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 %)

```
#include<stdio.h>
#include<strings.h>
#include<string.h>
int max(int a,int b){
    return a>b?a:b;
}

int lcs(int cost[100][100],char* s1,char*s2,int i,int j){
    if(i==0 || j==0) return 0;
    if(cost[i][j]!=-1) return cost[i][j];
    if(s1[i-1]==s2[j-1]){
        cost[i][j]=lcs(cost,s1, s2, i - 1, j - 1) +1;
    }
    else{
      cost[i][j] = max(lcs(cost,s1, s2, i - 1, j), lcs(cost,s1, s2, i, j - 1));
    }
    return cost[i][j];
}

int main(){
      char s1[100], s2[100];

    scanf("%s %s", s1, s2);

    int len1 = strlen(s1);
    int len2 = strlen(s2);
    int cost[100][100];
    memset(cost,-1,sizeof(cost));

    printf("%d\n", lcs(cost,s1, s2, len1, len2));

    return 0;
}
```

	Input	Expected	Got	
✓	aab azb	2	2	✓

	Input	Expected	Got	
✓	ABCD ABCD	4	4	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ 2-DP-Playing with chessboard

Jump to...

4-DP-Longest non-decreasing Subsequence ►