

Palindrome Merge

[English](#)

[Vietnamese](#)

Given two strings s_1 and s_2 . We can merge characters of two strings (with order in original strings) to get a new string.

For example : $s_1 = 'ab'$ and $s_2 = 'ba'$.

We can merge to get $st = 'abba'$ but not $st = 'aabb'$.

The Problem : Given two string contain only lowercase letters, count the number of palindrome by merging in different ways.

Example: 'aba', 'abba' are palindrome, 'abc' and 'abca' aren't.

Input

- Two lines, each line contains a string, string's length isn't over 500.

Output

- A single integer is the number of palindrome after **modulo 3210121**.

Example

Input:

ab
ba

Output:

4