Problem 1737: Change Minimum Characters to Satisfy One of Three Conditions

Problem Information

Difficulty: Medium
Acceptance Rate: 37.52%
Paid Only: No
Tags: Hash Table, String, Counting, Prefix Sum

Problem Description

You are given two strings `a` and `b` that consist of lowercase letters. In one operation, you can change any character in `a` or `b` to **any lowercase letter**.

Your goal is to satisfy **one** of the following three conditions:

* **Every** letter in `a` is **strictly less** than **every** letter in `b` in the alphabet. * **Every** letter in `b` is **strictly less** than **every** letter in `a` in the alphabet. * **Both** `a` and `b` consist of **only one** distinct letter.

Return _the**minimum** number of operations needed to achieve your goal._

Example 1:

Input: a = "aba", b = "caa" **Output:** 2 **Explanation:** Consider the best way to make each condition true: 1) Change b to "ccc" in 2 operations, then every letter in a is less than every letter in b. 2) Change a to "bbb" and b to "aaa" in 3 operations, then every letter in b is less than every letter in a. 3) Change a to "aaa" and b to "aaa" in 2 operations, then a and b consist of one distinct letter. The best way was done in 2 operations (either condition 1 or condition 3).

Example 2:

Input: a = "dabadd", b = "cda" **Output:** 3 **Explanation:** The best way is to make condition 1 true by changing b to "eee".

Constraints:

* `1 <= a.length, b.length <= 105` * `a` and `b` consist only of lowercase letters.

Code Snippets

C++:

```
class Solution {
public:
int minCharacters(string a, string b) {

}
};
```

Java:

```
class Solution {
public int minCharacters(String a, String b) {

}
}
```

Python3:

```
class Solution:
def minCharacters(self, a: str, b: str) -> int:
```