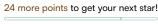
# Array Manipulation \*





X

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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 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

153

4 8 7 6 9 1

Add the values of  $\boldsymbol{k}$  between the indices  $\boldsymbol{a}$  and  $\boldsymbol{b}$  inclusive:

The largest value is 10 after all operations are performed.

## **Function Description**

Complete the function arrayManipulation with 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  $\boldsymbol{n}$  and  $\boldsymbol{q}$ , the size of the array and the number of queries.

Each of the next q lines contains three space-separated integers a, b and b, the left index, right index and number to add.

# Constraints

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

# • $0 \le k \le 10^9$

# Sample Input

```
STDIN Function
-----
5 3 arr[] size n = 5, queries[] size q = 3
1 2 100 queries = [[1, 2, 100], [2, 5, 100], [3, 4, 100]]
2 5 100
3 4 100
```

# Sample Output

200

# Explanation

After the first update the list is 100 100 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.

```
Change Theme Language Python 3
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17
18
    def arrayManipulation(n, queries):
19
         # Write your code here
20
21
         arr = [0]*(n+1)
         max_value = 0
22
         total_sum = 0
23
24
         # prefix sum array
25
         for a,d,k in queries:
26
             arr[a-1] += k
27
             arr[d] -= k
28
29
30
         # just one iteration to get the max value
         for value in arr:
31
32
             total_sum += value
33
             max_value = max(max_value, total_sum)
34
35
         return max_value
36
37
38
     if __name__ == '__main__':
         fptr = open(os.environ['OUTPUT_PATH'], 'w')
39
40
         first_multiple_input = input().rstrip().split()
41
42
43
         n = int(first_multiple_input[0])
44
45
         m = int(first_multiple_input[1])
46
47
         queries = []
```

for \_ in range(m):

EMACS Line: 30 Col: 46

Run Code Submit Code Test against custom input You have earned 60.00 points! You are now 24 points away from the 3rd star for your problem solving badge. 176/200 Congratulations Next Challenge You solved this challenge. Would you like to challenge your friends? Compiler Message Success Download Input (stdin) 1 2 100 2 5 100 3 4 100 Expected Output Download 200 

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