Problem 1225: Report Contiguous Dates

Problem Information

Difficulty: Hard
Acceptance Rate: 57.27%
Paid Only: Yes
Tags: Database

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
```