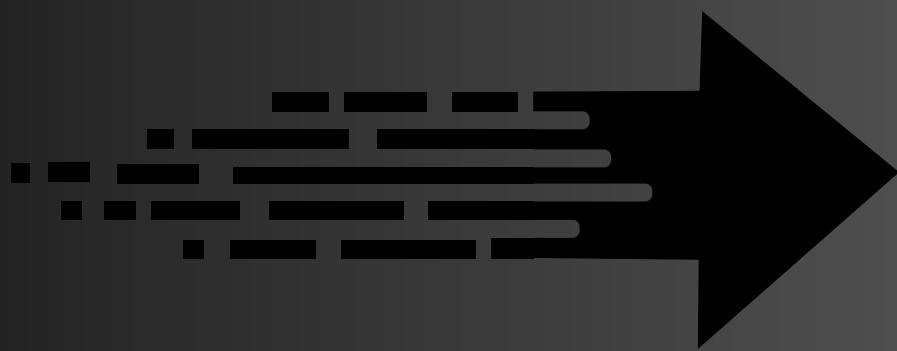# LeetCode

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Day 14/50

14. Confirmation Rate

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Question

The **confirmation rate** of a user is the number of `'confirmed'` messages divided by the total number of requested confirmation messages. The confirmation rate of a user that did not request any confirmation messages is `0`. Round the confirmation rate to **two decimal** places.

Write a solution to find the **confirmation rate** of each user.

Return the result table in **any order**.

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Table

```
Input:
Signups table:

+---------+---------------------+
| user_id | time_stamp          |
+---------+---------------------+
| 3       | 2020-03-21 10:16:13 |
| 7       | 2020-01-04 13:57:59 |
| 2       | 2020-07-29 23:09:44 |
| 6       | 2020-12-09 10:39:37 |
+---------+---------------------+
```

```
Confirmations table:

+---------+---------------------+-----------+
| user_id | time_stamp          | action    |
+---------+---------------------+-----------+
| 3       | 2021-01-06 03:30:46 | timeout   |
| 3       | 2021-07-14 14:00:00 | timeout   |
| 7       | 2021-06-12 11:57:29 | confirmed |
| 7       | 2021-06-13 12:58:28 | confirmed |
| 7       | 2021-06-14 13:59:27 | confirmed |
| 2       | 2021-01-22 00:00:00 | confirmed |
| 2       | 2021-02-28 23:59:59 | timeout   |
+---------+---------------------+-----------+
```

Approach

Used 2 CTEs ConfirmedCounts and TotalCounts to check how many times users tried to send message and how many times it was confirmed. Then used 2 left joins to join these CTEs with signups table on user_id and got the desired result by dividing ConfirmedCounts and TotalCounts for each users_id.

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Query

```
MySQL ∨    🔒 Auto                                          🔖 {} ↺

 1  WITH ConfirmedCounts AS (
 2      SELECT
 3          user_id, COUNT(*) AS confirmed_count
 4      FROM Confirmations
 5      WHERE action = 'confirmed'
 6      GROUP BY user_id
 7  ),
 8  TotalCounts AS (
 9      SELECT
10          user_id, COUNT(*) AS total_count
11      FROM Confirmations
12      GROUP BY user_id
13  )
14  SELECT
15      s.user_id,
16      ROUND(COALESCE(confirmed_count, 0) / COALESCE(total_count, 1), 2) AS confirmation_rate
17  FROM Signups s LEFT JOIN ConfirmedCounts cc
18      ON s.user_id = cc.user_id
19  LEFT JOIN TotalCounts tc
20      ON s.user_id = tc.user_id;
21
```

Output

```
Output:

+-----------+---------------------+
| user_id   | confirmation_rate   |
+-----------+---------------------+
| 6         | 0.00                |
| 3         | 0.00                |
| 7         | 1.00                |
| 2         | 0.50                |
+-----------+---------------------+
```

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Thank You :)