977. Distinct Subsequences II

Difficulty : Hard

https://leetcode.com/problems/distinct-subsequences-ii

Given a string s, return *the number of* ***distinct non-empty subsequences*** *of* `s`. Since the answer may be very large, return it **modulo** $10^9 + 7$.

A **subsequence** of a string is a new string that is formed from the original string by deleting some (can be none) of the characters without disturbing the relative positions of the remaining characters. (i.e., `"ace"` is a subsequence of `"abcde"` while `"aec"` is not.

Example 1:

```
Input: s = "abc"
Output: 7
Explanation: The 7 distinct subsequences are "a", "b", "c", "ab", "ac", "bc", and "abc".
```

Example 2:

```
Input: s = "aba"
Output: 6
Explanation: The 6 distinct subsequences are "a", "b", "ab", "aa", "ba", and "aba".
```

Example 3:

```
Input: s = "aaa"
Output: 3
Explanation: The 3 distinct subsequences are "a", "aa" and "aaa".
```

Constraints:

- `1 <= s.length <= 2000`
- `s` consists of lowercase English letters.