Problem F. Tower II

Time limit   1000 ms
Memory limit   256MB

Problem Description

Bill, a game tester, is now testing another tower. This tower has N levels, and each level contains a monster with a specific difficulty d_i and a reward amount v_i. Because Bill is a player who enjoys challenging himself, he will only attempt to fight monsters on levels higher than his current level, and the monster's difficulty must be greater than the previous one he defeated. Bill starts outside the tower and can choose which level to begin with, and he can end at any level he prefers.

To add more fun to the game, the game designer has defined that each level can only be entered within a specific range. Specifically, there is a limit l_i at each level, indicating that only levels equal to or above $i - l_i$ can reach level i.

Help Bill find the maximum amount of money he can collect.

Input format

The first line contains an integer N ($1 \leq N \leq 2 \times 10^5$), indicating the number of levels in the tower.

The next N lines each contain three integers d_i, v_i ($1 \leq d_i, v_i \leq 2 \times 10^5$) and l_i ($0 \leq l_i < i$), representing the difficulty, reward amount, and limit range for levels 1 through N.

Output format

Output a single integer, indicating the maximum amount of money Bill can collect.

Subtask score

Subtask	Score	Additional Constraints
1	10	$N \leq 5000$
2	25	$l_i = i - 1,\ v_i = 1$
3	30	$l_i = i - 1$
4	35	No constraints

Sample

Sample Input 1

```
5
3 5 0
4 4 1
1 3 0
4 1 0
5 4 4
```

Sample Output 1

```
13
```

Sample Input 2

```
5
5 1 0
3 5 1
1 5 2
1 1 3
5 5 4
```

Sample Output 2

```
10
```

Notes