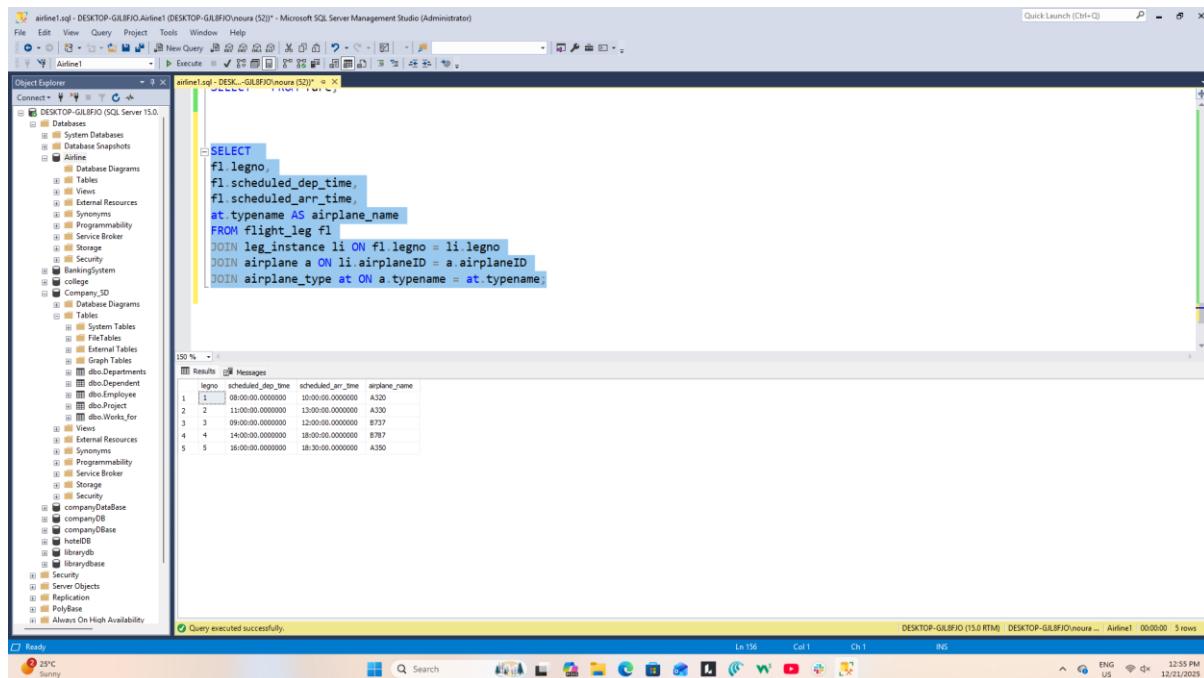


Airline Database – JOIN Queries

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



The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the database structure for 'Airline1'. The central pane displays a T-SQL query:

