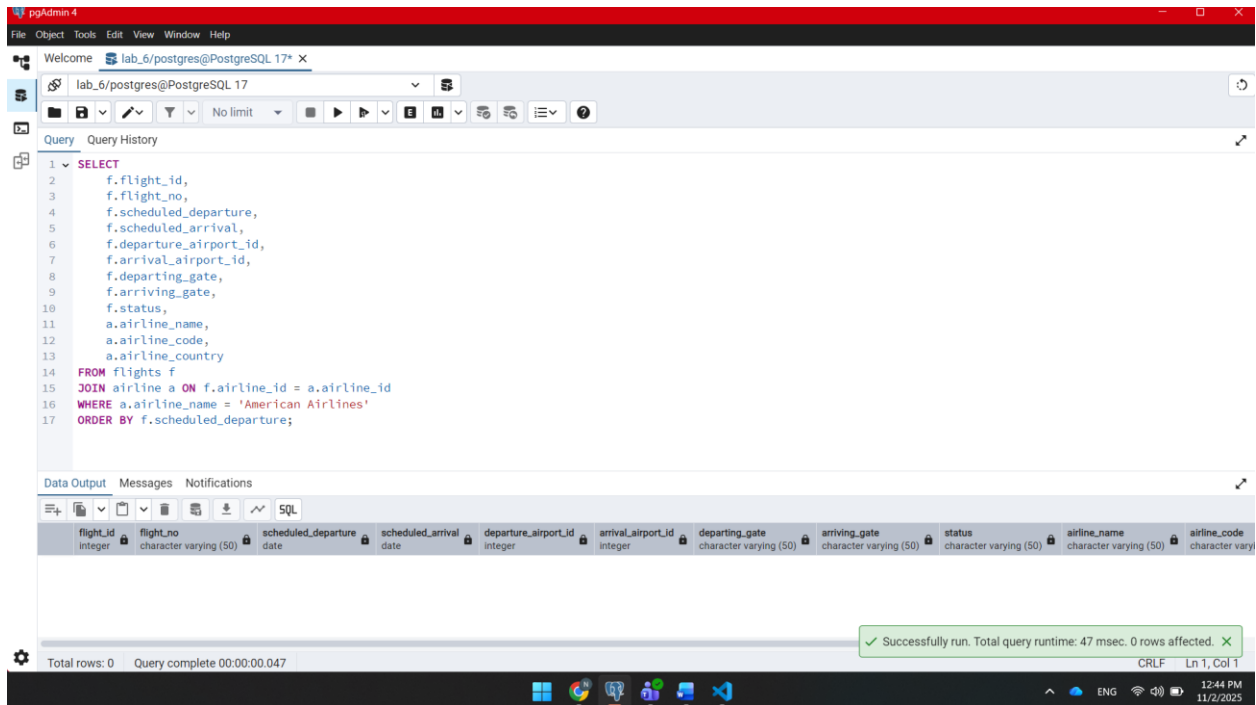


# Lab-6



1

**SELECT**

**f.flight\_id,**  
**f.flight\_no,**  
**f.scheduled\_departure,**  
**f.scheduled\_arrival,**  
**f.departure\_airport\_id,**  
**f.arrival\_airport\_id,**  
**f.departing\_gate,**  
**f.arriving\_gate,**  
**f.status,**

**a.airline\_name,**  
**a.airline\_code,**  
**a.airline\_country**

**FROM flights f**

**JOIN airline a ON f.airline\_id = a.airline\_id**

**WHERE a.airline\_name = 'American Airlines'**

**ORDER BY f.scheduled\_departure;**

The screenshot shows the pgAdmin 4 interface. The query editor contains the following SQL code:

```
1 SELECT
2     f.flight_id,
3     f.flight_no,
4     f.scheduled_departure,
5     f.scheduled_arrival,
6     a.airport_name AS departure_airport_name,
7     a.city AS departure_city,
8     a.country AS departure_country
9 FROM flights f
10 JOIN airline a
11     ON f.departure_airport_id = a.airport_id;
12
```

The Data Output tab shows the results of the query. The table has 7 columns: flight\_id, flight\_no, scheduled\_departure, scheduled\_arrival, departure\_airport\_name, departure\_city, and departure\_country. The results are as follows:

flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_name	departure_city	departure_country
1	US-CT	2024-01-22	2023-09-08	Elorza Airport	Shuiting	China
2	US-NM	2023-07-21	2023-09-17	Figari Sud-Corse Airport	Itapetinga	Brazil
3	FI-OL	2023-03-29	2023-08-01	Darchula Airport	Hilotongan	Philippines
4	RU-KR	2024-01-02	2023-03-18	Lime Acres Finsch Mine Airport	Tielu	China
5	RO-DJ	2023-07-03	2023-11-28	Hana Airport	Wilminston	United States

