3439. Reschedule Meetings for Maximum Free Time I

Solved ●

Medium Topics Companies Hint

You are given an integer `eventTime` denoting the duration of an event, where the event occurs from time `t = 0` to time `t = eventTime`.

You are also given two integer arrays `startTime` and `endTime`, each of length `n`. These represent the start and end time of `n` **non-overlapping** meetings, where the `i`th meeting occurs during the time `[startTime[i], endTime[i]]`.

You can reschedule **at most** `k` meetings by moving their start time while maintaining the **same duration**, to **maximize** the **longest** *continuous period of free time* during the event.

The **relative** order of all the meetings should stay the *same* and they should remain non-overlapping.

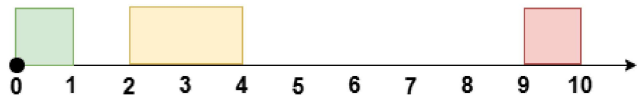
Return the **maximum** amount of free time possible after rearranging the meetings.

Note that the meetings can **not** be rescheduled to a time outside the event.

Example 1:

> **Input:** eventTime = 5, k = 1, startTime = [1,3], endTime = [2,5]
>
> **Output:** 2
>
> **Explanation:**
>
> 
>
>
> Reschedule the meeting at `[1, 2]` to `[2, 3]`, leaving no meetings during the time `[0, 2]`.

Example 2:

> **Input:** eventTime = 10, k = 1, startTime = [0,2,9], endTime = [1,4,10]
>
> **Output:** 6
>
> **Explanation:**
>
> 
>
>
> Reschedule the meeting at `[2, 4]` to `[1, 3]`, leaving no meetings during the time `[3, 9]`.

Example 3:

> **Input:** eventTime = 5, k = 2, startTime = [0,1,2,3,4], endTime = [1,2,3,4,5]
>
> **Output:** 0
>
> **Explanation:**
>
> There is no time during the event not occupied by meetings.

Constraints:

- $1 <= eventTime <= 10^9$
- $n == startTime.length == endTime.length$
- $2 <= n <= 10^5$
- $1 <= k <= n$
- $0 <= startTime[i] < endTime[i] <= eventTime$
- $endTime[i] <= startTime[i + 1]$ where i lies in the range $[0, n - 2]$.

Seen this question in a real interview before? 1/5

Yes No

Accepted **16.5K** Submissions **53.7K** Acceptance Rate **30.7%**

Topics

Companies

Hint 1

Hint 2

Similar Questions

Discussion (40)