2130. Maximum Product of the Length of Two Palindromic Subsequences

Difficulty : Medium

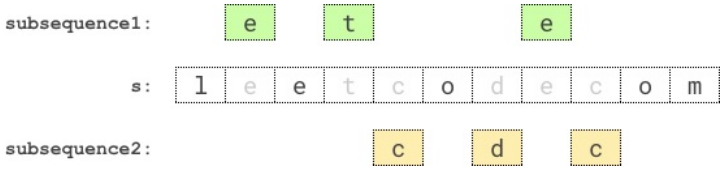
https://leetcode.com/problems/maximum-product-of-the-length-of-two-palindromic-subsequences

Given a string `s`, find two **disjoint palindromic subsequences** of `s` such that the **product** of their lengths is **maximized**. The two subsequences are **disjoint** if they do not both pick a character at the same index.

Return *the **maximum** possible **product** of the lengths of the two palindromic subsequences.*

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. A string is **palindromic** if it reads the same forward and backward.

Example 1:




```
Input: s = "leetcodecom"
Output: 9
Explanation: An optimal solution is to choose "ete" for the 1st subsequence and "cdc" for the 2nd subsequence.
The product of their lengths is: 3 * 3 = 9.
```

Example 2:

```
Input: s = "bb"
Output: 1
Explanation: An optimal solution is to choose "b" (the first character) for the 1st subsequence and "b" (the second character) for the 2nd subsequence.
The product of their lengths is: 1 * 1 = 1.
```

Example 3:

```
Input: s = "accbcaxxcxx"
Output: 25
Explanation: An optimal solution is to choose "accca" for the 1st subsequence and "xxcxx" for the 2nd subsequence.
The product of their lengths is: 5 * 5 = 25.
```

Constraints:

- `2 <= s.length <= 12`
- `s` consists of lowercase English letters only.