Problem 1097: Game Play Analysis V

Problem Information

Difficulty: Hard
Acceptance Rate: 50.45%
Paid Only: Yes
Tags: Database

Problem Description

Table: `Activity`

+--------------+---------+ | Column Name | Type | +--------------+---------+ | player_id | int | | device_id | int | | event_date | date | | games_played | int | +--------------+---------+ (player_id, event_date) is the primary key (combination of columns with unique values) of this table. This table shows the activity of players of some games. Each row is a record of a player who logged in and played a number of games (possibly 0) before logging out on someday using some device.

The **install date** of a player is the first login day of that player.

We define **day one retention** of some date `x` to be the number of players whose **install date** is `x` and they logged back in on the day right after `x`, divided by the number of players whose install date is `x`, rounded to `2` decimal places.

Write a solution to report for each install date, the number of players that installed the game on that day, and the **day one retention**.

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

The result format is in the following example.

Example 1:

Input: Activity table: +-----------+-----------+------------+--------------+ | player_id | device_id | event_date | games_played | +-----------+-----------+------------+--------------+ | 1 | 2 | 2016-03-01 |

5 | | 1 | 2 | 2016-03-02 | 6 | | 2 | 3 | 2017-06-25 | 1 | | 3 | 1 | 2016-03-01 | 0 | | 3 | 4 | 2016-07-03 | 5 | +-----------+-----------+-----------+-------------+ **Output:** +------------+----------+----------------+ | install_dt | installs | Day1_retention | +------------+----------+----------------+ | 2016-03-01 | 2 | 0.50 | | 2017-06-25 | 1 | 0.00 | +------------+----------+----------------+ **Explanation:** Player 1 and 3 installed the game on 2016-03-01 but only player 1 logged back in on 2016-03-02 so the day 1 retention of 2016-03-01 is 1 / 2 = 0.50 Player 2 installed the game on 2017-06-25 but didn't log back in on 2017-06-26 so the day 1 retention of 2017-06-25 is 0 / 1 = 0.00

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
```