

Problem 1540: Can Convert String in K Moves

Problem Information

Difficulty: Medium

Acceptance Rate: 36.65%

Paid Only: No

Tags: Hash Table, String

Problem Description

Given two strings `s` and `t`, your goal is to convert `s` into `t` in `k` moves or less.

During the `i`th ($1 \leq i \leq k$) move you can:

- * Choose any index `j` (1-indexed) from `s`, such that $1 \leq j \leq s.length$ and `j` has not been chosen in any previous move, and shift the character at that index `i` times.
- * Do nothing.

Shifting a character means replacing it by the next letter in the alphabet (wrapping around so that `'z'` becomes `'a'`). Shifting a character by `i` means applying the shift operations `i` times.

Remember that any index `j` can be picked at most once.

Return `true` if it's possible to convert `s` into `t` in no more than `k` moves, otherwise return `false`.

Example 1:

Input: `s = "input", t = "ouput", k = 9` **Output:** `true` **Explanation:** In the 6th move, we shift `'i'` 6 times to get `'o'`. And in the 7th move we shift `'n'` to get `'u'`.

Example 2:

Input: `s = "abc", t = "bcd", k = 10` **Output:** `false` **Explanation:** We need to shift each character in `s` one time to convert it into `t`. We can shift `'a'` to `'b'` during the 1st move. However, there is no way to shift the other characters in the remaining moves to obtain `t` from `s`.

****Example 3:****

****Input:**** s = "aab", t = "bbb", k = 27 ****Output:**** true ****Explanation:**** In the 1st move, we shift the first 'a' 1 time to get 'b'. In the 27th move, we shift the second 'a' 27 times to get 'b'.

****Constraints:****

* `1 <= s.length, t.length <= 10^5` * `0 <= k <= 10^9` * `s`, `t` contain only lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
    bool canConvertString(string s, string t, int k) {

    }
};
```

Java:

```
class Solution {
    public boolean canConvertString(String s, String t, int k) {

    }
}
```

Python3:

```
class Solution:
    def canConvertString(self, s: str, t: str, k: int) -> bool:
```