

In this lengthy never-ending vacation, Alice and Bob got really bored. For the first time in their lives, they feel they miss their university, but of course not their classes 😊. In order to have some fun and forget about their “miserable” situation, they decided to play a game called ***the game of boxes***. Initially they have two big sacs, A and B. Sac A has initially N boxes where there is a number written on each box. Sac B is initially empty. The game is composed of several round where at each round one of the two following events take place:

- Event 1: Alice gives Bob a number x and asks him to move a box carrying the number x from sac A to sac B. If Bob could find such a box, he moves it. Otherwise, he says “Vacant”.
- Event 2: Alice gives Bob a number x and asks him about the earliest round when a box carrying the number x existed in sac B. If the sac B contains such a box, Bob replies with the required answer. Otherwise, he simply says “Oops”.

Bob doesn’t want to answer any query before being sure of his answer. That’s why you are here; to write a code that answers any query rapidly.

Input format:

- The first line contains N, where N is a positive integer not exceeding 10^6 .
- The second line contains N, possibly negative, integers, each not exceeding 10^5 , in absolute value. The ith integer represents the number written on the ith box in sac A.
- R, the number of rounds. R is between 1 and 2×10^5 inclusively.
- R lines follow, the ith line represent the ith round. Each of those lines is represented by two integers a and x. The value of ‘a’ determines the type of event (event 1 or event 2). The value of x represents the required box number. The value of a is either 1 or 2. The value of x is inclusively between -10^5 and 10^5 .

Output format: For each round, if the event type is event 1 and the required box is not found, just print “Vacant”. Otherwise, print the required answer. Note that the first round is said to be Round 1 and not Round 0.

Sample input: 10

```
2 2 3 6 1 2 6 6 2 2
7
1 3
1 3
2 3
2 1
1 6
2 6
2 3
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Sample Output:

Vacant

1

Oops

5

1