Started on	Sunday, 10 November 2024, 9:30 PM
State	Finished
Completed on	Sunday, 10 November 2024, 9:43 PM
Time taken	12 mins 29 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 %)

```
#include <stdio.h>
#include <string.h>
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;//no str cond lol
            } else if (X[i-1]==Y[j-1]) {
                L[i][j]=L[i-1][j-1]+1;//match
            } else {
                L[i][j]=(L[i-1][j]>L[i][j-1])?L[i-1][j]:L[i][j-1];//max
            }
        }
    }return L[m][n];
}
int main(){
    char X[100];
    char Y[100];
    scanf("%s", X);
    scanf("%s", Y);
    int m=strlen(X);
    int n=strlen(Y);
    int length=LCS(X,Y,m,n);
    printf("%d",length);
    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 ►