

Python Problem Statement (Smallest Substring)

You are given a string S made of lowercase English alphabets. Find the length of the smallest substring with the maximum number of distinct characters.

Input format

The only line of input consists of a string made of lower case English alphabets.

Output format

Print the required answer.

Constraints

$1 \leq |S| \leq 10^5$ where S denotes the length of the string S .

Sample Input

abcda

Sample Output

4

Explanation

Among all substrings of length 1, maximum number of distinct characters = 1
Among all substrings of length 2, maximum number of distinct characters = 2
Among all substrings of length 3, maximum number of distinct characters = 3
Among all substrings of length 4, maximum number of distinct characters = 4
Among all substrings of length 5, maximum number of distinct characters = 4

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