. Words consist of only upper and lower case letters, no special characters.

4.2 Output
Output will be a single line of space-separated words.

If a palindrome can be formed using all the words in the input, then print out that palindrome. Letter case does not affect whether a sentence is a palindrome or not. Make sure each word has the same letter case as it did in the input.

You may assume that, if a palindrome can be formed, then there is only one solution. A palindrome must be formed using all of the words from the input.

Otherwise, if no palindrome can be formed using all of the words, then output ‘no solution’.

4.3 Sample Input/Output

<table>
<thead>
<tr>
<th>Sample Input</th>
<th>Sample Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat TACO</td>
<td>TACO Cat</td>
</tr>
<tr>
<td>in Zoo sanitary a rat Oozy</td>
<td>Oozy rat in a sanitary Zoo</td>
</tr>
<tr>
<td>Boo said the oob Ghost</td>
<td>no solution</td>
</tr>
</tbody>
</table>