

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.

Example

Sample input:

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

Sample output:

```
e  
nw  
et
```