5965. Intervals Between Identical Elements

My Submissions (/contest/weekly-contest-273/problems/intervals-between-identical-elements/submissions/)

Back to Contest (/contest/weekly-contest-273/)

You are given a **0-indexed** array of n integers `arr`.

The **interval** between two elements in `arr` is defined as the **absolute difference** between their indices. More formally, the **interval** between `arr[i]` and `arr[j]` is $|i - j|$.

Return *an array* `intervals` *of length* n *where* `intervals[i]` *is* **the sum of intervals** *between* `arr[i]` *and each element in* `arr` *with the same value as* `arr[i]`.

Note: $|x|$ is the absolute value of x.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:

```
Input: arr = [2,1,3,1,2,3,3]
Output: [4,2,7,2,4,4,5]
Explanation:
- Index 0: Another 2 is found at index 4. |0 - 4| = 4
- Index 1: Another 1 is found at index 3. |1 - 3| = 2
- Index 2: Two more 3s are found at indices 5 and 6. |2 - 5| + |2 - 6| = 7
- Index 3: Another 1 is found at index 1. |3 - 1| = 2
- Index 4: Another 2 is found at index 0. |4 - 0| = 4
- Index 5: Two more 3s are found at indices 2 and 6. |5 - 2| + |5 - 6| = 4
- Index 6: Two more 3s are found at indices 2 and 5. |6 - 2| + |6 - 5| = 5
```

Example 2:

```
Input: arr = [10,5,10,10]
Output: [5,0,3,4]
Explanation:
- Index 0: Two more 10s are found at indices 2 and 3. |0 - 2| + |0 - 3| = 5
- Index 1: There is only one 5 in the array, so its sum of intervals to identical elements is 0.
- Index 2: Two more 10s are found at indices 0 and 3. |2 - 0| + |2 - 3| = 3
- Index 3: Two more 10s are found at indices 0 and 2. |3 - 0| + |3 - 2| = 4
```

Constraints:

- `n == arr.length`
- $1 <= n <= 10^5$
- $1 <= arr[i] <= 10^5$

JavaScript ▾		⟨❼⟩ ⟳ ⚙

```javascript
1
2▾  function pair(count, prevIndex) {
3       this.count = count;
4       this.prevIndex = prevIndex;
5   }
6
7▾  const getDistances = (a) => {
8       let n = a.length, m = new Map();
9       let left = Array(n).fill(0);
10      let right = Array(n).fill(0);
11▾     for (let i = 0; i < n; i++) {
12▾         if (!m.has(a[i])) {
13              left[i] = 0;
14              m.set(a[i], new pair(1, i));
```

```
15 ▾        } else {
16              let tmp = m.get(a[i]);
17              left[i] = (tmp.count) * (i - tmp.prevIndex) + left[tmp.prevIndex];
18              m.set(a[i], new pair(tmp.count + 1, i));
19          }
20      }
21      m.clear();
22 ▾    for (let i = n - 1; i >= 0; i--) {
23 ▾        if (!m.has(a[i])) {
24              right[i] = 0;
25              m.set(a[i], new pair(1, i));
26          }
27 ▾        else {
28              let tmp = m.get(a[i]);
29              right[i] = (tmp.count) * (Math.abs(i - tmp.prevIndex)) + right[tmp.prevIndex];
30              m.set(a[i], new pair(tmp.count + 1, i));
31          }
32      }
33      let res = [];
34      for (let i = 0; i < n; i++) res.push(left[i] + right[i]);
35      return res;
36  };
```

☐ **Custom Testcase**   (Use Example Testcases)

⏵ Run   ☁ Submit

Submission Result: Accepted (/submissions/detail/607232062/) ❓   (More Details ❯ (/submissions/detail/607232062/))

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