75 Days of Code

Day19 Problem no: 724. Find Pivot Index (leetcode)

Given an array of integers nums, calculate the pivot index of this array.

The pivot index is the index where the sum of all the numbers strictly to the left of the index is equal to the sum of all the numbers strictly to the index's right.

If the index is on the left edge of the array, then the left sum is 0 because there are no elements to the left. This also applies to the right edge of the array.

Return *the leftmost pivot index*. If no such index exists, return -1.

Example 1:

Input: nums = [1,7,3,6,5,6]
Output: 3
Explanation:
The pivot index is 3.
Left sum = nums[0] + nums[1] + nums[2] = 1 + 7 + 3 = 11
Right sum = nums[4] + nums[5] = 5 + 6 = 11

Example 2:

Input: nums = [1,2,3]
Output: -1
Explanation:
There is no index that satisfies the conditions in the problem statement.

Solution of the above problem using postfix sum

1. We initialize two variables one is sum and another is postfixSum which is empty array
2. We Loop through the nums array in reverse and create the postfixSum array in each iteration
3. Now again we loop again from start to end , and initialize sum as zero again , and on each iteration we compare sum which is addition of current element and

compare with postfixSum current index , whenever current sum equal postfixSumm ‘s element then return index else after loop return -1

```
33
34  function pivotIndex(nums: number[]): number {
35    let postfixSum:number[] = [];
36    let sum = 0;
37
38    for (let numIndex = nums.length - 1; numIndex >= 0; numIndex--) {
39      sum += nums[numIndex];
40      postfixSum.unshift(sum);
41    }
42    sum = 0;
43    let pivotIndex = -1;
44    for (let numIndex = 0; numIndex < nums.length; numIndex++) {
45      sum += nums[numIndex];
46      if (sum === postfixSum[numIndex]) {
47        return numIndex;
48      }
49    }
50
51    return pivotIndex;
52  }
53
54  let answer = pivotIndex([1,7,3,6,5,6]);
55  console.log("Answer : ",answer);
56
57
```

```
[Running] node "c:\Users\Shubham\Desktop\75daysOfCode\75DaysOfCode\day19.js"
Answer :  3
```