Queue Simulation

Time limit: 5 sec.
Memory limit: 64MB

Description

You know queue? Now it's time to implement one.

You will be given q queries about queue. There are 3 types of query.

- Type 1(Push): Given an integer v, "push" the integer to the queue.
- Type 2(Pop): "pop" out one integer from the queue. If the queue was empty, do nothing instead.
- Type 3(Front): Print the integer at the "front" of the queue. If the queue was empty, print "EMPTY" instead. *Note that this query does not modify the elements of the queue.*

Input

The first line of the input contains a single integer q, the number of queries. (1 <= q <= 100000)

The i-th line of the next q line of the input consists of the following:

- The first integer of the line is t_i, the type of the i-th query. (t_i = 1 or 2 or 3).
- If t_i = 1, another integer v_i will be given in the line,

separated by whitespace. (-10^9 <= v_i <= 10^9)

It is guaranteed that there is at least one query of type 3.

Output

For every query of type 3, print the appropriate integer or string as stated on the description section, in a new line.

Sample I/O

Input(s)	Output(s)
13 1 12 1 23 1 34 2 3 2 3 3 2 2 3 1 45 3	23 34 34 EMPTY 45