

Airline Database – JOIN Queries

1. Display each flight leg's ID, schedule, and the name of the airplane assigned to it.

```
3
4      ----1. Display each flight leg's ID, schedule, and the name of the airplane assigned to
5
6      SELECT li.leg_instance_id, li.depart_time AS schedule, a.type_name AS airplane_name
7      FROM LegInstance li
8      JOIN Airplane a ON li.airplane_id = a.airplane_id;
9
10
11
12
13
14
15
```

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	leg_instance_id	schedule	airplane_name
1	1	2025-12-16 10:00:00.000	Boeing737
2	2	2025-12-17 12:00:00.000	AirbusA320
3	3	2025-12-18 14:00:00.000	Boeing737

2. Display all flight numbers and the names of the departure and arrival airports.

```
11 |     SELECT fl.flight_leg_code,
12 |             dep.name AS departure_airport
13 |     FROM FlightLeg fl
14 |     inner JOIN Airport dep ON fl.air_code = dep.air_code;
15 |
16 |
17 |
18 |
19 |
20 |
```

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Results Messages

	flight_leg_code	departure_airport
1	1	Muscat International Airport
2	2	Salalah Airport
3	3	Masirah Airport

3. Display all reservation data with the name and phone of the customer who made each booking.

```
18
19     SELECT reservation_id,
20           seat_number,
21           customer_name,
22           customer_phone,
23           leg_instance_id
24     FROM Reservation;
25
```

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Results Messages

	reservation_id	seat_number	customer_name	customer_phone	leg_instance_id
1	1	1	Ahmed Al-Amri	968-99123456	1
2	2	2	Salma Al-Balushi	968-99112233	1
3	3	3	Hamad Al-Harthy	968-99234567	2
4	4	4	Aisha Al-Lawati	968-99345678	2
5	5	5	Sultan Al-Rashidi	968-99456789	1
6	6	6	Fatma Al-Mahrouqi	968-99567890	3
7	7	7	Khalid Al-Salmi	968-99678901	3
8	8	8	Laila Al-Hinai	968-99789012	3

4. Display IDs and locations of flights departing from 'CAI' or 'DXB'.

```
25
26     ----4. Display IDs and locations of flights departing from 'CAI' or 'DXB'
27
28     SELECT li.leg_instance_id, li.depart_time, fl.air_code
29     FROM LegInstance li
30     JOIN FlightLeg fl ON li.leg_no = fl.leg_no
31     WHERE fl.air_code IN ('CAI', 'DXB');
32
```

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Results Messages

leg_instance_id	depart_time	air_code
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5. Display full data of flights whose names start with 'A'.

```
33
34     ----5. Display full data of flights whose names start with 'A'.
35     SELECT *
36     FROM Flight
37     WHERE airline LIKE 'A%';
38
39
40
41
```

The screenshot shows a SQL query editor interface. At the top, there is a code editor with the following SQL query:

```
SELECT *
FROM Flight
WHERE airline LIKE 'A%';
```

Below the code editor is a toolbar with icons for percentage, error (red circle), warning (yellow triangle), and up/down arrows. Underneath the toolbar is a tab bar with "Results" and "Messages". The "Results" tab is selected, and the table header row contains columns: "flight_leg_code", "restriction", "airline", and "weekdays". The main area below the header is currently empty, indicating no results have been returned.

6. List customers who have bookings with total payment between 3000 and 5000.

```
10
11     SELECT r.customer_name,
12           r.customer_phone,
13           (f.amount * r.seat_number) AS total_payment
14     FROM Reservation r
15   JOIN LegInstance li ON r.leg_instance_id = li.leg_instance_id
16   JOIN Fare f ON li.leg_no = f.flight_leg_code
17  WHERE (f.amount * r.seat_number) BETWEEN 3000 AND 5000;
18
```

The screenshot shows a SQL query editor interface. At the top, there is a code editor with the following SQL query:

```
SELECT r.customer_name,
       r.customer_phone,
       (f.amount * r.seat_number) AS total_payment
  FROM Reservation r
 JOIN LegInstance li ON r.leg_instance_id = li.leg_instance_id
 JOIN Fare f ON li.leg_no = f.flight_leg_code
 WHERE (f.amount * r.seat_number) BETWEEN 3000 AND 5000;
```

Below the code editor is a toolbar with icons for percentage, error (red circle), warning (yellow triangle), and up/down arrows. Underneath the toolbar is a tab bar with "Results" and "Messages". The "Results" tab is selected, and the table header row contains columns: "customer_name", "customer_phone", and "total_payment". The main area below the header is currently empty, indicating no results have been returned.

