QUESTION

Liker's Liker

Hard

10 Points

A dating website's schema is represented by a table of people that like other people. The table has three columns. One column is the user_id, another column is the liker_id which is the user_id of the user doing the liking, and the last column is the date time that the like occurred.

Write a query to count the number of liker's likers (the users that like the likers) if the liker has one.

Output Schema:

Column	Type
user	STRING
count	INT

TABLE SCHEMA

```sql
CREATE TABLE likes (
user_id VARCHAR(50),
created_at DATETIME,
liker_id VARCHAR(50)
);

INSERT INTO likes (user_id, created_at, liker_id) VALUES
('A', '2024-01-01 10:00:00', 'B'),
('B', '2024-01-01 11:00:00', 'C'),
('B', '2024-01-01 12:00:00', 'D'),
('B', '2024-01-01 13:00:00', 'E'),
('C', '2024-01-02 10:00:00', 'A'),
('D', '2024-01-02 14:00:00', 'E'),
('E', '2024-01-02 15:00:00', 'F'),
('B', '2024-01-03 09:00:00', 'G'),
('H', '2024-01-03 10:00:00', 'A'),
('B', '2024-01-03 11:00:00', 'C'),
('I', '2024-01-03 12:00:00', 'I');
```

SOLUTION

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```sql
WITH likers AS (
    SELECT DISTINCT user_id AS liker
    FROM likes
),
likers_list AS (
    SELECT
        l1.user_id AS user,
        COUNT(DISTINCT l2.liker_id) AS count
    FROM likes l1
    JOIN likes l2
        ON l1.liker_id = l2.user_id
    GROUP BY l1.user_id
)
SELECT
    user,
    count
FROM likers_list
ORDER BY user;
```

OUTPUT

▼ Tables

user	count
A	4
B	3
C	1
D	1
H	1
I	1

My Thought Process:

I broke the problem down using two steps one was to Identify all user_id values that have been liked (likers).Then, join this with the same table again to find out how many people liked the liker. The trick was realizing we needed to join the table on l1.liker_id = l2.user_id and then group by the original liked user.