

Problem 1934: Confirmation Rate

Problem Information

Difficulty: Medium
Acceptance Rate: 0.00%
Paid Only: No

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	0.00
3	0.00	0.00
7	1.00	1.00
2	0.50	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
```

Oracle:

```
/* Write your PL/SQL query statement below */
```

Pandas:

```
import pandas as pd

def confirmation_rate(signups: pd.DataFrame, confirmations: pd.DataFrame) -> pd.DataFrame:
```

Solutions

MySQL Solution:

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