Program :

#include<bits/stdc++.h>

using namespace std;

int helper(string s1, string s2, int n, int m, vector<vector<int>> dp){

if(s1[n] == '\0' || s2[m] == '\0'){

return 0;

}

if(dp[n][m] != 0){

return dp[n][m];

}

if(s1[n] == s2[m]){

return dp[n][m] = 1 + helper(s1, s2, n+1, m+1, dp);

}else{

return dp[n][m] = max(helper(s1, s2, n, m+1, dp), helper(s1, s2, n+1, m, dp));

}

}

int longestCommonSubsequence(string text1, string text2) {

vector<vector<int>> dp(text1.length(), vector<int> (text2.length(), 0));

return helper(text1, text2, 0, 0, dp);

}

int main(){

string s1; string s2;

cin >> s1 >> s2;

cout << longestCommonSubsequence(s1, s2);

}

Output:

