STUDENT REPORT

DETAILS

Name

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Roll Number

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EXPERIMENT

Title

MAGIC STRING

Description

Eva has a string S containing lowercase English letters. She wants to transform this string into a Magic String, where all the characters in the string are the same. To do so, she can replace any letter in the string with another letter present in that string.

Your task is to help Eva find and return an integer value, representing the minimum number of steps required to form a Magic String. Return 0, if S is already a Magic String.

Input Specification:

input1: A string S, containing lowercase English letters.

Output Specification:

Return an integer value, representing the minimum number of steps required to form a Magic String. Return 0, if S is already a Magic String.

Sample Input:

aaabbbccdddd

Sample Output:

8

Source Code:

```
def min_steps_to_magic_string(S):
    # If the string is empty, return 0
    if not S:
        return 0

    # Count the frequency of each character
    frequency = {}
    for char in S:
        if char in frequency:
            frequency[char] += 1
        else:
            frequency[char] = 1

    # Find the maximum frequency
    max_freq = max(frequency.values())

    # Calculate the minimum steps required
    min_steps = len(S) - max_freq

    return min_steps

# Input reading
import sys

input = sys.stdin.read
S = input().strip()

# Calculate and print the result
result = min_steps_to_magic_string(S)
print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %