//longest common subsequence- dynamic programming

#include<iostream>

using namespace std;

int max(int a, int b)

{

return (a > b)? a : b;

}

int lengthLongestCommonSubsequence(string s1,string s2, int m,int n){

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

for(int i=0;i<=m;i++)

{

for(int j=0;j<=n;j++)

{

if(i==0)

dis[i][j]=0;

else if (j==0)

dis[i][j]=0;

else if(s1[i-1] !=s2[j-1])

dis[i][j]=max(dis[i-1][j],dis[i][j-1]);

else

dis[i][j]= 1+ dis[i-1][j-1];

}

}

return dis[m][n];

}

int main()

{

string s1="ABCDEF";

string s2= "ACBCF";

cout<<lengthLongestCommonSubsequence(s1,s2,s1.length(),s2.length());

return 0;

}