

Problem 1767: Find the Subtasks That Did Not Execute

Problem Information

Difficulty: **Hard**

Acceptance Rate: 0.00%

Paid Only: No

Problem Description

Table:

Tasks

+-----+-----+ | Column Name | Type | +-----+-----+ | task_id | int | |
subtasks_count | int | +-----+-----+ task_id is the column with unique values for this
table. Each row in this table indicates that task_id was divided into subtasks_count subtasks
labeled from 1 to subtasks_count. It is guaranteed that $2 \leq \text{subtasks_count} \leq 20$.

Table:

Executed

+-----+-----+ | Column Name | Type | +-----+-----+ | task_id | int | |
subtask_id | int | +-----+-----+ (task_id, subtask_id) is the combination of columns
with unique values for this table. Each row in this table indicates that for the task task_id, the
subtask with ID subtask_id was executed successfully. It is

guaranteed

that $\text{subtask_id} \leq \text{subtasks_count}$ for each task_id.

Write a solution to report the IDs of the missing subtasks for each

task_id

Return the result table in

any order

The result format is in the following example.

Example 1:

Input:

Tasks table: +-----+-----+ | task_id | subtasks_count | +-----+-----+ | 1 | 3
| 2 | 2 | | 3 | 4 | +-----+-----+ Executed table: +-----+-----+ | task_id |
subtask_id | +-----+-----+ | 1 | 2 | | 3 | 1 | | 3 | 2 | | 3 | 3 | | 3 | 4 | +-----+-----+

Output:

+-----+-----+ | task_id | subtask_id | +-----+-----+ | 1 | 1 | | 1 | 3 | | 2 | 1 | | 2 | 2 |
+-----+-----+

Explanation:

Task 1 was divided into 3 subtasks (1, 2, 3). Only subtask 2 was executed successfully, so we include (1, 1) and (1, 3) in the answer. Task 2 was divided into 2 subtasks (1, 2). No subtask was executed successfully, so we include (2, 1) and (2, 2) in the answer. Task 3 was divided into 4 subtasks (1, 2, 3, 4). All of the subtasks were executed successfully.

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_subtasks(tasks: pd.DataFrame, executed: pd.DataFrame) ->
pd.DataFrame:
```

Solutions

MySQL Solution:

```
# Write your MySQL query statement below
```

MS SQL Server Solution:

```
/* Write your T-SQL query statement below */
```

PostgreSQL Solution:

```
-- Write your PostgreSQL query statement below
```

Oracle Solution:

```
/* Write your PL/SQL query statement below */
```

Pandas Solution:

```
import pandas as pd

def find_subtasks(tasks: pd.DataFrame, executed: pd.DataFrame) ->
pd.DataFrame:
```