Swaps and Sum

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You are given a sequence $a_1, a_2, \ldots, a_n$. The task is to perform the following queries on it:

Type 1. Given two integers l and r $(1 \le l < r \le n; \ r - l + 1 \ is \ even)$. Reorder the elements of the sequence in such a way (changed part of the sequence is in brackets):

$$a_1, a_2, \ldots, a_n \rightarrow a_1, a_2, \ldots, a_{l-2}, a_{l-1}, [a_{l+1}, a_l, a_{l+3}, a_{l+2}, \ldots, a_r, a_{r-1}], a_{r+1}, a_{r+2}, \ldots, a_n$$

That is swap the first two elements of segment $[l, r]$, the second two elements, and so on.

Type 2. Given two integers l and r, print the value of sum $\sum_{i=l}^{r} a_i$.

Input Format

The first line contains two integers n and q. The second line contains n integers $a_1, a_2, \ldots, a_n$, denoting initial sequence.

Each of the next q lines contains three integers tp_i, l_i, r_i, where tp_i denotes the type of the query, and l_i, r_i are parameters of the query. It's guaranteed that for a first-type query $(r - l + 1)$ will be even.

Constraints
$2 \le n \le 2 \times 10^5$
$1 \le q \le 2 \times 10^5$
$1 \le a_i \le 10^6$
$1 \le tp_i \le 2$
$1 \le l_i \le r_i \le n$

Output Format

For each query of the second type print the required sum.

Sample Input

```
6 4
1 2 3 4 5 6
1 2 5
2 2 3
2 3 4
2 4 5
```

Example Output

```
5
7
9
```

Explanation

After the first query the sequence becomes [1, 3, 2, 5, 4, 6].

Submissions:220

Max Score:120
Difficulty: Advanced

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```java
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
```

Line: 1 Col: 1

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