Problem D. Zlatan's Legacy

Time limit 2000 ms
Mem limit 1048576 kB

Problem Statement

You have enrolled in Zlatan Ibrahimović's prestigious academy, where he is teaching you about the rules and impact of cards in a soccer match. To test your understanding, Zlatan presents you with Q events. As his student, you are tasked with analyzing a game where:

- N players are numbered from 1 to N.
- Players may receive a **yellow card** or a **red card** for committing offenses.
- A player will be **removed** from the game if they:
  - Accumulate two yellow cards.
  - Receive a red card.

Once a player is removed from the game, they will not receive any further cards.

Initially, all players have no cards. Your job is to handle each of the Q events provided and respond correctly based on the game's rules. The events are given in the format `c x`, where c can be 1, 2, or 3, and your task is to determine the outcome of these events correctly and make Zlatan proud of his teachings!.

- `1 x`: Player x receives a yellow card.
- `2 x`: Player x receives a red card.
- `3 x`: You are asked whether player x has been removed from the game. Answer `Yes` or `No`.

Constraints

- $1 \leq N \leq 100$
- $1 \leq Q \leq 100$
- $1 \leq x \leq N$ in all events.
- There is at least one event of the third kind.
- A player who has been removed will no longer receive any cards.
- All values in the input are integers.

Input

The input is given from Standard Input in the following format, where event_i denotes the i-th event.

$$
\begin{aligned}
&N\ Q\\
&\text{event}_1\\
&\text{event}_2\\
&\vdots\\
&\text{event}_Q
\end{aligned}
$$

Each event is in one of the following formats:

1 x

2 x

3 x

Output

Print X lines, where X is the number of events of the third kind in the input.
The i-th line should contain `Yes` if, for the i-th event of the third kind, player x has been removed from the game, and `No` otherwise.

Sample 1

Input	Output
3 9 3 1 3 2 1 2 2 1 3 1 3 2 1 2 3 2 3 3	No No Yes No Yes No

Here are all the events in chronological order.

In the 1-st event, you are asked whether player 1 has been removed from the game. Player 1 has not been removed, so you should print `No`.
In the 2-nd event, you are asked whether player 2 has been removed from the game. Player 2 has not been removed, so you should print `No`.

In the 3-rd event, player 2 receives a yellow card.
In the 4-th event, player 1 receives a red card and is removed from the game.
In the 5-th event, you are asked whether player 1 has been removed from the game. Player 1 has been removed, so you should print `Yes`.
In the 6-th event, you are asked whether player 2 has been removed from the game. Player 2 has not been removed, so you should print `No`.
In the 7-th event, player 2 receives a yellow card and is removed from the game.
In the 8-th event, you are asked whether player 2 has been removed from the game. Player 2 has been removed, so you should print `Yes`.
In the 9-th event, you are asked whether player 3 has been removed from the game. Player 3 has not been removed, so you should print `No`.