Problem 170: Past Is Prologue

Difficulty: Medium

Author: Carlos Sepúlveda, Orlando, Florida, United States

Originally Published: Code Quest 2022

Problem Background

When managing training exercises, organizers of the training event aim for the best outcomes for those participating in the training. Capturing basic details of these training events can often be the deciding factor in whether future training efforts succeed or fail. Knowing basic details like frequency and duration of past events can help maximize scheduling efficiency; knowing the number of attendees of past events can help predict common logistical issues. This is where engineering teams can assist, by developing predictive algorithms that can help organizers make informed decisions with amazing results.

Problem Description

The Orlando Code Quest Junior League Association has been hosting daily events to help teams across Florida prepare for next year's Code Quest and other competitive programming events. They keep detailed records of everyone who attends each event in a database, which stores the following information:

- Data Source ID - A unique alphanumeric identifier for the data record
- Participant - The name of the team or person attending the event
- Session - Either 'Day' or 'Night,' indicating which session of the event was attended
- Event ID - A unique alphanumeric identifier for the event
- Team - Either 'true' or 'false', indicating if the attendee was a team or not

The Association wants to be able to predict how many teams to expect at future events and needs to know what attendance was at each session of past events in order to do so. Your team has been hired to develop a tool that will take in a comma delimited export of their database to collect this information.

Sample Input

The first line of your program's input, received from the standard input channel, will contain a positive integer representing the number of test cases. Each test case will include:

- A line containing a single positive integer, N, representing the number of database records
- N lines, each representing a database record, containing the following information separated by commas:
    - The entry's data source ID, a string containing uppercase alphanumeric characters

- The participant's name, a string containing letters and spaces
- The session, one of the strings 'Day' or 'Night'
- The event ID, a string containing uppercase alphanumeric characters
- A boolean value ('true' or 'false'), indicating if the participant was a team

```
1
4
A1,Code Questers,Day,E1,true
A2,Maintenance,Day,E1,false
A3,LM Peeps,Night,E1,true
A4,Code Questers,Day,E2,true
```

Sample Output

For each test case, your program must print one line for each unique event ID listed in the database records, in alphanumeric order. Omit events that no team attended. Each line should contain the following information, separated by commas:

- The event ID, as provided in the input
- The number of teams that attended the Day session of that event
- The number of teams that attended the Night session of that event

```
E1,1,1
E2,1,0
```