

1851. Maximum Number of Events That Can Be Attended II

Difficulty : Hard

<https://leetcode.com/problems/maximum-number-of-events-that-can-be-attended-ii>

You are given an array of events where $\text{events}[i] = [\text{startDay}_i, \text{endDay}_i, \text{value}_i]$. The i^{th} event starts at startDay_i and ends at endDay_i , and if you attend this event, you will receive a value of value_i . You are also given an integer k which represents the maximum number of events you can attend.

You can only attend one event at a time. If you choose to attend an event, you must attend the **entire** event. Note that the end day is **inclusive**: that is, you cannot attend two events where one of them starts and the other ends on the same day.

Return the **maximum sum** of values that you can receive by attending events.

Example 1:

Time	1	2	3	4
Event 0	4			
Event 1			3	
Event 2		1		

Input: $\text{events} = [[1,2,4],[3,4,3],[2,3,1]]$, $k = 2$

Output: 7

Explanation: Choose the green events, 0 and 1 (0-indexed) for a total value of $4 + 3 = 7$.

Example 2:

Time	1	2	3	4
Event 0	4			
Event 1			3	
Event 2		10		

Input: $\text{events} = [[1,2,4],[3,4,3],[2,3,10]]$, $k = 2$

Output: 10

Explanation: Choose event 2 for a total value of 10.

Notice that you cannot attend any other event as they overlap, and that you do **not** have to attend k events.

Example 3:

Time	1	2	3	4
Event 0	1			
Event 1		2		
Event 2			3	
Event 3				4

Input: $\text{events} = [[1,1,1],[2,2,2],[3,3,3],[4,4,4]]$, $k = 3$

Output: 9

Explanation: Although the events do not overlap, you can only attend 3 events. Pick the highest valued three.

Constraints:

- $1 \leq k \leq \text{events.length}$
- $1 \leq k * \text{events.length} \leq 10^6$
- $1 \leq \text{startDay}_i \leq \text{endDay}_i \leq 10^9$
- $1 \leq \text{value}_i \leq 10^6$