Module 5: Analysis and Comparison of Truck Prices

Problem Description

Time Limit: 3 seconds
Memory Limit: 256 MB

Now that your skills have been revealed to TapNap, they want to add a feature to clearly distinguish themselves from competitors. They ask you to find a way for trucks to declare their prices, which will be stored. When a requester receives a price from another company in the free market, they can enter that price into the TapNap super-app and see how many offers with a price less than or equal to the competitor's requested price are available in the TapNap system.

The inputs are of two types:

1. Input of Type 1: A new price is added to the existing offers.
2. Input of Type 2: For a requested price, you must return the number of offers that have a price less than or equal to the requested price.

Answer the questions of Type 2 in an **online** manner. This means that in your final program, whenever you receive a query as input, you must calculate the answer and output it immediately. This will be checked manually.

Input Format

- The first line of input contains an integer q, the number of queries.
- In each of the next q lines, two integers `type` and `val` are given:
  - `type` indicates the type of query (1 or 2).
  - `val` indicates the value associated with the query (price).

Constraints

- $1 \leq q \leq 2 \times 10^5$
- type $\in \{1, 2\}$
- $1 \leq \text{val} \leq 10^9$

Output Format

For each query of Type 2, output the number of offered prices with a value less than or equal to `val`.