1097. Game Play Analysis V

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
```