

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:
```