Problem H
Reversibly Cyclic Strings

Time Limit: 1 sec

A string t is a *Cyclic Substring* of a string s if there is some rotation of s such that t is a substring of that rotation of s.

For example, if s is `fatcat`, then `atc` and `atf` are both *Cyclic Substrings* of s. However, `act` is not a *Cyclic Substring* of s.

A string s is *Internally Reversibly Cyclic* if, for every proper substring t of s, the reverse of t is a *Cyclic Substring* of s.

Given a string, determine if it is *Internally Reversibly Cyclic*.

Input

The single line of input contains a string s ($1 \leq |s| \leq 1{,}000$, $s \in \{\texttt{a} - \texttt{z}\}^*$)

Output

Output a single integer, which is 1 if s is *Internally Reversibly Cyclic*, 0 otherwise.

Sample Input 1	Sample Output 1
ccca	1

Sample Input 2	Sample Output 2
eeaafbddfaa	0