Simulate the behavior of the queues of a supermarket. Initially, there are $n$ queues ($1, 2, \ldots, n$), each one with some customers. Afterwards, two events can happen:

- A customer arrives to a queue: If the queue is between 1 and $n$, the customer goes to the end of that queue. Otherwise, the event is ignored.
- A customer leaves a queue: If the queue is between 1 and $n$, and that queue is not empty, the oldest customer of that queue leaves it. Otherwise, the event is ignored.

**Input**

Input starts with the number of queues $n$ (a strictly positive natural number). Follow $n$ lines, one per queue, each one with its customers (a word) and their ages (a real number). Follow an empty line and the description of several events, one per line: the word “ENTERS” followed by the customer, the customer’s age, and the queue; or the word “LEAVES” followed by the queue. All the customers have different ages.

**Output**

First, print the name of the customers that leave the queues, in the order that they departed. Afterwards, print the final content of the $n$ queues, using the order in which the customers would leave. Follow the format of the example.

### Sample input

```
4
Cristina 10 Tomas 27
Francesc 70 Damia 25.5 Domenec 80
Teresa 19 Toni 83 Carles 24
LEAVES 1
LEAVES 1
ENTERS Amalia 30 4
LEAVES 2
LEAVES 1
ENTERS Leo 22 1
ENTERS Maria 20 3
LEAVES 4
LEAVES 4
LEAVES 3
ENTERS Carme 18 4
LEAVES 2
LEAVES -1
LEAVES 2
```

### Sample output

```
DEPARTS
-------
Tomas
Cristina
Domenec
Toni
Amalia
Maria
Francesc
Damia

FINAL CONTENTS
--------------
queue 1: Leo
queue 2:
queue 3:
queue 4: Carles Teresa Carme
```

### Problem information

Author: Salvador Roura
Translator: Carlos Molina
Generation: 2022-07-24 11:01:34