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);

/\*\* Passing smaller length string first \*/

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;

}