UVa Online Judge

13183 Tobby and Array

As it is known, Tobby loves arrays and queries (he also hates long statements :D). One day Tobby came up with the following: there is an array of integers and multiple queries. For each query, Tobby wants to know the value of the k-th position in the subarray $[l, r]$ $(r \geq l)$ $(1 \leq k \leq r - l + 1)$, if the subarray $[l, r]$ was sorted in non-decreasing order.

Input

The input has several test cases. The first line contains n $(1 \leq n \leq 10^6)$ and q $(1 \leq q \leq 10^6)$, the length of the array and the number of queries respectively. The next line contains n integers a_i $(1 \leq a_i \leq 10^9)$. Then q lines follow, each line containing a query with three integers l, r and k $(1 \leq l, r \leq n)$.

Output

For each query print the answer in a single line (Look at the samples).

Explanation: For the first sample.
indexes: 1 2 3 4
$array = \{1, 3, 4, 3\}$

For first query [1, 2] we have the subarray $\{1, 3\}$, after sorting we have $\{1, \overline{3}\}$, so the value in the 2-th position is 3.

For second query [2, 4] we have the subarray $\{3, 4, 3\}$, after sorting we have $\{\overline{3}, 3, 4\}$, so the value in the 1-th position is 3.

For third query [1, 4] we have the subarray $\{1, 3, 4, 3\}$, after sorting we have $\{1, 3, 3, \overline{4}\}$, so the value in the 4-th position is 4.

Sample Input

```
4 3
1 3 4 3
1 2 2
2 4 1
1 4 4
8 3
4 7 8 5 3 6 1 2
4 5 1
1 8 3
3 5 3
10 10
8 6 2 1 7 3 10 9 5 4
1 8 3
7 7 1
7 8 1
9 9 1
2 10 9
2 7 2
5 7 1
```

```
10 10 1
9 10 2
7 10 4
```

Sample Output

```
3
3
4
3
3
8
3
10
9
5
10
2
3
4
5
10
```