

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 azb	2

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2 #include <string.h>
3
4 int lcs(char *s1, char *s2)
5 {
6     int m = strlen(s1);
7     int n = strlen(s2);
8     int dp[m+1][n+1];
9     for (int i = 0; i <= m; i++)
10     {
11         for (int j = 0; j <= n; j++)
12         {
13             if (i == 0 || j == 0)
14             {
15                 dp[i][j] = 0;
16             } else if (s1[i-1] == s2[j-1])
17             {
18                 dp[i][j] = dp[i-1][j-1] + 1;
19             } else
20             {
21                 dp[i][j] = (dp[i-1][j] > dp[i][j-1]) ? dp[i-1][j] : dp[i][j-1];
22             }
23         }
24     }
25     return dp[m][n];
26 }
27 int main() {
28     char s1[1000], s2[1000];
29     scanf("%s", s1);
30     scanf("%s", s2);
31     int result = lcs(s1, s2);
32     printf("%d\n", result);
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.

◀ 2-DP-Playing with chessboard

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4-DP-Longest non-decreasing Subsequence ▶