3.A user will input two strings, and we find if one of the strings is a sub sequence of the other. Program prints “yes” if either the first string is a sub sequence of the second string or the second string is a sub sequence of the first string.  
Assume that, the length of the first string is smaller than or equal to the length of the second string.

**An expected output of the program:**

Input the first string  
tree  
Input the second string  
Computer science is awesome  
YES

#include <stdio.h>  
#include <string.h>

int check\_subsequence (char [], char[]);

int main () {  
  int flag;  
  char s1[1000], s2[1000];

  printf("Input first string**\n**");  
  gets(s1);

  printf("Input second string**\n**");  
  gets(s2);

  if (strlen(s1) < strlen(s2))  
    flag = check\_subsequence(s1, s2);  
  else  
    flag = check\_subsequence(s2, s1);

  if (flag)  
    printf("YES**\n**");  
  else  
    printf("NO**\n**");

  return 0;  
}

int check\_subsequence (char a[], char b[]) {  
  int c, d;

  c = d = 0;

  while (a[c] != '**\0**') {  
    while ((a[c] != b[d]) && b[d] != '**\0**') {  
      d++;  
    }  
    if (b[d] == '**\0**')  
      **break**;  
    d++;  
    c++;  
  }  
  if (a[c] == '**\0**')  
    return 1;  
  else  
    return 0;  
}

**output**

