

Problem 2484: Count Palindromic Subsequences

Problem Information

Difficulty: Hard

Acceptance Rate: 40.46%

Paid Only: No

Tags: String, Dynamic Programming

Problem Description

Given a string of digits `s`, return the number of palindromic subsequences of `s` having length 5. Since the answer may be very large, return it modulo $10^9 + 7$.

Note:

A string is palindromic if it reads the same forward and backward. 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 = "103301"` **Output:** 2 **Explanation:** There are 6 possible subsequences of length 5: "10330", "10331", "10301", "10301", "13301", "03301". Two of them (both equal to "10301") are palindromic.

Example 2:

Input: `s = "0000000"` **Output:** 21 **Explanation:** All 21 subsequences are "00000", which is palindromic.

Example 3:

Input: `s = "9999900000"` **Output:** 2 **Explanation:** The only two palindromic subsequences are "99999" and "00000".

****Constraints:****

*`1` <= s.length <= 104` *`s` consists of digits.

Code Snippets

C++:

```
class Solution {  
public:  
    int countPalindromes(string s) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int countPalindromes(String s) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def countPalindromes(self, s: str) -> int:
```