C. Not Equal on a Segment

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given array a with n integers and m queries. The i-th query is given with three integers l_i, r_i, x_i.

For the i-th query find any position p_i ($l_i \le p_i \le r_i$) so that $a_{p_i} \ne x_i$.

Input

The first line contains two integers n, m ($1 \le n, m \le 2 \cdot 10^5$) — the number of elements in a and the number of queries.

The second line contains n integers a_i ($1 \le a_i \le 10^6$) — the elements of the array a.

Each of the next m lines contains three integers l_i, r_i, x_i ($1 \le l_i \le r_i \le n$, $1 \le x_i \le 10^6$) — the parameters of the i-th query.

Output

Print m lines. On the i-th line print integer p_i — the position of any number not equal to x_i in segment $[l_i, r_i]$ or the value -1 if there is no such number.

Examples

input
6 4 1 2 1 1 3 5 1 4 1 2 6 2 3 4 1 3 4 2

output
2 6 -1 4