Problem 1142: User Activity for the Past 30 Days II

Problem Information

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

Problem Description

Table:

Activity

+---------------+---------+ | Column Name | Type | +---------------+---------+ | user_id | int | | session_id | int | | activity_date | date | | activity_type | enum | +---------------+---------+ This table may have duplicate rows. The activity_type column is an ENUM (category) of type ('open_session', 'end_session', 'scroll_down', 'send_message'). The table shows the user activities for a social media website. Note that each session belongs to exactly one user.

Write a solution to find the average number of sessions per user for a period of

30

days ending

2019-07-27

inclusively,

rounded to 2 decimal places

. The sessions we want to count for a user are those with at least one activity in that time period.

The result format is in the following example.

Example 1:

Input:

Activity table: +---------+------------+---------------+---------------+ | user_id | session_id | activity_date | activity_type | +---------+------------+---------------+---------------+ | 1 | 1 | 2019-07-20 | open_session | | 1 | 1 | 2019-07-20 | scroll_down | | 1 | 1 | 2019-07-20 | end_session | | 2 | 4 | 2019-07-20 | open_session | | 2 | 4 | 2019-07-21 | send_message | | 2 | 4 | 2019-07-21 | end_session | | 3 | 2 | 2019-07-21 | open_session | | 3 | 2 | 2019-07-21 | send_message | | 3 | 2 | 2019-07-21 | end_session | | 3 | 5 | 2019-07-21 | open_session | | 3 | 5 | 2019-07-21 | scroll_down | | 3 | 5 | 2019-07-21 | end_session | | 4 | 3 | 2019-06-25 | open_session | | 4 | 3 | 2019-06-25 | end_session | +---------+------------+---------------+---------------+

Output:

+--------------------------+ | average_sessions_per_user | +--------------------------+ | 1.33 | +--------------------------+

Explanation:

User 1 and 2 each had 1 session in the past 30 days while user 3 had 2 sessions so the average is (1 + 1 + 2) / 3 = 1.33.

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 user_activity(activity: pd.DataFrame) -> pd.DataFrame:
```

Solutions

MySQL Solution:

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