

Problem D: Suffidromes

Given two strings of lowercase letters, a and b , print the shortest string x of lowercase letters such that exactly one (but not both) of ax or bx is a palindrome; that is, equal to itself when reversed. Standard input contains several pairs of a and b . Each string is on a separate line and consists of between 0 and 1,000 lowercase letters. For each pair, output a line containing x . If several x satisfy the criteria above, choose the first one in alphabetical order.

Sample Input

```
abab
ababab
abc
def
```

Output for Sample Input

```
baba
ba
```