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Started on	Tuesday, 12 November 2024, 6:49 AM
State	Finished
Completed on	Tuesday, 12 November 2024, 6:51 AM
Time taken	2 mins
Marks	1.00/1.00
Grade	10.00 out of 10.00 (100%)

Question 1

Correct

Mark 1.00 out of 1.00

Given two strings find the length of the common longest subsequence(need not be contiguous) between the two.

Example:

s1: ggtabe

s2: tgatasb

s1	a	g	g	t	a	b	
s2	g	x	t	x	a	y	b

The length is 4

Solveing it using Dynamic Programming

For example:

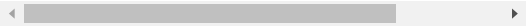
Input	Result
aab	2
azb	

Answer: (penalty regime: 0 %)

```

1  #include <stdio.h>
2  #include <string.h>
3
4  int max(int a, int b) {
5      return (a > b) ? a : b;
6  }
7
8  int lcs(char *X, char *Y, int m, int n) {
9      int L[m + 1][n + 1];
10
11     for (int i = 0; i <= m; i++) {
12         for (int j = 0; j <= n; j++) {
13             if (i == 0 || j == 0)
14                 L[i][j] = 0;
15             else if (X[i - 1] == Y[j - 1])
16                 L[i][j] = L[i - 1][j - 1] + 1;
17             else
18                 L[i][j] = max(L[i - 1][j], L[i][j - 1]);
19         }
20     }
21
22     return L[m][n];
23 }
24
25 int main() {
26     char X[100], Y[100];
27
28     scanf("%s", X);
29
30
31     scanf("%s", Y);
32
33     int m = strlen(X);
34     int n = strlen(Y);
35
36     int len = lcs(X, Y, m, n);
37     printf("%d\n", len);
38
39     return 0;
40 }
41

```



	Input	Expected	Got	
✓	aab azb	2	2	✓
✓	ABCD ABCD	4	4	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◀ 2-DP-Playing with chessboard

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4-DP-Longest non-decreasing Subsequence ▶