

Problem 3008: Find Beautiful Indices in the Given Array II

Problem Information

Difficulty: Hard

Acceptance Rate: 27.24%

Paid Only: No

Tags: Two Pointers, String, Binary Search, Rolling Hash, String Matching, Hash Function

Problem Description

You are given a **0-indexed** string `s`, a string `a`, a string `b`, and an integer `k`.

An index `i` is **beautiful** if:

* `0 <= i <= s.length - a.length` * `s[i..(i + a.length - 1)] == a` * There exists an index `j` such that: * `0 <= j <= s.length - b.length` * `s[j..(j + b.length - 1)] == b` * `|j - i| <= k`

Return _the array that contains beautiful indices in**sorted order from smallest to largest**_.

Example 1:

Input: s = "isawsquirrelnearmysquirrelhouseohmy", a = "my", b = "squirrel", k = 15
Output: [16,33] **Explanation:** There are 2 beautiful indices: [16,33]. - The index 16 is beautiful as s[16..17] == "my" and there exists an index 4 with s[4..11] == "squirrel" and |16 - 4| <= 15. - The index 33 is beautiful as s[33..34] == "my" and there exists an index 18 with s[18..25] == "squirrel" and |33 - 18| <= 15. Thus we return [16,33] as the result.

Example 2:

Input: s = "abcd", a = "a", b = "a", k = 4 **Output:** [0] **Explanation:** There is 1 beautiful index: [0]. - The index 0 is beautiful as s[0..0] == "a" and there exists an index 0 with s[0..0] == "a" and |0 - 0| <= 4. Thus we return [0] as the result.

Constraints:

`* `1 <= k <= s.length <= 5 * 105` * `1 <= a.length, b.length <= 5 * 105` * `s`, `a`, and `b` contain only lowercase English letters.`

Code Snippets

C++:

```
class Solution {  
public:  
vector<int> beautifulIndices(string s, string a, string b, int k) {  
  
}  
};
```

Java:

```
class Solution {  
public List<Integer> beautifulIndices(String s, String a, String b, int k) {  
  
}  
}
```

Python3:

```
class Solution:  
def beautifulIndices(self, s: str, a: str, b: str, k: int) -> List[int]:
```