

Problem 3262: Find Overlapping Shifts

Problem Information

Difficulty: Medium

Acceptance Rate: 58.16%

Paid Only: Yes

Tags: Database

Problem Description

Table: `EmployeeShifts`

+-----+-----+ | Column Name | Type | +-----+-----+ | employee_id | int |
| start_time | time | | end_time | time | +-----+-----+ (employee_id, start_time) is the
unique key for this table. This table contains information about the shifts worked by
employees, including the start and end times on a specific date.

Write a solution to count the number of **overlapping shifts** for each employee. Two shifts
are considered overlapping if one shift's `end_time` is **later than** another shift's
'start_time'.

Return the result table ordered by `employee_id` _in**ascending** order_.

The query result format is in the following example.

Example:

Input:

`EmployeeShifts` table:

+-----+-----+-----+ | employee_id | start_time | end_time |
+-----+-----+-----+ | 1 | 08:00:00 | 12:00:00 | | 1 | 11:00:00 | 15:00:00 | | 1 |
14:00:00 | 18:00:00 | | 2 | 09:00:00 | 17:00:00 | | 2 | 16:00:00 | 20:00:00 | | 3 | 10:00:00 |
12:00:00 | | 3 | 13:00:00 | 15:00:00 | | 3 | 16:00:00 | 18:00:00 | | 4 | 08:00:00 | 10:00:00 | | 4 |
09:00:00 | 11:00:00 | +-----+-----+-----+

****Output:****

```
+-----+-----+ | employee_id | overlapping_shifts |  
+-----+-----+ | 1 | 2 | | 2 | 1 | | 4 | 1 | +-----+
```

****Explanation:****

* Employee 1 has 3 shifts: * 08:00:00 to 12:00:00 * 11:00:00 to 15:00:00 * 14:00:00 to 18:00:00 The first shift overlaps with the second, and the second overlaps with the third, resulting in 2 overlapping shifts.

* Employee 2 has 2 shifts: * 09:00:00 to 17:00:00 * 16:00:00 to 20:00:00 These shifts overlap with each other, resulting in 1 overlapping shift.

* Employee 3 has 3 shifts: * 10:00:00 to 12:00:00 * 13:00:00 to 15:00:00 * 16:00:00 to 18:00:00 None of these shifts overlap, so Employee 3 is not included in the output.

* Employee 4 has 2 shifts: * 08:00:00 to 10:00:00 * 09:00:00 to 11:00:00 These shifts overlap with each other, resulting in 1 overlapping shift.

The output shows the employee_id and the count of overlapping shifts for each employee who has at least one overlapping shift, ordered by employee_id in ascending order.

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
```