SubstrPal

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	2048 MB

You are given a string s consisting only of lowercase letters.

A **palindromic substring** of string s is a contiguous sequence of characters from that string which, when read forward, is identical to when read backwards.

Two palindromic substrings of string s intersect if they share at least one character position in s.

Formally, two palindromic substrings $[i_1, j_1]$ and $[i_2, j_2]$ intersect if $\max(i_1, i_2) \leq \min(j_1, j_2)$.

We consider each distinct palindromic substring of string s as a node in a graph. Two nodes in this graph have an edge if the two palindromic substrings intersect.

Output the number of connected components in the created graph.

Input

The first and only line of the input contains the string s ($1 \leq |s| \leq 2 * 10^6$) consisting only of lowercase letters.

Output

The output should contain the number of connected components in the created graph.

Example

standard input	standard output
abcbba	3

Explanation

The 3 connected components of the palindromic substring graph are listed below, represented as 1-indexed positions in the array:

1: $[1, 1]$

2: $[2, 2], [2, 4], [3, 3], [4, 4], [4, 5], [5, 5]$

3: $[6, 6]$