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adivamsi2000

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Array Manipulation ☆

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Problem

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

For example, the length of your array of zeros $n = 10$. Your list of queries is 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:

Author [amititkgp](#)Difficulty **Hard**

Max Score 60

Submitted By [186470](#)

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```

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. It must return an integer, the maximum value in the resulting array.

`arrayManipulation` has the following parameters:

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

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

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

Output Format



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Return the integer maximum value in the finished array.

Sample Input

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

Sample Output

```
200
```

Explanation

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

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

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

The required answer will be **200**.

Change Theme

Python 3



```
1 import math
2 import os
3 import random
```

```
4 import re
5 import sys
6 def arrayManipulation(n, queries):
7     res=[0]*(n+2)
8     for i in range(m):
9         a=queries[i][0]
10        b=queries[i][1]
11        c=queries[i][2]
12        res[a]+=c
13        res[b+1]-=c
14    maxx=0
15    summ=0
16    for i in range(n+2): #prefix sum
17        summ+=res[i]
18        maxx=max(summ,maxx)
19    return maxx
20
21
22 if __name__ == '__main__':
```

Line: 12 Col: 19

 Upload Code as File☐ Test against custom input

Run Code

Submit Code



You have earned 60.00 points!

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35%

296/475

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You solved this challenge. Would you like to challenge your friends?

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✓ **Test case 0**

✓ **Test case 1** 

✓ **Test case 2** 

✓ **Test case 3** 

✓ **Test case 4** 

✓ **Test case 5** 

✓ **Test case 6** 

Compiler Message

Success

Input (stdin)

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

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Expected Output

```
1 200
```

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