Problem 2103: Rings and Rods

Problem Information

Difficulty: Easy
Acceptance Rate: 81.40%
Paid Only: No
Tags: Hash Table, String

Problem Description

There are `n` rings and each ring is either red, green, or blue. The rings are distributed **across ten rods** labeled from `0` to `9`.

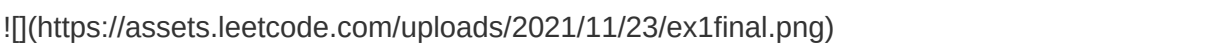
You are given a string `rings` of length `2n` that describes the `n` rings that are placed onto the rods. Every two characters in `rings` forms a **color-position pair** that is used to describe each ring where:

* The **first** character of the `ith` pair denotes the `ith` ring's **color** (`'R'`, `'G'`, `'B'`). * The **second** character of the `ith` pair denotes the **rod** that the `ith` ring is placed on (`'0'` to `'9'`).

For example, `"R3G2B1"` describes `n == 3` rings: a red ring placed onto the rod labeled 3, a green ring placed onto the rod labeled 2, and a blue ring placed onto the rod labeled 1.

Return _the number of rods that have**all three colors** of rings on them._

Example 1:



Input: rings = "B0B6G0R6R0R6G9" **Output:** 1 **Explanation:** - The rod labeled 0 holds 3 rings with all colors: red, green, and blue. - The rod labeled 6 holds 3 rings, but it only has red and blue. - The rod labeled 9 holds only a green ring. Thus, the number of rods with all three colors is 1.

Example 2:

Input: rings = "B0R0G0R9R0B0G0" **Output:** 1 **Explanation:** - The rod labeled 0 holds 6 rings with all colors: red, green, and blue. - The rod labeled 9 holds only a red ring. Thus, the number of rods with all three colors is 1.

Example 3:

Input: rings = "G4" **Output:** 0 **Explanation:** Only one ring is given. Thus, no rods have all three colors.

Constraints:

* `rings.length == 2 * n` * `1 <= n <= 100` * `rings[i]` where `i` is **even** is either `'R'`, `'G'`, or `'B'` (**0-indexed**). * `rings[i]` where `i` is **odd** is a digit from `'0'` to `'9'` (**0-indexed**).

Code Snippets

C++:

```
class Solution {
public:
int countPoints(string rings) {

}
};
```

Java:

```
class Solution {
public int countPoints(String rings) {

}
}
```

Python3:

```
class Solution:
def countPoints(self, rings: str) -> int:
```