903 · Range Addition

Description

Assume you have an array of length `n` initialized with all `0`'s and are given `k` update operations.

Each operation is represented as a triplet: `[startIndex, endIndex, inc]` which increments each element of subarray `A[startIndex ... endIndex]` (startIndex and endIndex inclusive) with `inc`.

Return the modified array after all `k` operations were executed.

Example

```
Given:
length = 5,
updates =
[
[1,  3,  2],
[2,  4,  3],
[0,  2, -2]
]
return [-2, 0, 3, 5, 3]

Explanation:
Initial state:
[ 0, 0, 0, 0, 0 ]
After applying operation [1, 3, 2]:
[ 0, 2, 2, 2, 0 ]
After applying operation [2, 4, 3]:
[ 0, 2, 5, 5, 3 ]
After applying operation [0, 2, -2]:
[-2, 0, 3, 5, 3 ]
```

```python
class Solution:
    """
    @param length: the length of the array
    @param updates: update operations
    @return: the modified array after all k operations were executed
    """
    def getModifiedArray(self, length, updates):
        # Write your code here
        ans = [0]*length
```

```
        for query in updates:
            start = query[0]
            end = query[1]
            inc = query[2]
            ans[start]+=inc
            if end+1<length:
                ans[end+1]-=inc

        prefix = 0
        for i,ele in enumerate(ans):
            prefix= prefix+ans[i]
            ans[i] = prefix
        return ans
```