

# Problem 2494: Merge Overlapping Events in the Same Hall

## Problem Information

Difficulty: **Hard**

Acceptance Rate: 0.00%

Paid Only: No

## Problem Description

Table:

HallEvents

+-----+-----+ | Column Name | Type | +-----+-----+ | hall\_id | int | | start\_day | date |  
| end\_day | date | +-----+-----+ This table may contain duplicates rows. Each row of this table indicates the start day and end day of an event and the hall in which the event is held.

Write a solution to merge all the overlapping events that are held

in the same hall

. Two events overlap if they have

at least one day

in common.

Return the result table

in any order

.

The result format is in the following example.

Example 1:

Input:

```
HallEvents table: +-----+-----+-----+ | hall_id | start_day | end_day |
+-----+-----+-----+ | 1 | 2023-01-13 | 2023-01-14 | | 1 | 2023-01-14 | 2023-01-17 | |
1 | 2023-01-18 | 2023-01-25 | | 2 | 2022-12-09 | 2022-12-23 | | 2 | 2022-12-13 | 2022-12-17 | |
3 | 2022-12-01 | 2023-01-30 | +-----+-----+-----+
```

Output:

```
+-----+-----+-----+ | hall_id | start_day | end_day | +-----+-----+-----+ |
1 | 2023-01-13 | 2023-01-17 | | 1 | 2023-01-18 | 2023-01-25 | | 2 | 2022-12-09 | 2022-12-23 | |
3 | 2022-12-01 | 2023-01-30 | +-----+-----+-----+
```

Explanation:

There are three halls. Hall 1: - The two events ["2023-01-13", "2023-01-14"] and ["2023-01-14", "2023-01-17"] overlap. We merge them in one event ["2023-01-13", "2023-01-17"]. - The event ["2023-01-18", "2023-01-25"] does not overlap with any other event, so we leave it as it is. Hall 2: - The two events ["2022-12-09", "2022-12-23"] and ["2022-12-13", "2022-12-17"] overlap. We merge them in one event ["2022-12-09", "2022-12-23"]. Hall 3: - The hall has only one event, so we return it. Note that we only consider the events of each hall separately.

## Code Snippets

**MySQL:**

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

**MS SQL Server:**

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

**Oracle:**

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

**Pandas:**

```
import pandas as pd

def merge_events(hall_events: pd.DataFrame) -> pd.DataFrame:
```

**Solutions****MySQL Solution:**

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