Common Child

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.