Problem 1651: Hopper Company Queries III

Problem Information

Difficulty: Hard
Acceptance Rate: 65.52%
Paid Only: Yes
Tags: Database

Problem Description

Table: `Drivers`

+-------------+---------+ | Column Name | Type | +-------------+---------+ | driver_id | int | | join_date | date | +-------------+---------+ driver_id is the column with unique values for this table. Each row of this table contains the driver's ID and the date they joined the Hopper company.

Table: `Rides`

+--------------+---------+ | Column Name | Type | +--------------+---------+ | ride_id | int | | user_id | int | | requested_at | date | +--------------+---------+ ride_id is the column with unique values for this table. Each row of this table contains the ID of a ride, the user's ID that requested it, and the day they requested it. There may be some ride requests in this table that were not accepted.

Table: `AcceptedRides`

+---------------+---------+ | Column Name | Type | +---------------+---------+ | ride_id | int | | driver_id | int | | ride_distance | int | | ride_duration | int | +---------------+---------+ ride_id is the column with unique values for this table. Each row of this table contains some information about an accepted ride. It is guaranteed that each accepted ride exists in the Rides table.

Write a solution to compute the `average_ride_distance` and `average_ride_duration` of every 3-month window starting from **January - March 2020** to **October - December 2020**. Round `average_ride_distance` and `average_ride_duration` to the nearest **two decimal places**.

The `average_ride_distance` is calculated by summing up the total `ride_distance` values from the three months and dividing it by `3`. The `average_ride_duration` is calculated in a similar way.

Return the result table ordered by `month` in ascending order, where `month` is the starting month's number (January is `1`, February is `2`, etc.).

The result format is in the following example.

Example 1:

Input: Drivers table: +-----------+------------+ | driver_id | join_date | +-----------+------------+ | 10 | 2019-12-10 | | 8 | 2020-1-13 | | 5 | 2020-2-16 | | 7 | 2020-3-8 | | 4 | 2020-5-17 | | 1 | 2020-10-24 | | 6 | 2021-1-5 | +-----------+------------+ Rides table: +---------+---------+--------------+ | ride_id | user_id | requested_at | +---------+---------+--------------+ | 6 | 75 | 2019-12-9 | | 1 | 54 | 2020-2-9 | | 10 | 63 | 2020-3-4 | | 19 | 39 | 2020-4-6 | | 3 | 41 | 2020-6-3 | | 13 | 52 | 2020-6-22 | | 7 | 69 | 2020-7-16 | | 17 | 70 | 2020-8-25 | | 20 | 81 | 2020-11-2 | | 5 | 57 | 2020-11-9 | | 2 | 42 | 2020-12-9 | | 11 | 68 | 2021-1-11 | | 15 | 32 | 2021-1-17 | | 12 | 11 | 2021-1-19 | | 14 | 18 | 2021-1-27 | +---------+---------+--------------+ AcceptedRides table: +---------+-----------+---------------+---------------+ | ride_id | driver_id | ride_distance | ride_duration | +---------+-----------+---------------+---------------+ | 10 | 10 | 63 | 38 | | 13 | 10 | 73 | 96 | | 7 | 8 | 100 | 28 | | 17 | 7 | 119 | 68 | | 20 | 1 | 121 | 92 | | 5 | 7 | 42 | 101 | | 2 | 4 | 6 | 38 | | 11 | 8 | 37 | 43 | | 15 | 8 | 108 | 82 | | 12 | 8 | 38 | 34 | | 14 | 1 | 90 | 74 | +---------+-----------+---------------+---------------+ **Output:** +-------+---------------------+----------------------+ | month | average_ride_distance | average_ride_duration | +-------+---------------------+----------------------+ | 1 | 21.00 | 12.67 | | 2 | 21.00 | 12.67 | | 3 | 21.00 | 12.67 | | 4 | 24.33 | 32.00 | | 5 | 57.67 | 41.33 | | 6 | 97.33 | 64.00 | | 7 | 73.00 | 32.00 | | 8 | 39.67 | 22.67 | | 9 | 54.33 | 64.33 | | 10 | 56.33 | 77.00 | +-------+---------------------+----------------------+ **Explanation:** By the end of January --> average_ride_distance = (0+0+63)/3=21, average_ride_duration = (0+0+38)/3=12.67 By the end of February --> average_ride_distance = (0+63+0)/3=21, average_ride_duration = (0+38+0)/3=12.67 By the end of March --> average_ride_distance = (63+0+0)/3=21, average_ride_duration = (38+0+0)/3=12.67 By the end of April --> average_ride_distance = (0+0+73)/3=24.33, average_ride_duration = (0+0+96)/3=32.00 By the end of May --> average_ride_distance = (0+73+100)/3=57.67, average_ride_duration = (0+96+28)/3=41.33 By the end of June --> average_ride_distance = (73+100+119)/3=97.33, average_ride_duration = (96+28+68)/3=64.00 By the end of July --> average_ride_distance = (100+119+0)/3=73.00, average_ride_duration = (28+68+0)/3=32.00 By the end of August --> average_ride_distance = (119+0+0)/3=39.67, average_ride_duration = (68+0+0)/3=22.67 By the end of Septemeber --> average_ride_distance = (0+0+163)/3=54.33, average_ride_duration = (0+0+193)/3=64.33 By the end of October --> average_ride_distance = (0+163+6)/3=56.33, average_ride_duration = (0+193+38)/3=77.00

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
```