7. Retrieve all passengers on 'Flight 110' who booked more than 2 seats.

```
--  
51  
52     SELECT r.customer_name,  
53             SUM(r.seat_number) AS seats_booked  
54     FROM Reservation r  
55     JOIN LegInstance li ON r.leg_instance_id = li.leg_instance_id  
56     JOIN Flight f ON li.leg_no = f.flight_leg_code  
57     WHERE f.flight_leg_code = 1    -- Flight 110  
58     GROUP BY r.customer_name  
59     HAVING SUM(r.seat_number) > 2;  
60  
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```

Results

	customer_name	seats_booked
1	Sultan Al-Rashidi	5

8. Find names of passengers whose booking was handled by agent "Youssef Hamed".

There is no table with agent name

9. Display each passenger's name and the flights they booked, ordered by flight date.

```
65  ----9. Display each passenger's name and the flights they bo
66  SELECT r.customer_name,
67      f.airline AS flight_airline,
68      li.depart_time AS flight_date
69  FROM Reservation r
70  JOIN LegInstance li ON r.leg_instance_id = li.leg_instance_i
71  JOIN Flight f ON li.leg_no = f.flight_leg_code
72  ORDER BY li.depart_time;
73
```

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Results Messages

	customer_name	flight_airline	flight_date
1	Ahmed Al-Amri	Oman Air	2025-12-16 10:00:00.000
2	Salma Al-Balushi	Oman Air	2025-12-16 10:00:00.000
3	Sultan Al-Rashidi	Oman Air	2025-12-16 10:00:00.000
4	Hamad Al-Harthy	Oman Air	2025-12-17 12:00:00.000
5	Aisha Al-Lawati	Oman Air	2025-12-17 12:00:00.000
6	Fatma Al-Mahrouqi	Oman Air	2025-12-18 14:00:00.000
7	Khalid Al-Salmi	Oman Air	2025-12-18 14:00:00.000
8	Laila Al-Hinai	Oman Air	2025-12-18 14:00:00.000

10. For each flight departing from 'Cairo', display the flight number, departure time, and airline name.

```
74  10. For each flight departing from 'Cairo', display the flight num
75
76  SELECT f.flight_leg_code AS flight_number,
77      li.depart_time,
78      f.airline
79  FROM FlightLeg fl
80  inner JOIN LegInstance li ON li.leg_no = fl.leg_no
81  inner JOIN Flight f ON fl.flight_leg_code = f.flight_leg_code
82  WHERE fl.air_code = 'CAI';
83
```

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Results Messages

flight_number	depart_time	airline
---------------	-------------	---------

11. Display all staff members who are assigned as supervisors for flights.

In the current database schema, there is no table for staff members and no link between staff and flights.

12. Display all bookings and their related passengers, even if some bookings are unpaid

```
89
90     SELECT r.reservation_id,
91             r.customer_name,
92             r.customer_phone,
93             f.amount AS fare_amount,
94             li.depart_time
95     FROM Reservation r
96     LEFT JOIN LegInstance li ON r.leg_instance_id = li.leg_instance_id
97     LEFT JOIN Fare f ON li.leg_no = f.flight_leg_code
98
99     ORDER BY r.reservation_id;
```

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Results Messages

reservation_id	customer_name	customer_phone	fare_amount	depart_time
1	Ahmed Al-Amri	968-99123456	120.00	2025-12-16 10:00:00.000
2	Salma Al-Balushi	968-99112233	120.00	2025-12-16 10:00:00.000
3	Hamad Al-Harthy	968-99234567	150.00	2025-12-17 12:00:00.000
4	Aisha Al-Lawati	968-99345678	150.00	2025-12-17 12:00:00.000
5	Sultan Al-Rashidi	968-99456789	120.00	2025-12-16 10:00:00.000
6	Fatma Al-Mahrouqi	968-99567890	200.00	2025-12-18 14:00:00.000
7	Khalid Al-Salmi	968-99678901	200.00	2025-12-18 14:00:00.000
8	Laila Al-Hinai	968-99789012	200.00	2025-12-18 14:00:00.000