

Problem 1946: Largest Number After Mutating Substring

Problem Information

Difficulty: Medium

Acceptance Rate: 37.55%

Paid Only: No

Tags: Array, String, Greedy

Problem Description

You are given a string `num`, which represents a large integer. You are also given a **0-indexed** integer array `change` of length `10` that maps each digit `0-9` to another digit. More formally, digit `d` maps to digit `change[d]`.

You may **choose** to **mutate a single substring** of `num`. To mutate a substring, replace each digit `num[i]` with the digit it maps to in `change` (i.e. replace `num[i]` with `change[num[i]]`).

Return `_` a string representing the **largest** possible integer after **mutating** (or choosing not to) a **single substring** of `num`.

A **substring** is a contiguous sequence of characters within the string.

Example 1:

Input: `num = "1_32"`, `change = [9,8,5,0,3,6,4,2,6,8]` **Output:** `"_8_32"` **Explanation:** Replace the substring `"1"`: `1` maps to `change[1] = 8`. Thus, `"1_32"` becomes `"_8_32"`. `"832"` is the largest number that can be created, so return it.

Example 2:

Input: `num = "_021_"`, `change = [9,4,3,5,7,2,1,9,0,6]` **Output:** `"_934_"` **Explanation:** Replace the substring `"021"`: `0` maps to `change[0] = 9`. `2` maps to `change[2] = 3`. `1` maps to `change[1] = 4`. Thus, `"_021_"` becomes `"_934_"`. `"934"` is the largest number that can be created, so return it.

****Example 3:****

****Input:**** num = "5", change = [1,4,7,5,3,2,5,6,9,4] ****Output:**** "5" ****Explanation:**** "5" is already the largest number that can be created, so return it.

****Constraints:****

* `1 <= num.length <= 105` * `num` consists of only digits `0-9`. * `change.length == 10` * `0 <= change[d] <= 9`

Code Snippets

C++:

```
class Solution {
public:
    string maximumNumber(string num, vector<int>& change) {

    }
};
```

Java:

```
class Solution {
    public String maximumNumber(String num, int[] change) {

    }
}
```

Python3:

```
class Solution:
    def maximumNumber(self, num: str, change: List[int]) -> str:
```