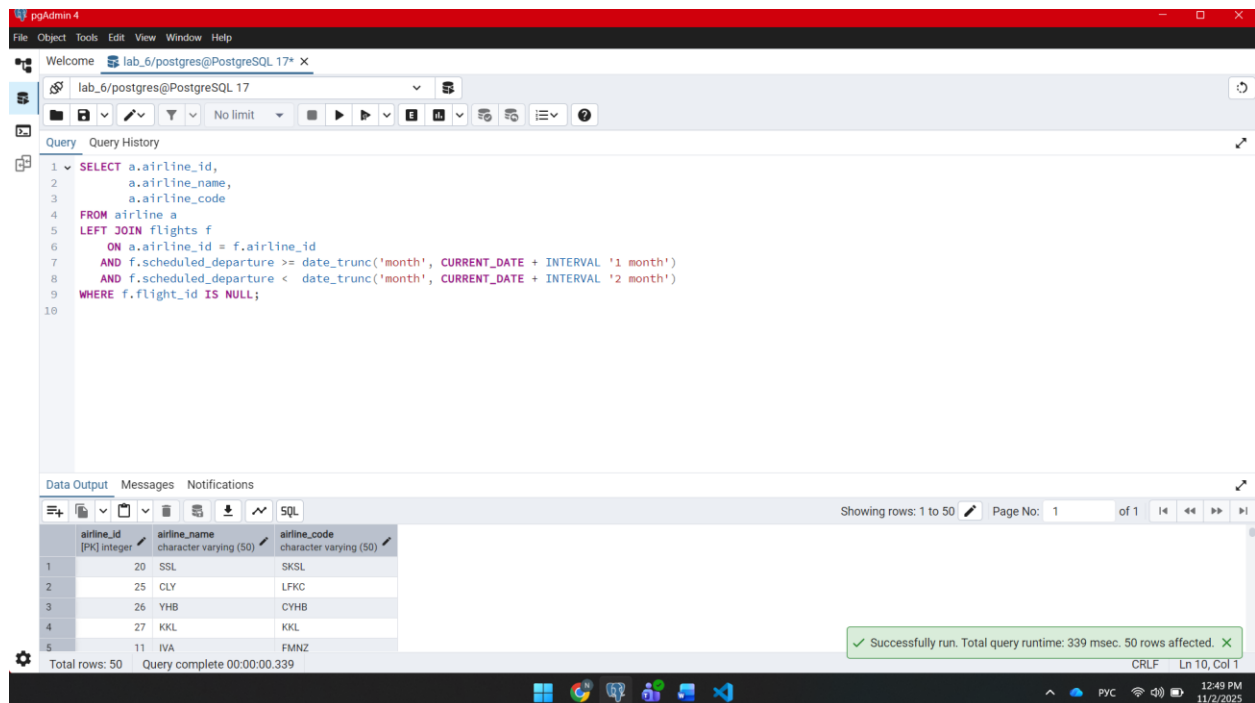
A green message box at the bottom right states: "Successfully run. Total query runtime: 509 msec. 1000 rows affected." The status bar at the bottom indicates "Total rows: 1000" and "Query complete 00:00:00.509".

**2**

**SELECT**

**f.flight\_id,**  
**f.flight\_no,**  
**f.scheduled\_departure,**  
**f.scheduled\_arrival,**  
**a.airport\_name AS departure\_airport\_name,**

```
a.city AS departure_city,  
a.country AS departure_country  
FROM flights f  
JOIN airport a  
ON f.departure_airport_id = a.airport_id;
```



The screenshot shows the pgAdmin 4 web interface. The top menu bar includes File, Object, Tools, Edit, View, Window, and Help. The main window displays a SQL query in the 'Query' tab, which is a LEFT JOIN between the 'airline' table (a) and the 'flights' table (f). The query filters for flights scheduled between the current month and two months ahead, excluding null flight IDs. Below the query editor, the 'Data Output' tab shows the results of the query. The results are displayed in a table with three columns: 'airline\_id' (integer), 'airline\_name' (character varying), and 'airline\_code' (character varying). The table contains five rows of data. A status bar at the bottom indicates that the query was successfully run, affecting 50 rows in 339 milliseconds.

```
1 SELECT a.airline_id,  
2         a.airline_name,  
3         a.airline_code  
4 FROM airline a  
5 LEFT JOIN flights f  
6     ON a.airline_id = f.airline_id  
7     AND f.scheduled_departure >= date_trunc('month', CURRENT_DATE + INTERVAL '1 month')  
8     AND f.scheduled_departure < date_trunc('month', CURRENT_DATE + INTERVAL '2 month')  
9 WHERE f.flight_id IS NULL;  
10
```

airline_id [PK] integer	airline_name character varying (50)	airline_code character varying (50)
20	SSL	SKSL
25	CLY	LFKC
26	YHB	CYHB
27	KKL	KKL
11	IVA	FMNZ

Showing rows: 1 to 50 | Page No: 1 of 1  
Total rows: 50 | Query complete 00:00:00.339  
Successfully run. Total query runtime: 339 msec. 50 rows affected.

