

A: Common Permutation

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
aaxbchpmd
becdadmopsa
```

Sample Output:

```
e
nw
aabcpmd
```