

Given two strings of lowercase letters, a and b , print the longest string x of lowercase letters such that there is a permutation of x that is a subsequence of a and there is a permutation of x that is a subsequence of b .

Input

Input file contains several lines of input. Consecutive two lines make a set of input. That means in the input file line 1 and 2 is a set of input, line 3 and 4 is a set of input and so on. The first line of a pair contains a and the second contains b . Each string is on a separate line and consists of at most 1000 lowercase letters.

Output

For each set of input, output a line containing x . If several x satisfy the criteria above, choose the first one in alphabetical order.

Sample Input

```
pretty  
women  
walking  
down  
the  
street
```

Sample Output

```
e  
nw  
et
```