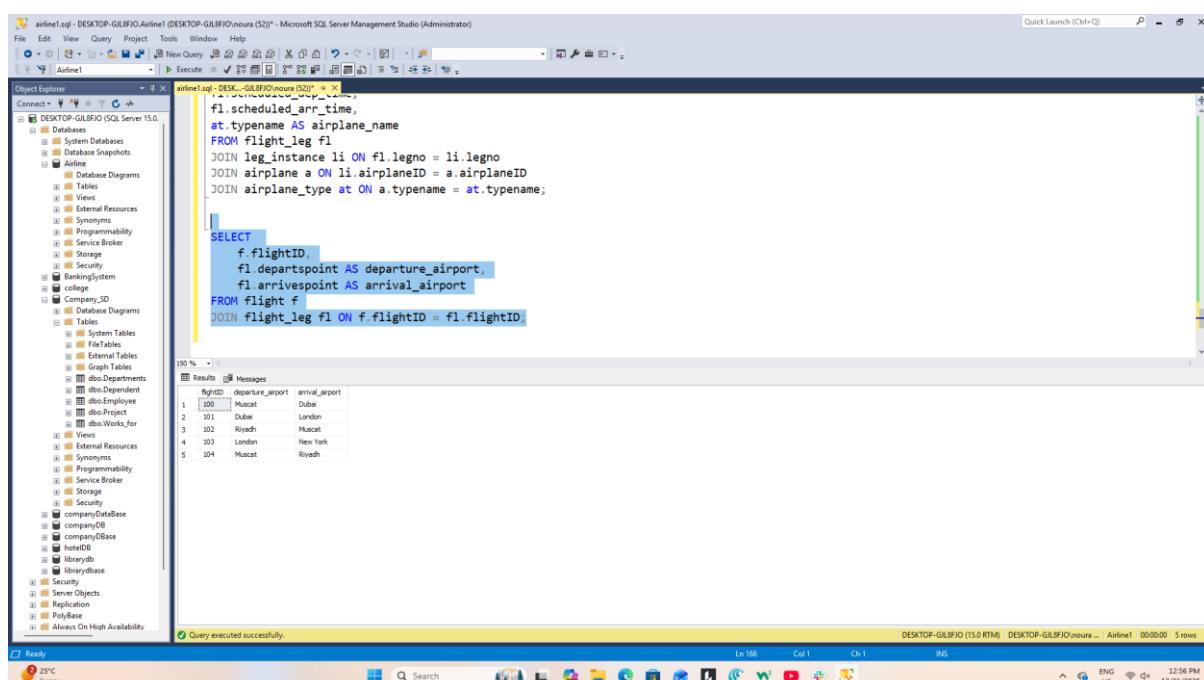
```
SELECT
    fl.legno,
    fl.scheduled_dep_time,
    fl.scheduled_arr_time,
    at.typename AS airplane_name
FROM Flight_leg fl
JOIN leg_instance li ON fl.legno = li.legno
JOIN airplane a ON li.airplaneID = a.airplaneID
JOIN airplane_type at ON a.typename = at.typename;
```

The results pane shows the output of the query:

legno	scheduled_dep_time	scheduled_arr_time	airplane_name
1	08:00:00.0000000	12:00:00.0000000	A320
2	09:00:00.0000000	13:00:00.0000000	A320
3	09:00:00.0000000	12:00:00.0000000	B737
4	14:00:00.0000000	18:00:00.0000000	B787
5	16:00:00.0000000	18:30:00.0000000	A350

At the bottom, a message indicates "Query executed successfully."

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



The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the database structure for 'Airline1'. The central pane displays a T-SQL query:

```
SELECT
    f.flightID,
    f.departspoint AS departure_airport,
    f.arrivespoint AS arrival_airport
FROM flight f
JOIN flight_leg fl ON f.flightID = fl.flightID;
```

The results pane shows the output of the query:

flightID	departure_airport	arrival_airport
100	Muscat	Dubai
101	Dubai	London
102	Riyadh	Muscat
103	London	New York
104	Muscat	Riyadh

At the bottom, a message indicates "Query executed successfully."

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

```

SELECT
    sr.reservationID,
    sr.customer_name,
    sr.customer_phone,
    sr.leg_instance_id
FROM seat_reservation sr;

```

reservationID	customer_name	customer_phone	leg_instance_id
1	Ahmed Ali	91234567	1
2	Fatma Saeed	92345678	2
3	Saleem Khan	93456789	3
4	Aisha Noor	94567890	4
5	John Smith	95678901	5

4. Display IDs and locations of flights departing from ' ('Dubai', 'Muscat')

```

SELECT DISTINCT
    f.flightID,
    f1.departspoint
FROM flight f
JOIN flight_leg f1 ON f.flightID = f1.flightID
WHERE f1.departspoint IN ('Dubai', 'Muscat');

```

flightID	departspoint
100	Muscat
101	Dubai
104	Muscat

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

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the database structure for 'Airline1'. A query window titled 'airline1.sql - DESKTOP-GILBFIO.Airline1 (DESKTOP-GILBFIO\neura (S2))' contains the following SQL code:

```

SELECT DISTINCT
    f.flightID,
    fl.departspoint
FROM flight f
JOIN flight_leg fl ON f.flightID = fl.flightID
WHERE fl.departspoint IN ('Dubai', 'Muscat');

SELECT *
FROM flight
WHERE airline LIKE 'AA%';

```

The results pane shows a single row of data:

flightID	airline	weekdays	restrictions
104	American Airlines	Daily	Via required

At the bottom, a message indicates 'Query executed successfully.'

