

CCC '20 J4 - Cyclic Shifts

Time limit: 1.0s **Memory limit:** 512M

Canadian Computing Competition: 2020 Stage 1, Junior #4

Thuc likes finding cyclic shifts of strings. A *cyclic shift* of a string is obtained by moving characters from the beginning of the string to the end of the string. We also consider a string to be a cyclic shift of itself. For example, the cyclic shifts of

`ABCDE` are:

`ABCDE`, `BCDEA`, `CDEAB`, `DEABC`, and `EABCD`.

Given some text, T , and a string, S , determine if T contains a cyclic shift of S .

Input Specification

The input will consist of exactly two lines containing only uppercase letters. The first line will be the text T , and the second line will be the string S . Each line will contain at most 1000 characters.

For 6 of the 15 available marks, S will be exactly 3 characters in length.

Output Specification

Output `yes` if the text, T , contains a cyclic shift of the string, S . Otherwise, output `no`.

Sample Input 1

```
ABCCDEABAA
ABCDE
```

Output for Sample Input 1

```
yes
```

Explanation of Output for Sample Input 1

`CDEAB` is a cyclic shift of `ABCDE` and is contained in the text `ABC` `CDEAB` `AA`.

Sample Input 2

ABCDDEBCAB

ABA

Output for Sample Input 2

no

Explanation of Output for Sample Input 2

The cyclic shifts of `ABA` are `ABA`, `BAA`, and `AAB`. None of these shifts are contained in the text `ABCDDEBCAB`.