Problem I. Interval Mex

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	64 megabytes

For any multiset S (S may contain duplicated elements) of non-negative integers, define $\text{mex}(S)$ as the smallest non-negative integer that is not in S.

You are given a sequence of n non-negative integers $A_1, A_2, \ldots, A_n$ and q queries.

For any interval $[l, r]$ $(1 \le l \le r \le n)$, let its weight be $\text{mex}([l, r]) = \text{mex}(\{A_l, A_{l+1}, \cdots, A_r\})$.

For each query, you are given an interval $[L, R]$ and a positive integer k. Find the k-th smallest weight among all subintervals of $[L, R]$.

Input

The first line contains two integers n, q $(n, q \le 10^5)$, denoting the length of the sequence and the number of queries.

The second line contains n non-negative integers $A_1, A_2, \cdots, A_n$ $(0 \le A_i \le n)$ separated by spaces.

In the following q lines, each line contains three integers L, R, k $(1 \le L \le R \le n, 1 \le k \le \frac{(R-L+1)(R-L+2)}{2})$, denoting a query.

Output

Output q lines. The i-th line should contain the answer of the i-th query.

Example

standard input	standard output
5 5 1 0 3 0 2 1 5 3 3 4 2 1 3 4 1 3 3 2 2 1	0 1 1 1 1