

SPOJ Problem Set (classical)

1728. Common Permutation

Problem code: CPRMT

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
```

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Time limit: 1s
Source limit:50000B
Languages: All
Resource: University of Alberta Local Contest 1999