STUDENT REPORT

DETAILS

Name

Mohammed Aakhil R

Roll Number

22BI24EE410-T

EXPERIMENT

Title

SPECIAL STRING

Description

Alice has a string A consisting of lowercase English letters. Her friend gives her another string S and asks her to modify string A and replace its characters with the characters present in string S.

But, to achieve the above task, Alice must follow the below steps:

1. Choose a character from string S that has the minimum ASCII distance from the ith character in string A

Replace the ith character in string A with the chosen character in string S

Your task is to find and return an integer value, representing minimum total ASCII distance that is required to modify string A to the characters in string S. Return 0, if all the characters in string S are already present in string A

Sample Input:

abcd

xyz

Sample Output:

86

Source Code:

```
def min_total_ascii_distance(A, S):
    total_distance = 0

    # Create a set for quick lookup of characters in S
    char_set_S = set(S)

    for char in A:
        if char in char_set_S:
            continue  # No distance if the character is already in S

        # Find the minimum ASCII distance for the current character
        min_distance = float('inf')  # Start with infinity

        for target_char in S:
            distance = abs(ord(char) - ord(target_char))
            if distance < min_distance:
                min_distance = distance

        total_distance += min_distance  # Add the minimum distance for this character

    return total_distance

# Sample usage
A = input()  # Input string A
S = input()  # Input string S

# Output the total minimum ASCII distance
print(min_total_ascii_distance(A, S))
```

RESULT

5 / 5 Test Cases Passed | 100 %