**Badge Progress** (Details)                **Points: 730.13 Rank: 15336**

**All Domains** › **Algorithms** › **Strings** › **Common Child**

# Common Child

by **idlecool**

| Problem | Submissions | Leaderboard | Discussions | Topics |

## Problem Statement

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, $a$ and $b$, with a newline separating them.

## Constraints

All characters are upper cased and lie between ASCII values 65-90. The maximum length of the strings is 5000.

## Output format

Length of string $S$.

## Sample Input #0

```
HARRY
SALLY
```

## Sample Output #0

```
2
```

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

## Sample Input #1

```
AA
BB
```

## Sample Output #1

```
0
```

AA and BB has no characters in common and hence the output is 0.

## Sample Input #2

```
SHINCHAN
NOHARAAA
```

## Sample Output #2

```
3
```

The largest set of characters, in order, between *SHINCHAN* and *NOHARAAA* is *NHA*.

## Sample Input #3

```
ABCDEF
FBDAMN
```

## Sample Output #3

```
2
```

*BD* is the longest child of these strings.

**Related Topics**

Dynamic Programming Basics

**Submissions:** 6856

**Max Score:** 60

**Difficulty:** Difficult

More

---

**Current Buffer** (saved locally, editable)          Java 8

```java
1  import java.io.*;
2  import java.util.*;
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named
   Solution. */
8      }
9  }
```

Line: 1 Col: 1

↥ Upload Code as File        ☐ Test against custom input                    Run Code    Submit Code

Join us on IRC at #hackerrank on freenode for hugs or bugs.

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