**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.