

## Problem C. Red Buttons

Mahdi is greatly interested in red buttons, so much so that he has invented a new game using them. This game is played between two players, each of which has an infinite number of red buttons. On each red button is a distinct string of letters, which we call the button's Code. In each turn, the rival will choose two buttons with  $n$ -letter Codes and give them to Mahdi (We call these two strings  $A$  and  $B$ ). He should find the button with the code  $A + B$  in the shortest time.

To do this, Mahdi takes the set of all strings of length  $n$  over a fixed alphabet. Then Mahdi sorts all taken strings, thus obtaining a sorted sequence of strings  $T$ . Let's denote the length of  $T$  as  $M$ , and enumerate the elements of this sequence as  $T_0, T_1, \dots, T_{M-1}$ . Now Mahdi says that the sum of two strings  $A = T_a$  and  $B = T_b$  is a string  $C = T_c$  where  $c = (a + b) \bmod M$ .

Mahdi has no interest in losing, so you should help Mahdi find the sum of two given strings  $A$  and  $B$  over the alphabet of small English letters.

### Input

The input file consists of two lines containing strings  $A$  and  $B$  of the same length. Both strings consist of small letters of English alphabet. The length of each string doesn't exceed 100000.

### Output

Output the sum of strings  $A$  and  $B$ .

### Examples

test	answer
kak sam	caw
z y	x