Problem 1225: Report Contiguous Dates

Problem Information

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

Problem Description

Table:

Failed

+--------------+---------+ | Column Name | Type | +--------------+---------+ | fail_date | date | +--------------+---------+ fail_date is the primary key (column with unique values) for this table. This table contains the days of failed tasks.

Table:

Succeeded

+--------------+---------+ | Column Name | Type | +--------------+---------+ | success_date | date | +--------------+---------+ success_date is the primary key (column with unique values) for this table. This table contains the days of succeeded tasks.

A system is running one task

every day

. Every task is independent of the previous tasks. The tasks can fail or succeed.

Write a solution to report the

period_state

for each continuous interval of days in the period from

2019-01-01

to

2019-12-31

.

period_state

is

'

failed'

if tasks in this interval failed or

'succeeded'

if tasks in this interval succeeded. Interval of days are retrieved as

start_date

and

end_date.

Return the result table ordered by

start_date

.

The result format is in the following example.

Example 1:

Input:

Failed table: +-------------------+ | fail_date | +-------------------+ | 2018-12-28 | | 2018-12-29 | | 2019-01-04 | | 2019-01-05 | +-------------------+ Succeeded table: +-------------------+ | success_date | +-------------------+ | 2018-12-30 | | 2018-12-31 | | 2019-01-01 | | 2019-01-02 | | 2019-01-03 | | 2019-01-06 | +-------------------+

Output:

+--------------+--------------+--------------+ | period_state | start_date | end_date | +--------------+--------------+--------------+ | succeeded | 2019-01-01 | 2019-01-03 | | failed | 2019-01-04 | 2019-01-05 | | succeeded | 2019-01-06 | 2019-01-06 | +--------------+--------------+--------------+

Explanation:

The report ignored the system state in 2018 as we care about the system in the period 2019-01-01 to 2019-12-31. From 2019-01-01 to 2019-01-03 all tasks succeeded and the system state was "succeeded". From 2019-01-04 to 2019-01-05 all tasks failed and the system state was "failed". From 2019-01-06 to 2019-01-06 all tasks succeeded and the system state was "succeeded".

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 report_contiguous_dates(failed: pd.DataFrame, succeeded: pd.DataFrame) ->
pd.DataFrame:
```

Solutions

MySQL Solution:

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