389 Find the Difference (link)

Description

You are given two strings `s` and `t`.

String `t` is generated by random shuffling string `s` and then add one more letter at a random position.

Return the letter that was added to `t`.

Example 1:

```
Input: s = "abcd", t = "abcde"
Output: "e"
Explanation: 'e' is the letter that was added.
```

Example 2:

```
Input: s = "", t = "y"
Output: "y"
```

Constraints:

- `0 <= s.length <= 1000`
- `t.length == s.length + 1`
- `s` and `t` consist of lowercase English letters.

(scroll down for solution)

Solution

Language: cpp

Status: Accepted

```cpp
#include <string>
#include <unordered_map>

using namespace std;

class Solution {
public:
    char findTheDifference(string s, string t) {
        unordered_map<char, int> count;

        // Считаем частоту каждого символа в строке s
        for (char ch : s) {
            count[ch]++;
        }

        // Вычитаем частоту каждого символа в строке t
        for (char ch : t) {
            if (--count[ch] < 0) {
                return ch; // Возвращаем символ, чья частота стала отрицательной
            }
        }

        return ' '; // Здесь никогда не должны оказаться
    }
};
```