

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

Solving it using Dynamic Programming

For example:

Input	Result
aab	2
azb	

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 #include <string.h>
3
4 int max(int a, int b) {
5     return (a > b) ? a : b;
6 }
7
8 int main() {
9     char s1[1001], s2[1001];
10    scanf("%s", s1, s2);
11    int n = strlen(s1);
12    int m = strlen(s2);
13    int dp[n+1][m+1];
14
15    for(int i = 0; i <= n; i++) {
16        for(int j = 0; j <= m; j++) {
17            if(i == 0 || j == 0) {
18                dp[i][j] = 0;
19            } else if(s1[i-1] == s2[j-1])
20                dp[i][j] = dp[i-1][j-1] + 1;
21            else
22                dp[i][j] = max(dp[i-1][j], dp[i][j-1]);
23        }
24    }
25    printf("%d\n", dp[n][m]);
26
27 }
```

	Input	Expected	Got	
✓	aab	2	2	✓
	azb			
✓	ABCD	4	4	✓
	ABCD			

Passed all tests! ✓