Problem 1934: Confirmation Rate

Problem Information

Difficulty: Medium
Acceptance Rate: 61.48%
Paid Only: No
Tags: Database

Problem Description

Table: `Signups`

+----------------+----------+ | Column Name | Type | +----------------+----------+ | user_id | int | | time_stamp | datetime | +----------------+----------+ user_id is the column of unique values for this table. Each row contains information about the signup time for the user with ID user_id.

Table: `Confirmations`

+----------------+----------+ | Column Name | Type | +----------------+----------+ | user_id | int | | time_stamp | datetime | | action | ENUM | +----------------+----------+ (user_id, time_stamp) is the primary key (combination of columns with unique values) for this table. user_id is a foreign key (reference column) to the Signups table. action is an ENUM (category) of the type ('confirmed', 'timeout') Each row of this table indicates that the user with ID user_id requested a confirmation message at time_stamp and that confirmation message was either confirmed ('confirmed') or expired without confirming ('timeout').

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**.

The result format is in the following example.

Example 1:

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 | +---------+---------------------+-----------+ **Output:** +---------+-------------------+ | user_id | confirmation_rate | +---------+-------------------+ | 6 | 0.00 | | 3 | 0.00 | | 7 | 1.00 | | 2 | 0.50 | +---------+-------------------+ **Explanation:** User 6 did not request any confirmation messages. The confirmation rate is 0. User 3 made 2 requests and both timed out. The confirmation rate is 0. User 7 made 3 requests and all were confirmed. The confirmation rate is 1. User 2 made 2 requests where one was confirmed and the other timed out. The confirmation rate is 1 / 2 = 0.5.

Code Snippets

MySQL:

```
# Write your MySQL query statement below
```

MS SQL Server:

```
/* Write your T-SQL query statement below */
```

PostgreSQL:

```
-- Write your PostgreSQL query statement below
```