

Calender (prefix sum) - technique

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Prefix sum technique:

this prefix-sum technique (also called a difference array method) is a very elegant trick often used for range updates and range counting problems.

Let's understand it clearly with a small, simple example.

Imagine you have a number line (or array) of points from 1 to 10.

[2, 4]

[3, 7]

We can do it faster using start +1, end+1 -1 rule.

For each interval [L, R]:

- Add +1 at L
- Add -1 at R + 1

Now, traverse points from 1 to 10, accumulating the values.

Point	Change	Running total (cover count)
1	0	0
2	+1	1
3	+1	2
4	0	2
5	-1	1
6	0	1
7	0	1
8	-1	0
9	0	0
10	0	0