214. Shortest Palindrome

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:

- $0 <= s.length <= 5 * 10^4$
- s consists of lowercase English letters only.