Starting with a 1-indexed array of zeros and a list of operations, for each operation add a value to each the array element between two given indices, inclusive. Once all operations have been performed, return the maximum value in the array.

Example

$n = 10$
$queries = [[1, 5, 3], [4, 8, 7], [6, 9, 1]$

Queries are interpreted as follows:

```
a b k
1 5 3
4 8 7
6 9 1
```

Add the values of k between the indices a and b inclusive:

```
index->     1 2 3  4  5 6 7 8 9 10
        [0,0,0, 0, 0,0,0,0,0, 0]
        [3,3,3, 3, 3,0,0,0,0, 0]
        [3,3,3,10,10,7,7,7,0, 0]
        [3,3,3,10,10,8,8,8,1, 0]
```

The largest value is 10 after all operations are performed.

Function Description

Complete the function arrayManipulation in the editor below.

arrayManipulation has the following parameters:

- int n - the number of elements in the array
- int queries[q][3] - a two dimensional array of queries where each queries[i] contains three integers, a, b, and k.

Returns

- int - the maximum value in the resultant array

Input Format

The first line contains two space-separated integers n and m, the size of the array and the number of operations. Each of the next m lines contains three space-separated integers a, b and k, the left index, right index and summand.

Constraints

- $3 \leq n \leq 10^7$
- $1 \leq m \leq 2 * 10^5$
- $1 \leq a \leq b \leq n$

- $0 \leq k \leq 10^9$

Sample Input

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

Sample Output

```
200
```

Explanation

After the first update the list is 100 100 0 0 0.

After the second update list is 100 200 100 100 100.

After the third update list is 100 200 200 200 100.

The maximum value is 200.