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

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the database structure for 'Airline1'. A query window titled 'airline1.sql - DESKTOP-GILBFIO.Airline1 (DESKTOP-GILBFIO\neura (S2))' contains the following SQL code:

```

GROUP BY sr.customer_name, f.flightID
HAVING COUNT(sr.reservationID) > 2;

SELECT
    sr.customer_name,
    SUM(fa.amount) AS total_payment
FROM seat_reservation sr
JOIN leg_instance li ON sr.leg_instance_id = li.leg_instance_id
JOIN flight_leg fl ON li.legno = fl.legno
JOIN flight f ON fl.flightID = f.flightID
JOIN fare fa ON f.flightID = fa.flightID
GROUP BY sr.customer_name
HAVING SUM(fa.amount) BETWEEN 3000 AND 5000;

```

The results pane shows a single row of data:

customer_name	total_payment

At the bottom, a message indicates 'Query executed successfully.'

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

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar reads "airline1.sql - DESKTOP-GILBFIQ.Airline1 (DESKTOP-GILBFIQ\neuris (S2)) - Microsoft SQL Server Management Studio (Administrator)". The Object Explorer sidebar shows the database structure, including the "Airline" database with its tables, views, and other objects. The main Query Editor window contains the following T-SQL query:

```
SELECT sr.customer_name,
       COUNT(sr.reservationID) AS seats_booked,
       f.flightID
  FROM seat_reservation sr
  JOIN leg_instance li ON sr.leg_instance_id = li.leg_instance_id
  JOIN flight_leg fl ON li.legno = fl.legno
  JOIN flight f ON fl.flightID = f.flightID
 WHERE f.flightID = 100
 GROUP BY sr.customer_name, f.flightID
 HAVING COUNT(sr.reservationID) > 2;
```

The results pane shows the output of the query, which is empty (0 rows). The status bar at the bottom indicates "Query executed successfully".

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

This query cannot be implemented using the current database schema,

because there is no table or column containing agent information.

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

```

airline1.sqI - DESKTOP-GILBFIO.Airline1 (DESKTOP-GILBFIO\inoussa (52)) - Microsoft SQL Server Management Studio (Administrator)

SELECT sr.customer_name,
       f.flightID,
       li.flight_leg_date
  FROM seat_reservation sr
 JOIN leg_instance li ON sr.leg_instance_id = li.leg_instance_id
 JOIN flight_leg fl ON li.legno = fl.legno
 JOIN flight f ON fl.flightID = f.flightID
 GROUP BY sr.customer_name
 HAVING SUM(fa.amount) BETWEEN 3000 AND 5000;
 ORDER BY li.flight_leg_date;

```

customer_name	flightID	flight_leg_date
Afrah Ali	200	2023-01-10
Fatma Sadi	101	2023-01-11
Saleha Khan	102	2023-01-12
Alpha Noor	103	2023-01-13
John Smith	104	2023-01-14

Query executed successfully.

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

```

airline1.sqI - DESKTOP-GILBFIO.Airline1 (DESKTOP-GILBFIO\inoussa (52)) - Microsoft SQL Server Management Studio (Administrator)

SELECT f.flightID,
       fl.scheduled_dep_time,
       f.airline
  FROM flight f
 JOIN flight_leg fl ON f.flightID = fl.flightID
 WHERE fl.departspoint = 'Muscat';

```

flightID	scheduled_dep_time	airline
300	08:00:00.000000	Oran Air
104	16:00:00.000000	American Airlines

