Problem 2793: Status of Flight Tickets

Problem Information

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

Problem Description

Table:

Flights

+-------------+------+ | Column Name | Type | +-------------+------+ | flight_id | int | | capacity | int | +-------------+------+

flight_id

column contains distinct values. Each row of this table contains flight id and capacity.

Table:

Passengers

+--------------+----------+ | Column Name | Type | +--------------+----------+ | passenger_id | int | | flight_id | int | | booking_time | datetime | +--------------+----------+ passenger_id column contains distinct values. booking_time column contains distinct values. Each row of this table contains passenger id, booking time, and their flight id.

Passengers book tickets for flights in advance. If a passenger books a ticket for a flight and there are still empty seats available on the flight, the passenger's ticket will be

confirmed

. However, the passenger will be on a

waitlist

if the flight is already at full capacity.

Write a solution to determine the current status of flight tickets for each passenger.

Return the result table ordered by

passenger_id

in

ascending order

.

The result format is in the following example.

Example 1:

Input:

Flights table: +-----------+----------+ | flight_id | capacity | +-----------+----------+ | 1 | 2 | | 2 | 2 | | 3 | 1 | +-----------+----------+ Passengers table: +--------------+-----------+---------------------+ | passenger_id | flight_id | booking_time | +--------------+-----------+---------------------+ | 101 | 1 | 2023-07-10 16:30:00 | | 102 | 1 | 2023-07-10 17:45:00 | | 103 | 1 | 2023-07-10 12:00:00 | | 104 | 2 | 2023-07-05 13:23:00 | | 105 | 2 | 2023-07-05 09:00:00 | | 106 | 3 | 2023-07-08 11:10:00 | | 107 | 3 | 2023-07-08 09:10:00 | +--------------+-----------+---------------------+

Output:

+--------------+-----------+ | passenger_id | Status | +--------------+-----------+ | 101 | Confirmed | | 102 | Waitlist | | 103 | Confirmed | | 104 | Confirmed | | 105 | Confirmed | | 106 | Waitlist | | 107 | Confirmed | +--------------+-----------+

Explanation:

- Flight 1 has a capacity of 2 passengers. Passenger 101 and Passenger 103 were the first to book tickets, securing the available seats. Therefore, their bookings are confirmed. However,

Passenger 102 was the third person to book a ticket for this flight, which means there are no more available seats. Passenger 102 is now placed on the waitlist, - Flight 2 has a capacity of 2 passengers, Flight 2 has exactly two passengers who booked tickets, Passenger 104 and Passenger 105. Since the number of passengers who booked tickets matches the available seats, both bookings are confirmed. - Flight 3 has a capacity of 1 passenger. Passenger 107 booked earlier and secured the only available seat, confirming their booking. Passenger 106, who booked after Passenger 107, is on the waitlist.

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 ticket_status(flights: pd.DataFrame, passengers: pd.DataFrame) ->
pd.DataFrame:
```

Solutions

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