CS1020E | Lab 3 | Exercise 1

Substring Removal

Objective

The objective of this exercise is to learn how to perform C-style string manipulation.

Problem Description

Given a string *S* and a string *T*, we want to remove from *S* all occurrences of *T*. Each occurrence of *T* in *S* must always match the left-most occurrence without overlapping the earlier occurrences. For example, if *S* is `"xabababay"` and *T* is `"aba"`, then the occurrences are those underlined in `"x`**`aba`**`b`**`aba`**`y"`, and the result of *S* is `"xby"` after the removal of all the substrings `"aba"`.

The matching and removal of substrings in *S* is only "one-pass". For example, if *S* is `"aabcbabcc"` and *T* is `"abc"`, the final result of *S* is `"abc"`. The final result `"abc"` should not be further matched and removed.

Complete the given C++ program **RemoveSubstring.cpp** to achieve the requirements. All the strings must be represented using C-style null-terminated `char` arrays. Besides the use of `cin` for reading input and `cout` for displaying result, **you are not allowed to use any other C/C++ built-in functions and classes/objects**. You should break your solution into well-defined functions.

Inputs

The first line contains the string *S* and the second line contains the string *T*. Both input strings do not contain any white space. The length of each input string can be from 1 to 100.

Outputs

The output is just one single line containing the final result string enclosed by two `"`.

Sample Run 1

xabababay
aba
`"xby"`

(*User inputs are shown in **bold red**.*)

Sample Run 2

aabcbabcc
abc
"abc"

(*User inputs are shown in **bold red**.*)

Sample Run 3

xyzxyz
xyz
""

(*User inputs are shown in **bold red**.*)

Submission

You need to submit only your completed **RemoveSubstring.cpp**. to CodeCrunch (https://codecrunch.comp.nus.edu.sg/) before the specified deadline. We will take only your latest submission.

Late submissions will not be accepted. The submission system in CodeCrunch will automatically close at the deadline.