



SRIRAM S (12/08/2006) 2024-IT ▾

**S2****Started on** Wednesday, 5 November 2025, 4:09 AM**State** Finished**Completed on** Wednesday, 5 November 2025, 4:10 AM**Time taken** 1 min 36 secs**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	<b>g</b>	<b>t</b>	a	<b>b</b>
s2		<b>g</b>	x	<b>t</b>	x	a	y <b>b</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  // Function to find LCS length using Dynamic Programming
5  int lcs(char *s1, char *s2) {
6      int m = strlen(s1);
7      int n = strlen(s2);
8      int dp[m + 1][n + 1];
9
10     // Initialize the dp table
11     for (int i = 0; i <= m; i++) {
12         for (int j = 0; j <= n; j++) {
13             if (i == 0 || j == 0)
14                 dp[i][j] = 0;
15             else if (s1[i - 1] == s2[j - 1])
16                 dp[i][j] = dp[i - 1][j - 1] + 1;
17             else
18                 dp[i][j] = (dp[i - 1][j] > dp[i][j - 1]) ? dp[i - 1][j] : dp[i][j - 1];
19         }
20     }
21
22     return dp[m][n];
23 }
24
25 int main() {
26     char s1[100], s2[100];
27     scanf("%s", s1);
28     scanf("%s", s2);
29
30     int result = lcs(s1, s2);
31     printf("%d\n", result);
32
33     return 0;
34 }
35

```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)

