Array Manipulation ☆

RATE THIS CHALLENGE

☆ ☆ ☆ ☆ ☆

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 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

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

Sample Input

```
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**.

Change Theme   C++

```cpp
1   #include <bits/stdc++.h>
2
3   using namespace std;
4
5   vector<string> split_string(string);
6
7   // Complete the arrayManipulation function below.
8   long arrayManipulation(int n, vector<vector<int>> queries) {
9       vector<int> a(n+1,0);
10      long sum=0,m=0;
11
12      for(auto query:queries){
13          int in1=query[0]-1;
14          int in2=query[1];
15          a[in1]+=query[2];
16          a[in2]-=query[2];
17
18      }
19      for(int i=0;i<n;i++){
20          sum+=a[i];
21          m=max(m,sum);
22      }
23      cout<<m;
24      return m;
25
26  }
27
28  int main()
29  {
30      ofstream fout(getenv("OUTPUT_PATH"));
31
32      string nm_temp;
33      getline(cin, nm_temp);
34
35      vector<string> nm = split_string(nm_temp);
36
37      int n = stoi(nm[0]);
38
39      int m = stoi(nm[1]);
40
```

Line: 89 Col: 1

↥ Upload Code as File   ☐ Test against custom input   **Run Code**   **Submit Code**

Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature

https://www.hackerrank.com/challenges/crush/problem?h_l=interview&playlist_slugs%5B%5D=interview-preparation-kit&playlist_slugs%5B%5D=…   2/2