Started on	Tuesday, 22 October 2024, 2:03 PM
State	Finished
Completed on	Tuesday, 5 November 2024, 2:46 PM
Time taken	14 days
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>
#define M 100
int max(int a, int b) {
    return (a > b) ? a : b;
}
int main() {
    char s1[M], s2[M];
    int dp[M+1][M+1];
    scanf("%s", s1);
    scanf("%s", s2);
    int a = strlen(s1);
    int b = strlen(s2);
    for (int i = 0; i <= a; i++) {
        for (int j = 0; j <= b; j++) {
            if (i == 0 || j == 0)
                dp[i][j] = 0;
            else if (s1[i-1] == s2[j-1])
                dp[i][j] = dp[i-1][j-1] + 1;
            else
                dp[i][j] = max(dp[i-1][j], dp[i][j-1]);
        }
    }
    printf("%d\n", dp[a][b]);
    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 ►