Common Child ☆

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A string is said to be a child of a another string if it can be formed by deleting 0 or more characters from the other string. Given two strings of equal length, what's the longest string that can be constructed such that it is a child of both?

For example, ABCD and ABDC have two children with maximum length 3, ABC and ABD. They can be formed by eliminating either the D or C from both strings. Note that we will not consider ABCD as a common child because we can't rearrange characters and ABCD $\neq$ ABDC.

Function Description

Complete the commonChild function in the editor below. It should return the longest string which is a common child of the input strings.

commonChild has the following parameter(s):

- s1, s2: two equal length strings

Input Format

There is one line with two space-separated strings, $s1$ and $s2$.

Constraints

- $1 \leq |s1|, |s2| \leq 5000$
- All characters are upper case in the range ascii[A-Z].

Output Format

Print the length of the longest string s, such that s is a child of both $s1$ and $s2$.

Sample Input

```
HARRY
SALLY
```

Sample Output

```
2
```

Explanation

The longest string that can be formed 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
```

Explanation 1

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

Sample Input 2

```
SHINCHAN
NOHARAAA
```

Sample Output 2

```
3
```

Explanation 2

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
```

Explanation 3

BD is the longest child of the given strings.

Change Theme C++

```
// Complete the commonChild function below.
static int T[5001][5001];
int commonChild(string s1, string s2) {
    int m = s1.size();
    int n = s2.size();

    for(int i = 0; i <= m; i++ ){
        for(int j = 0; j <= n; j++ ){
            if(i == 0 || j == 0){
                T[i][j] = 0;
            }else if(s1[i-1]==s2[j-1]){
                T[i][j] = 1+T[i-1][j-1];
            }else{
                T[i][j] = max(T[i][j-1], T[i-1][j]);
            }
        }
    }

    return T[m][n];

}
```

Line: 25 Col: 2

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