2539. Count the Number of Good Subsequences Premium

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A **subsequence** of a string is good if it is not empty and the frequency of each one of its characters is the same.

Given a string `s`, return *the number of good subsequences of* `s`. Since the answer may be too large, return it modulo `10^9 + 7`.

A **subsequence** is a string that can be derived from another string by deleting some or no characters without changing the order of the remaining characters.

Example 1:

> **Input:** s = "aabb"
> **Output:** 11
> **Explanation:** The total number of subsequences is `2^4`. There are five subsequences which are not good: "**aab**b", "a**abb**", "**a**a**bb**", "**aa**b**b**", and the empty subsequence. Hence, the number of good subsequences is `2^4-5 = 11`.

Example 2:

> **Input:** s = "leet"
> **Output:** 12
> **Explanation:** There are four subsequences which are not good: "**lee**t", "l**eet**", "**leet**", and the empty subsequence. Hence, the number of good subsequences is `2^4-4 = 12`.

Example 3:

> **Input:** s = "abcd"
> **Output:** 15
> **Explanation:** All of the non-empty subsequences are good subsequences. Hence, the number of good subsequences is `2^4-1 = 15`.

Constraints:

- `1 <= s.length <= 10^4`
- `s` consists of only lowercase English letters.

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Hint 1

Use the frequency array of characters of the string.

Hint 2

For 1 ≤ m ≤ s.length, count the number of subsequences of s where each character occurs exactly m times.

Hint 3

For any n and k, you can calculate (n choose k) mod p in O(log p) using binary exponentiation.

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