

TC1018 – Estructuras de Datos

Momento de Práctica 1 – Array Manipulation

Ing. Luis Humberto González G / Ing. Delia Castro Rojas

Forma de Trabajo: *Individual*.

Forma de Entrega: Subir a Blackboard el código de tu solución y un archivo con la pantalla de Aceptado en la plataforma de hackerrank

El presente problema pertenece a HackerRank Online Judge (<https://hackerrank.com>)

Array Manipulation

URL: <https://www.hackerrank.com/challenges/crush/problem>

You are given a list(1-indexed) of size n , initialized with zeroes. You have to perform m operations on the list and output the maximum of final values of all the n elements in the list. For every operation, you are given three integers a , b and k and you have to add value to all the elements ranging from index a to b (both inclusive).

For example, consider a list of size 3. The initial list would be $[0, 0, 0]$ and after performing the update $O(a,b,k) = (2, 3, 30)$, the new list would be $[0, 30, 30]$. Here, we've added value 30 to elements between indices 2 and 3. Note the index of the list starts from 1.

Input Format

The first line will contain two integers n and m separated by a single space.

Next m lines will contain three integers a , b and k separated by a single space.

Numbers in list are numbered from 1 to n .

Constraints

- $3 \leq n \leq 10^7$
- $1 \leq m \leq 2 \cdot 10^5$
- $1 \leq a \leq b \leq n$
- $0 \leq k \leq 10^9$

Output Format

Print in a single line the maximum value in the updated list.

Sample Input

```
5 3
1 2 100
2 5 100
3 4 100
```

Sample Output

```
200
```

Explanation

After first update list will be 100 100 0 0 0.

After second update list will be 100 200 100 100 100.

After third update list will be 100 200 200 200 100.

So the required answer will be 200.