

# 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<sup>9</sup> + 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:
```