Longest Common Subsequence

Question 1 | Correct Mark 1.00 out of 1.00 Flag question

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

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

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

int main() {
    char s1[1001], s2[1001];
    scanf("%s %s", s1, s2);

    int n = strlen(s1);
    int m = strlen(s2);

    int dp[n+1][m+1];


    for (int i = 0; i <= n; i++) {
        for (int j = 0; j <= m; j++) {
            if (i == 0 || j == 0)
                dp[i][j] = 0;
            else if (s1[i-1] == s2[j-1])
                dp[i][j] = 1 + dp[i-1][j-1];
            else
                dp[i][j] = max(dp[i-1][j], dp[i][j-1]);
        }
    }


    printf("%d\n", dp[n][m]);

    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.