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 azb	2

Answer: (penalty regime: 0 %)

```c
#include <stdio.h>
#include <string.h>

int max(int a, int b) {
    return (a > b) ? a : b;
}

int lcs(char *X, char *Y, int m, int n) {
    int L[m + 1][n + 1];

    for (int i = 0; i <= m; i++) {
        for (int j = 0; j <= n; j++) {
            if (i == 0 || j == 0)
                L[i][j] = 0;
            else if (X[i - 1] == Y[j - 1])
                L[i][j] = L[i - 1][j - 1] +
            else
                L[i][j] = max(L[i - 1][j], L
        }
    }

    return L[m][n];
}

int main() {
    char X[100], Y[100];


    scanf("%s", X);


    scanf("%s", Y);

    int m = strlen(X);
    int n = strlen(Y);

    int len = lcs(X, Y, m, n);
    printf("%d\n", len);

    return 0;
}
```

	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

Jump to...

4-DP-Longest non-decreasing Subsequence ►