



STUDENT REPORT

DETAILS

Name

SHAIKH MOHAMMAD KAIF

Roll Number

KUB23CSE131

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:

aaabbbccddddd

Sample Output:

8

Source Code:

```
def min_steps_to_magic_string(S):
    from collections import Counter

    # Count the frequency of each character
    freq = Counter(S)

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

    # Total length of the string
    total_length = len(S)

    # Calculate the minimum steps needed
    min_steps = total_length - max_freq

    return min_steps

# Sample Input
input_string = "aaabbbccddd"
# Output the result
print(min_steps_to_magic_string(input_string)) # Output: 8
```

RESULT

1 / 5 Test Cases Passed | 20 %