

# 2539. Count the Number of Good Subsequences

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Hint

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: "aa**b**b", "aa**b**b", "aa**b**b", "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**", "lee**t**", "lee**t**", 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:

- `$1 \leq s.length \leq 10^4$`
- `s` consists of only lowercase English letters.

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Yes

No

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Hint 1

Use the frequency array of characters of the string.

Hint 2

For  $1 \leq m \leq s.length$ , 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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