You are given a string s. You can convert s to a

palindrome

by adding characters in front of it.

Return *the shortest palindrome you can find by performing this transformation*.

**Example 1:**

Input: s = "aacecaaa"  
Output: "aaacecaaa"

**Example 2:**

Input: s = "abcd"  
Output: "dcbabcd"

**Constraints:**

* 0 <= s.length <= 5 \* 104
* s consists of lowercase English letters only.