Smallest KMP : CodeChef

20 August 2020   13:58

Chef has a string SS. He also has another string PP, called *pattern*. He wants to find the pattern in SS, but that might be impossible. Therefore, he is willing to reorder the characters of SS in such a way that PP occurs in the resulting string (an anagram of SS) as a substring.

Since this problem was too hard for Chef, he decided to ask you, his genius friend, for help. Can you find the lexicographically smallest anagram of SS that contains PP as substring?

Note: A string BB is a substring of a string AA if BB can be obtained from AA by deleting several (possibly none or all) characters from the beginning and several (possibly none or all) characters from the end.

Input
- The first line of the input contains a single integer TT denoting the number of test cases. The description of TT test cases follows.
- The first line of each test case contains a single string SS.
- The second line contains a single string PP.

Output
For each test case, print a single line containing one string — the smallest anagram of SS that contains PP.

Constraints
- $1 \leq T \leq 10$ $1 \leq T \leq 10$
- $1 \leq |P| \leq |S| \leq 105$ $1 \leq |P| \leq |S| \leq 105$
- SS and PP contain only lowercase English letters
- there is at least one anagram of SS that contains PP

Subtasks
Subtask #1 (20 points): $|S| \leq 1,000$ $|S| \leq 1,000$

Subtask #2 (80 points): $|S| \leq 105$ $|S| \leq 105$

Example Input
3
akramkeeanany
aka
supahotboy
bohoty
daehabshatorawy

badawy

Example Output

aaakaeekmnnry

abohotypsu

aabadawyehhorst

All submissions for this problem are available.

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Editorial:https://discuss.codechef.com/problems/SKMP

Tags:aug20, daniel 1999, easy, hashing, observations, rishup_nitdgp, triplem5ds, triplem5ds

Date Added:23-07-2020

Time Limit:1 secs

Source Limit:50000 Bytes

Languages:CPP14, C, JAVA, PYTH 3.6, PYTH, CS2, ADA, PYPY, PYP3, TEXT, CPP17, PAS fpc, RUBY, PHP, NODEJS, GO, TCL, HASK, PERL, SCALA, kotlin, BASH, JS, PAS gpc, BF, LISP sbcl, CLOJ, LUA, D, R, CAML, rust, ASM, FORT, FS, LISP clisp, SQL, swift, SCM guile, PERL6, CLPS, WSPC, ERL, ICK, NICE, PRLG, ICON, PIKE, COB, SCM chicken, SCM qobi, ST, NEM, SQLQ

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