Started on	Wednesday, 20 November 2024, 6:12 PM
State	Finished
Completed on	Wednesday, 20 November 2024, 6:54 PM
Time taken	42 mins 34 secs
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 st(int m, int n, char a[], char b[]) {
    int str[m+1][n+1];

    for(int i = 0; i <= m; i++) {
        for(int j = 0; j <= n; j++) {
            if (i == 0 || j == 0) {
                str[i][j] = 0;
            } else if (a[i - 1] == b[j - 1]) {
                str[i][j] = str[i - 1][j - 1] + 1;
            } else {
                if (str[i - 1][j] > str[i][j - 1]) {
                    str[i][j] = str[i - 1][j];
                } else {
                    str[i][j] = str[i][j - 1];
                }
            }
        }
    }

    return str[m][n];
}

int main() {
    char a[100], b[100];
    scanf("%s", a);
    scanf("%s", b);

    int m = strlen(a);
    int n = strlen(b);
    int result = st(m, n, a, b);
    printf("%d", result);

    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 ►