Problem 2020: Number of Accounts That Did Not Stream

Problem Information

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

Problem Description

Table:

Subscriptions

+-------------+------+ | Column Name | Type | +-------------+------+ | account_id | int | | start_date | date | | end_date | date | +-------------+------+ account_id is the primary key column for this table. Each row of this table indicates the start and end dates of an account's subscription. Note that always start_date < end_date.

Table:

Streams

+-------------+------+ | Column Name | Type | +-------------+------+ | session_id | int | | account_id | int | | stream_date | date | +-------------+------+ session_id is the primary key column for this table. account_id is a foreign key from the Subscriptions table. Each row of this table contains information about the account and the date associated with a stream session.

Write an SQL query to report the number of accounts that bought a subscription in

2021

but did not have any stream session.

The query result format is in the following example.

Example 1:

Input:

Subscriptions table: +------------+------------+------------+ | account_id | start_date | end_date | +------------+------------+------------+ | 9 | 2020-02-18 | 2021-10-30 | | 3 | 2021-09-21 | 2021-11-13 | | 11 | 2020-02-28 | 2020-08-18 | | 13 | 2021-04-20 | 2021-09-22 | | 4 | 2020-10-26 | 2021-05-08 | | 5 | 2020-09-11 | 2021-01-17 | +------------+------------+------------+ Streams table: +------------+------------+-------------+ | session_id | account_id | stream_date | +------------+------------+-------------+ | 14 | 9 | 2020-05-16 | | 16 | 3 | 2021-10-27 | | 18 | 11 | 2020-04-29 | | 17 | 13 | 2021-08-08 | | 19 | 4 | 2020-12-31 | | 13 | 5 | 2021-01-05 | +------------+------------+-------------+

Output:

+----------------+ | accounts_count | +----------------+ | 2 | +----------------+

Explanation:

Users 4 and 9 did not stream in 2021. User 11 did not subscribe in 2021.

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 find_target_accounts(subscriptions: pd.DataFrame, streams: pd.DataFrame)
-> pd.DataFrame:
```

Solutions

MySQL Solution:

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