Problem D
Hidden Password
Time limit: 1 second

Insecure Inc. has decided to shift directions after a failed attempt at developing a new encryption standard. Their new effort is a password system used to hide a password inside another string of characters we denote as a *message*. However, it is important that the message has a certain property relative to the hidden password.

Let us assume that we denote the characters of the password as $c_1 c_2 \ldots c_P$ (although those characters need not be distinct). To be a valid message for the password, if you start from the beginning of the message and search for any character from the set $\{c_1, \ldots, c_P\}$, it must be that c_1 is the first that you find. Subsequently, if you continue looking from that point of the message for any character from the set $\{c_2, \ldots, c_P\}$, it must be that c_2 is the next that you find. Continuing in that manner, c_3 must be the next character from the set $\{c_3, \ldots, c_P\}$, and so on until reaching c_P.

For example, if the password is `ABC`, then the string `HAPPYBIRTHDAYCACEY` is a valid message.

- Notice that `A` is the first of the set {`A`, `B`, `C`} to appear in the message. (The initial `H` is not relevant.)
- Following the `A` that was found, the next occurrence from the set {`B`, `C`} is `B`.
- Following the `B` that was found, the next occurrence from the set {`C`} is indeed `C`.
  (Note that the `A` in `DAY` is not relevant, since we are only looking for a `C` at this point, and the additional `A` and `C` in `CACEY` are not relevant, because we have already completed the password with the first `C`.)

However, for the password `ABC`, the string `TRAGICBIRTHDAYCACEY` is not a valid message.

- While the `A` is the first of the set {`A`, `B`, `C`} to appear in the string,
  the next occurrence from the set {`B`, `C`} is `C` rather than `B`.

Also, the string `HAPPYBIRTHDAY` is not a valid message for the password `ABC` because the `C` never appears.

As an example with duplicate letters in the password, consider the password `SECRET`. For this password, the string `SOMECHORESARETOUGH` is a valid message. In contrast, the string `SOMECHEERSARETOUGH` is not a valid message, because an extraneous `E` is found at the point when an `R` is first expected.

Input

The input consists of a single line containing two strings. The first string is the password, having length P, with $3 \leq P \leq 8$. The second string has length S, with $10 \leq S \leq 40$. Both strings will consist solely of uppercase letters. (That is, neither string can include whitespace, lowercase letters, digits, or other special characters.)

Output

Output a single line with the word `PASS` if the second string is a valid message for the password, or `FAIL` otherwise.

Sample Input 1	Sample Output 1
ABC HAPPYBIRTHDAYCACEY	PASS

Sample Input 2	Sample Output 2
ABC TRAGICBIRTHDAYCACEY	FAIL

Sample Input 3	Sample Output 3
ABC HAPPYBIRTHDAY	FAIL

Sample Input 4	Sample Output 4
SECRET SOMECHORESARETOUGH	PASS

Sample Input 5	Sample Output 5
SECRET SOMECHEERSARETOUGH	FAIL