

The background features a central composition of watercolor splashes. A large, irregular blue splash is centered, with two horizontal red brushstrokes crossing it. The top stroke is wider and more textured, while the bottom one is thinner and more uniform. In the top-left and bottom-right corners, there are small, stylized blue leaf illustrations. Additionally, there are small clusters of yellow dots: three near the top-left of the blue splash and three near the bottom-right.

UVA10252

# 題目

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  $b$ .

給定兩個由小寫字母組成的字串 $a$ 和 $b$ 。

印出最長的小寫字串 $x$ ，使得 $x$ 經過重新排列後為 $a$ 的子序列，且 $x$ 經過重新排列後為 $b$ 的子序列。



# 輸入與輸出

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.

輸入：輸入包含多行輸入。連續的兩行為一組，第一行為字串a，第二行為字串b。1~2行為一組輸入，3~4行為一組輸入，依此類推。每個字串最多包涵1000個小寫字母。

輸出：對於每組輸入，輸出本題要求a和b的x。如果有多組符合的x，請印出字母順序由小到大排列的那一個。

# 範例測資

Input :  
pretty  
women  
walking  
down  
the  
street

Output :  
e  
nw  
et



# 程式碼說明

## Step 1：輸入測資

```
5  
6
```

```
string a,b;  
while(getline(cin,a),getline(cin,b)) {
```

已宣告變數

註解

a

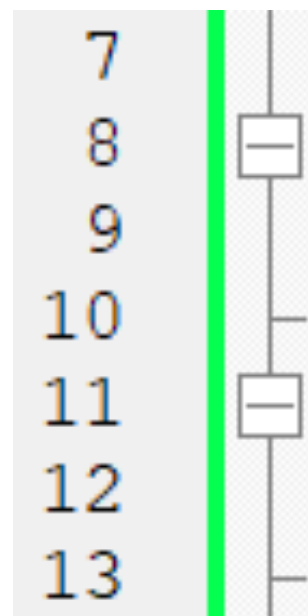
字串a

b

字串b

# 程式碼說明

Step 2：計算字串a、b字母出現次數



```
int a_array[2][128]={};  
for(char i:a){  
    a_array[0][i]++;  
}  
for(char i:b){  
    a_array[1][i]++;  
}
```

已宣告變數	註解
a	字串a
b	字串b
a_array	字串a、b字母出現次數



# 程式碼說明

Step 3：輸出字母，次數為兩字串中字母出現的最小次數

```
14
15
16
17
18
```

```
for(int i=0;i<128;i++){
    for(int j=0;j<min(a_array[0][i],a_array[1][i]);j++)
        cout<<char(i);
}
cout<<endl;
```

已宣告變數

a

b

a\_array

註解

字串a

字串b

字串a、b字母出現次數



# 完整程式碼

```
1  #include<iostream>
2  #include<string>
3  using namespace std;
4  int main() {
5      string a,b;
6      while(getline(cin,a),getline(cin,b)){
7          int a_array[2][128]={};
8          for(char i:a){
9              a_array[0][i]++;
10         }
11         for(char i:b){
12             a_array[1][i]++;
13         }
14         for(int i=0;i<128;i++){
15             for(int j=0;j<min(a_array[0][i],a_array[1][i]);j++){
16                 cout<<char(i);
17             }
18             cout<<endl;
19         }
20     }
```





# 資料來源

英文題目：

<https://vjudge.net/problem/UVA-10252>

中文翻譯：

<https://zerojudge.tw/ShowProblem?problemid=e507>



Thanks!

