Codemania 3.0: Nunquam Soli Sumus

Mar 25, 2020, 04:00 PM IST - Mar 25, 2020, 10:00 PM IST

Raj's Dilemma

Max. Marks: 100

This problem is no longer available for practice. Apology for any inconvenience!

Raj wants his child's name to be lexicographically greater than Prathamesh's child's name i.e. string **t**. Raj's wife wants that name to be an anagram of string **s**.

Mr. Bathary will charge a tax on the lexicographic order of name. Larger the lexicographic order, larger the tax.

Lexicographic order is nothing but the dictionary order that are we used to.

Formally, a string p of length n is lexicographically less than string q of length m, if one of the two statements is correct:

- $n < m$, and p is the beginning (prefix) of string q (for example, "aba" is less than string "abaa"),
- $p_1 = q_1$, $p_2 = q_2$, ..., $p_{k-1} = q_{k-1}$, $p_k < q_k$ for some k ($1 \le k \le min(n, m)$), here characters in strings are numbered starting from 1.

Help Raj to find his child's name such that it should be an anagram of string s, lexicographically greater than string t and lexicographically minimum.

INPUT

The first line will have the number of test cases. Each test case corresponds to two strings i. e. **s** and **t** respectively.

OUTPUT

The output consists of the name required, if not possible print -1.

CONSTRAINTS

Number of testcases (**t**): 1 <= **t** <= 1100

Length of string (**l**): 1 <= **l** <= 5000

SAMPLE INPUT

```
4
ccd
cccd
abcd
def
aboa
bob
efghzxy
wxyz
```

SAMPLE OUTPUT

```
ccd
-1
oaab
xefghyz
```

Time Limit:	0.3 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Marks are awarded if any testcase passes.
Allowed Languages:	Bash, C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Swift-4.1, TypeScript, Visual Basic

CODE EDITOR

Save C (gcc 5.4.0)

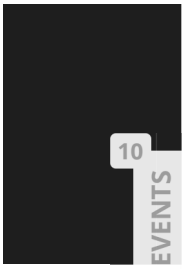
```c
/*
// Sample code to perform I/O:
#include <stdio.h>

int main(){
    int num;
    scanf("%d", &num);                          // Reading input from STDIN
    printf("Input number is %d.\n", num);       // Writing output to STDOUT
}

// Warning: Printing unwanted or ill-formatted data to output will cause the test cases to fail
*/

// Write your code here

```



Provide custom input

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