

You are 73.88 points away from the 4th star for problem solving badge.

Common Child



by naonaonao

Leaderboard **Problem** Submissions **Discussions** Editorial A **Topics**

Given two strings a and b of equal length, what's the longest string (s) that can be constructed such that it is a child of both?

A string x is said to be a child of a string y if x can be formed by deleting 0 or more characters from y.

For example, ABCD and ABDC has two children with maximum length 3, ABC and ABD. Note that we will not consider ABCD as a common child because C doesn't occur before D in the second string.

Input format

Two strings, \boldsymbol{a} and \boldsymbol{b} , with a newline separating them.

Constraints

- $1 \le |a|, |b| \le 5000$
- All characters are upper cased and lie between ASCII values 65-90.

Output format

Print the length of the longest string \boldsymbol{s} , such that \boldsymbol{s} is a child of both \boldsymbol{a} and \boldsymbol{b} .

Sample Input 0

HARRY SALLY

Sample Output 0

2

The longest possible string that is possible by deleting zero or more characters from HARRY and SALLY is AY, whose length is 2.

Sample Input 1

AΑ

3/7/2018 HackerRank

Sample Output 1

0

 ${\it AA}$ and ${\it BB}$ has no characters in common and hence the output is 0.

Sample Input 2

SHINCHAN NOHARAAA

Sample Output 2

3

The longest string that can be formed between *SHINCHAN* and *NOHARAAA* while maintaining the order is *NHA*.

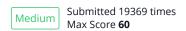
Sample Input 3

ABCDEF FBDAMN

Sample Output 3

2

 \boldsymbol{BD} is the longest child of the given strings.



Need Help?



Rate This Challenge:

公公公公公

Resources

Dynamic Programming Basics

Download problem statement

Download sample test cases

Suggest Edits

3/7/2018 HackerRank

ש in

```
Current Buffer (saved locally, editable) & • •
                                                                          lava 8
                                                                                                         Ö
1 ▼ import java.io.*;
2 | import java.util.*;
3 import java.text.*;
4 import java.math.*;
   import java.util.regex.*;
7 ▼ public class Solution {
8
        static int commonChild(String s1, String s2, int alreadyMatched){
9 ▼
            if ((s1.length() == 0) || (s2.length() == 0)) { return alreadyMatched; }
10 ▼
11
12
            char c1 = s1.charAt(s1.length() - 1);
13
            char c2 = s2.charAt(s2.length() - 1);
14
15 ▼
            if (c1 == c2) {
                return (commonChild(s1.substring(0, s1.length() - 1), s2.substring(0, s2.length() - 1),
16
   alreadyMatched + 1));
            } else {
17 ▼
                int s1_lcs = commonChild(s1, s2.substring(0, s2.length() - 1), alreadyMatched);
18
                int s2_lcs = commonChild(s1.substring(0, s1.length() - 1), s2, alreadyMatched);
19
20
                return Math.max(s1_lcs, s2_lcs);
21
            }
        }
22
23
24 ▼
        public static void main(String[] args) {
25
            Scanner in = new Scanner(System.in);
            String s1 = in.next();
26
27
            String s2 = in.next();
28
            int result = commonChild(s1, s2, 0);
            System.out.println(result);
29
30
        }
31
   }
32
                                                                                                 Line: 32 Col: 1
                                                                                                 Submit Code
                         Test against custom input
                                                                                     Run Code
```

<u>**1**</u> <u>Upload Code as File</u>

MCB MAC

Terminated due to timeout

Ask your friends for help: f 💆 in

- ✓ Test Case #0
- Test Case #3
- ✓ Test Case #6
- Test Case #9

- Test Case #1
- Test Case #4
- ✓ Test Case #7
- (1) Test Case #10

- Test Case #2
- Test Case #5
- ✓ Test Case #8
- Test Case #11

Test Case #12

Test Case #13

Try Again

Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature