Problem A
Aibohphobia

Time limit: 1 second
Memory limit: 2048 megabytes

Problem Description

Aibohphobia is the irrational fear of palindromes. A palindrome is a string that is the same forwards and backwards, for example `racecar`, `radar`, and `aibohphobia`. However, in this problem, we are not dealing with aibophobia, but instead simply solving a problem involving palindromes.

Recently, Softy participated in a algorithmic training camp, and the favorite thing she learned was Manacher's algorithm, which can be used to efficiently compute the longest palindromic substring of a string s in $\mathcal{O}(|s|)$ time.

After burning chicken for many days in the training camp, Softy decided to procrastinate her work in the PCCA Camp for as long as possible. While wandering in the NYCU campus, she found an `std::string` stuck to the ground. Let's call the string s.

Softy was disappointed that the string isn't a palindrome, so she decided to make some changes to make it palindromic. She will repeat the following operation until s become palindromic. In the i-th turn, Softy will:

1. Choose any substring $s_l s_{l+1} \ldots s_r$ $(l \le r)$ of s, let it be t.

2. Pick some intervals $[a_j, b_j]$ $(a_j \le b_j)$ such that $s_{a_j} s_{a_j+1} \ldots s_{b_j}$ is equal to t and the intervals are pairwise disjoint. Note that you do not need to pick all such intervals.

3. Replace each substring $s_{a_j} s_{a_j+1} \ldots s_{b_j}$ with a single character $\$_i$. You may assume that $\$_i$ is a character that never appeared in the string s before the i-th turn.

For example, let the string s be "`mississimi`". In the first turn, Softy may choose $t =$ `"mi"` and the intervals $[1, 2]$ and $[9, 10]$. After replacing $s_1 s_2$ and $s_9 s_{10}$ with $\$_1$, s will become "$\$_1$`ssissi`$\$_1$". In the second turn, Softy may choose $t =$ `"ssi"` and the intervals $[2, 4]$ and $[5, 7]$, and s will become "$\$_1 \$_2 \$_2 \$_1$" after replacing both occurrences of `"ssi"` with $\$_2$. After this step the string becomes palindromic, so she stops.

Since the larger the palindromic string is, the happier Softy will be, she wants you to help her find out the maximum possible length of the resulting palindromic sequence. Maybe she will give you some soft Miku if you fulfill her wish?

Input Format

The input contains the string s on a line.

Output Format

Print the maximum length of the resulting palindromic string after some operations.

Technical Specification

- $1 \le |s| \le 10^6$

- Each character in s has an ASCII code in the rage $[33, 126]$. In other words, each character is one of `!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[]^_`abcdefghijklmnopqrstuvwxyz{|}` .

Sample Input 1

```
mississimi
```

Sample Output 1

```
4
```

Sample Input 2

```
mirrorrorrim
```

Sample Output 2

```
12
```

Sample Input 3

```
DRUNK{NOT_THE_FLAG$1/29_10:30AM$P
CCA_final}
```

Sample Output 3

```
1
```