

## Problem G

# Common Permutation

**Input:** standard input

**Output:** standard output

**Time Limit:** 4 seconds

**Memory Limit:** 32 MB

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
```

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(World Finals Warm-up Contest, Problem Source: University of Alberta Local Contest)