

Problem 833: Find And Replace in String

Problem Information

Difficulty: Medium

Acceptance Rate: 51.06%

Paid Only: No

Tags: Array, Hash Table, String, Sorting

Problem Description

You are given a **0-indexed** string `s` that you must perform `k` replacement operations on. The replacement operations are given as three **0-indexed** parallel arrays, `indices`, `sources`, and `targets`, all of length `k`.

To complete the `ith` replacement operation:

1. Check if the **substring** `sources[i]` occurs at index `indices[i]` in the **original string** `s`.
2. If it does not occur, **do nothing**. 3. Otherwise if it does occur, **replace** that substring with `targets[i]`.

For example, if `s = "_ab_ cd"`, `indices[i] = 0`, `sources[i] = "ab"`, and `targets[i] = "eee"`, then the result of this replacement will be `"_eee_ cd"`.

All replacement operations must occur **simultaneously**, meaning the replacement operations should not affect the indexing of each other. The testcases will be generated such that the replacements will **not overlap**.

* For example, a testcase with `s = "abc"`, `indices = [0, 1]`, and `sources = ["ab", "bc"]` will not be generated because the `ab` and `bc` replacements overlap.

Return **the resulting string** after performing all replacement operations on **s**.

A **substring** is a contiguous sequence of characters in a string.

Example 1:

[!\[\]\(\[https://assets.leetcode.com/uploads/2021/06/12/833-ex1.png\\)\]\(https://assets.leetcode.com/uploads/2021/06/12/833-ex1.png\)](https://assets.leetcode.com/uploads/2021/06/12/833-ex1.png)

****Input:**** s = "abcd", indices = [0, 2], sources = ["a", "cd"], targets = ["eee", "ffff"] ****Output:**** "eeebffff" ****Explanation:**** "a" occurs at index 0 in s, so we replace it with "eee". "cd" occurs at index 2 in s, so we replace it with "ffff".

****Example 2:****

****Input:**** s = "abcd", indices = [0, 2], sources = ["ab", "ec"], targets = ["eee", "ffff"] ****Output:**** "eeecd" ****Explanation:**** "ab" occurs at index 0 in s, so we replace it with "eee". "ec" does not occur at index 2 in s, so we do nothing.

****Constraints:****

* `1 <= s.length <= 1000` * `k == indices.length == sources.length == targets.length` * `1 <= k <= 100` * `0 <= indexes[i] < s.length` * `1 <= sources[i].length, targets[i].length <= 50` * `s` consists of only lowercase English letters. * `sources[i]` and `targets[i]` consist of only lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
    string findReplaceString(string s, vector<int>& indices, vector<string>&
sources, vector<string>& targets) {
        ...
    }
};
```

Java:

```
class Solution {  
    public String findReplaceString(String s, int[] indices, String[] sources,  
        String[] targets) {  
  
    }  
}
```

}

Python3:

```
class Solution:

def findReplaceString(self, s: str, indices: List[int], sources: List[str],
targets: List[str]) -> str:
```