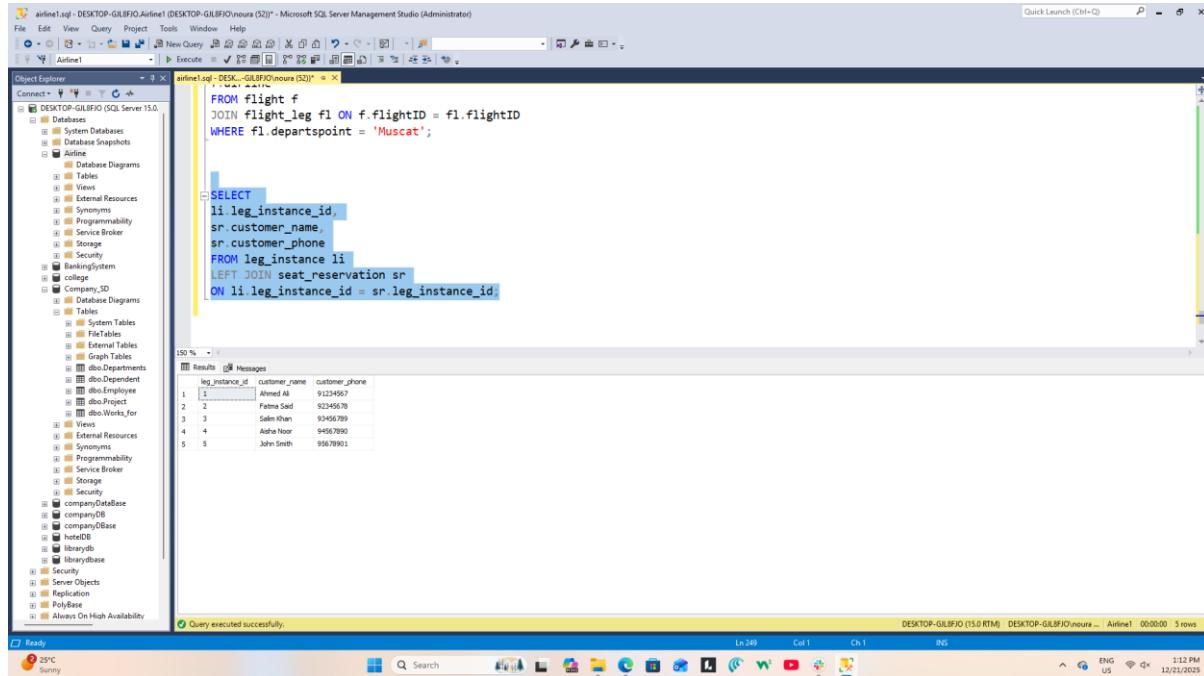
Query executed successfully.

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

This query cannot be implemented using the current database schema,

because there is no table or column containing staff or supervisor information.

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



The screenshot shows a Microsoft SQL Server Management Studio (SSMS) window. The Object Explorer on the left shows a database named 'Airline1' with various objects like Tables, Views, and Procedures. A query window titled 'airline1.mdf - DESKTOP-GILBFJO\mours (52)' is open, displaying the following SQL code:

```
FROM flight f
JOIN flight_leg fl ON f.flightID = fl.flightID
WHERE fl.departspoint = 'Muscat';

SELECT
    li.leg_instance_id,
    sr.customer_name,
    sr.customer_phone
FROM leg_instance li
LEFT JOIN seat_reservation sr
ON li.leg_instance_id = sr.leg_instance_id;
```

The results grid shows the following data:

	leg_instance_id	customer_name	customer_phone
1	1	Ahmed Ali	91234567
2	2	Eman Sadiq	92345678
3	3	Saleem Khan	93456789
4	4	Raha Noor	94567890
5	5	Sohn Smith	95678901

At the bottom of the SSMS window, a status bar indicates 'Query executed successfully.' and shows system information like 'DESKTOP-GILBFJO (15.0 RTM) | DESKTOP-GILBFJO\mours ... | Airline1 | 00:00:00 | 5 rows'.