

arr: [1, 3, 2, 5, 7]

prefix: [1] [1, 3] [1, 3, 2] [1, 3, 2, 5] [1, 3, 2, 5, 7]  
~~[1, 2]~~ ~~[1, 2, 3]~~

suffix: [7] [5, 7] [2, 5, 7] - - -

arr: [1, 3, 2, 5, 7]

prefixSum: [1, 4, 6, 11, 18]

suffixSum: [18, 17, 15, 12, 7]

$$ps[0] = arr[0]$$

$$ps[i] = \sum_{j=0}^i arr[j] \quad \text{for } i > 0$$

$$ss[n-1] = arr[n-1]$$

$$ss[i] = arr[i] + ss[i+1] \quad \text{for } i < n-1$$

$$L[] = [2, 1, 3, 9]$$

$$R[] = [5, 4, 9, 14]$$

$$[2, 5] \rightarrow [2, 3, 4, 5]$$

$$[1, 4] \rightarrow [1, 2, 3, 4]$$

$$[3, 9] \rightarrow [3, 4, 5, 6, 7, 8, 9]$$

$$[9, 11] \rightarrow [9, 10, 11]$$

maxx:

[0, maxx].

$$TC: O(n * \text{maxx})$$

$$AS: O(\text{maxx})$$

$$0/9 = 3.$$

freq:

0	1
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1

$$10^6 \times 10^6 = 10^{12}$$

$$\sim (10^6 - 10^7)$$

$$\sim 10^8 \rightarrow \sim 1 \text{ sec.}$$

$$10^{12} \rightarrow \sim 10^4 \text{ sec.}$$

$$[2, 5]$$

freq:

0	1	2	3	4	5	6	7	8	9	10
			+			-				
0	0	1	1	1	1	0	0	0	0	0

$$\rightarrow [2, 5] \rightarrow [2, 3, 4, 5]$$

$$\rightarrow [1, 4] \rightarrow [1, 2, 3, 4]$$

$$\rightarrow [3, 9] \rightarrow [3, 4, 5, 6, 7, 8, 9]$$

$$\rightarrow [9, 11] \rightarrow [9, 10, 11]$$

0	1	2	3	4	5	6	7	8	9	10	11	12	13
	+	+	+		-	-			+	-		-	
0	1	2	3	3	2	1	1	1	2	1	1	0	

$$TC: O(n + \text{maxx})$$

$$AS: O(\text{maxx})$$