Sequential Nim

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

One day, Susu discovered a game that involved N piles of stones where the k^{th} pile has s_k stones. The game is played between two players. The players take turns removing stones from the piles with the following rules:

- A player can remove any positive number of stones from a single pile in turn.
- A player cannot remove stones from a pile until all the stones in the piles with lower indices have been removed.
- The player who cannot make a valid move loses.

There are two types of queries you need to handle:

Type 1: Update the size of the i^{th} pile to x.

Type 2: Given a range of piles L to R, determine which player will win the game if they play optimally.

As you are a skilled programmer, you decide to implement this game. Can you write a program to solve this game?

Input

The first line of input contains two integers N and Q ($1 \leq N, Q \leq 10^5$) — the number of piles and the number of queries, respectively.

The second line of input contains N integers $s_1, s_2, ..., s_N (1 \leq s_i \leq 10^9)$ — the initial sizes of the piles.

Each of the following Q lines contains a query in the following format:

- 1 i x: update the i^{th} pile to size $x (1 \leq i \leq N, 1 \leq x \leq 10^9)$.
- 2 L R: which player will win the game if they play optimally using only the piles from L to R ($1 \leq L \leq R \leq N$).

Output

For each query of type 2, output a single line containing either "First" or "Second", depending on which player will win the game if they play optimally.

Example

standard input	standard output
5 3 20 1 1 2 5 2 1 3 1 5 3 2 3 5	First Second