Ice Cream Queue 1

1 second, 32 MB, no STL containers

An ice cream shop has a single queue. There are two types of events happening in order.

- A number of customers arrive at the shop. They will be in the queue. Each customer is a member and has a unique integer ID.
- The first customer in the queue is served. This type of events only happens when there is at least one customer in the queue.

Write a program that simulate the ice cream queue.

Input

The first line of the input contains an integer *M* (1<=*M*<=1,000) denoting the number of events. The next *M* lines specify the event information in the following format.

Each event line starts with an integer *T* specifying the event type.

If *T*=1, customers arrive. On the same line, an integer *N* (1<=*N*<=100), the number of arriving customers, follows. The next *N* integers specify the customer ID's of each customer. They also enter the queue one-by-one in this order. Each ID is an integer from 1 to 1,000,000.

If *T*=2, the first customer in the queue is served.

Output

For each line where *T*=2, your program should output the customer ID of the customer. Also, at the end the program should print the number of customers remaining in the queue

Example

Input	Output
7 1 2 4 3 2 1 3 8 6 2 2 2 2 1 6 10 20 30 40 50 60	4 3 8 6 7

Comments

The remaining customers are customers 2, 10, 20, 30, 40, 50, 60. Thus, program output 6 in the last line.

Notes: This is a practice task for implementing data structures. Therefore, you are not allowed to use any STL container classes. However, other supporting classes for STL are OK. E.g., you can use `pair`.