Problem 2565: Subsequence With the Minimum Score

Problem Information

Difficulty: Hard
Acceptance Rate: 32.88%
Paid Only: No
Tags: Two Pointers, String, Binary Search

Problem Description

You are given two strings `s` and `t`.

You are allowed to remove any number of characters from the string `t`.

The score of the string is `0` if no characters are removed from the string `t`, otherwise:

* Let `left` be the minimum index among all removed characters. * Let `right` be the maximum index among all removed characters.

Then the score of the string is `right - left + 1`.

Return _the minimum possible score to make_`t` _ a subsequence of _`s` _._

A **subsequence** of a string is a new string that is formed from the original string by deleting some (can be none) of the characters without disturbing the relative positions of the remaining characters. (i.e., `"ace"` is a subsequence of `"_a_ b _c_ d _e_ "` while `"aec"` is not).

Example 1:

Input: s = "abacaba", t = "bzaa" **Output:** 1 **Explanation:** In this example, we remove the character "z" at index 1 (0-indexed). The string t becomes "baa" which is a subsequence of the string "abacaba" and the score is 1 - 1 + 1 = 1. It can be proven that 1 is the minimum score that we can achieve.

Example 2:

Input: s = "cde", t = "xyz" **Output:** 3 **Explanation:** In this example, we remove characters "x", "y" and "z" at indices 0, 1, and 2 (0-indexed). The string t becomes "" which is a subsequence of the string "cde" and the score is 2 - 0 + 1 = 3. It can be proven that 3 is the minimum score that we can achieve.

Constraints:

* `1 <= s.length, t.length <= 105` * `s` and `t` consist of only lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
int minimumScore(string s, string t) {

}
};
```

Java:

```
class Solution {
public int minimumScore(String s, String t) {

}
}
```

Python3:

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