Problem F
Contiguous Sum

Time Limit: 2 seconds

Memory Limit: 512 megabytes

You are given a sequence A of n integers $a_1, a_2, \dots, a_n$ and m queries of type (u_i, v_i, k_i). For each query (u_i, v_i, k_i), your task is to find the largest contiguous sum of the integers in A from index u_i to v_i such that the sum is not exceed the value k_i.

Input

The first line contains n, m – the number of the integers in A and the number of queries, respectively.
The second line contains n integers $a_1, a_2, \dots, a_n$.
In the next m line, the i^{th} line contains three integers u_i, v_i, k_i, which represents a query.
Constrains:

- $1 \le n \le 2000$
- $1 \le m \le 2 \times 10^5$
- $-10^9 \le a_i \le 10^9$
- $1 \le u_i \le v_i, \le n$
- $-10^4 \le k_i \le 10^{14}$

Output

The output contains exacly m lines. The i^{th} line should contain the larges sum of contiguous integers in A from index u_i to v_i, that does not exeed k_i. If it is not possible to find such contiguous sum, the i^{th} line should contain "NONE".

Sample Input	Sample Output
5 3 1 -2 -3 5 4 1 3 -2 1 5 8 1 5 3	-2 6 2
6 4 3 8 -3 2 5 2 1 6 17 1 6 16 2 5 4 2 5 -4	17 15 4 NONE