

CSES Problem Set

Dynamic Range Sum Queries

TASK | SUBMIT | RESULTS | STATISTICS | HACKING

Time limit: 1.00 s    Memory limit: 512 MB

Given an array of  $n$  integers, your task is to process  $q$  queries of the following types:

1. update the value at position  $k$  to  $u$
2. what is the sum of values in range  $[a, b]$ ?

Input

The first input line has two integers  $n$  and  $q$ : the number of values and queries.

The second line has  $n$  integers  $x_1, x_2, \dots, x_n$ : the array values.

Finally, there are  $q$  lines describing the queries. Each line has three integers: either " $1$   $k$   $u$ " or " $2$   $a$   $b$ ".

Output

Print the result of each query of type 2.

Constraints

- $1 \leq n, q \leq 2 \cdot 10^5$
- $1 \leq x_i, u \leq 10^9$
- $1 \leq k \leq n$
- $1 \leq a \leq b \leq n$

Example

Input:  
8 4  
3 2 4 5 1 1 5 3  
2 1 4  
2 5 6  
1 3 1  
2 1 4

Output:  
14  
2  
11

Range Queries

Static Range Sum Queries	✓
Static Range Minimum Queries	✓
Dynamic Range Sum Queries	✓
Dynamic Range Minimum Queries	✓
Range Xor Queries	✓
Range Update Queries	✓
Forest Queries	✓
Hotel Queries	✓
...	

Your submissions

2020-03-20 04:26:23	✓
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