

Check if frequencies can be equal

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Medium Accuracy: 16.67% Submissions: 75K+ Points: 4

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Given a string s which contains only lower alphabetic characters, check if it is possible to remove at most one character from this string in such a way that frequency of each distinct character becomes same in the string. Return `true` if it is possible to do else return `false`.

Note: The driver code print 1 if the value returned is true, otherwise 0.

Example 1:

Input:

$s = \text{"xyyz"}$

Output:

1

Explanation:

Removing one 'y' will make frequency of each character to be 1.

Example 2:

Input:

$s = \text{"xxxxyyzz"}$

Output:

0

Explanation:

Frequency can not be made same by removing at most one character.

→ Approach:-

$x\ x\ x\ x\ y\ y\ z\ z$

Step 1:

0	0	...	1	4	2	2
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↓
freq. array.

Step 2: Now iterate through each character if its count is greater than 0 & subtract 1 from its freq. If after subtraction all the freq. are same that means it can be done.

Time complexity: $O(N)$

Space complexity: $O(1)$

```
class Solution{
public:
    int getIdx(char ch)
    {
        return (ch - 'a');
    }
    bool allSame(int freq[], int N)
    {
        int same;
        int i;
        for (i = 0; i < N; i++)
        {
            if (freq[i] > 0)
            {
                same = freq[i];
                break;
            }
        }
        for (int j = i+1; j < N; j++)
            if (freq[j] > 0 && freq[j] != same)
                return false;
        return true;
    }
};
```

```
bool sameFreq(string str)
{
    int M = 26;
    int l = str.length();

    // fill frequency array
    int freq[M] = {0};
    for (int i = 0; i < l; i++)
        freq[getIdx(str[i])]++;
    if (allSame(freq, M))
        return true;
    for (char c = 'a'; c <= 'z'; c++)
    {
        int i = getIdx(c);
        if (freq[i] > 0)
        {
            freq[i]--;
            if (allSame(freq, M))
                return true;
            freq[i]++;
        }
    }
    return false;
}
```