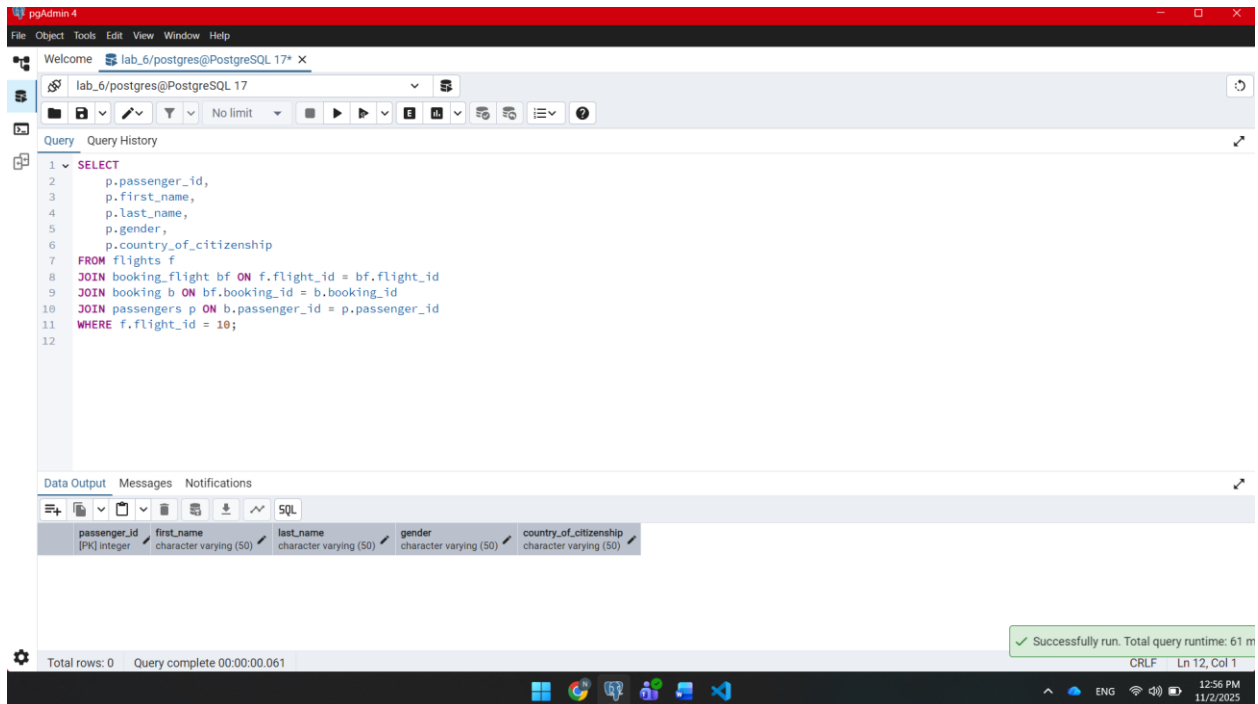
3

```
SELECT a.airline_id,  
       a.airline_name,  
       a.airline_code  
FROM airline a  
LEFT JOIN flights f  
ON a.airline_id = f.airline_id
```

**AND f.scheduled\_departure >= date\_trunc('month', CURRENT\_DATE  
+ INTERVAL '1 month')**

**AND f.scheduled\_departure < date\_trunc('month', CURRENT\_DATE  
+ INTERVAL '2 month')**

**WHERE f.flight\_id IS NULL;**



**4**

**SELECT**

**p.passenger\_id,**

**p.first\_name,**

**p.last\_name,**

**p.gender,**

**p.country\_of\_citizenship**

**FROM flights f**

**JOIN booking\_flight bf ON f.flight\_id = bf.flight\_id**

**JOIN booking b ON bf.booking\_id = b.booking\_id**

**JOIN passengers p ON b.passenger\_id = p.passenger\_id**  
**WHERE f.flight\_id = 10;**

The screenshot shows the pgAdmin 4 interface. The query editor contains the following SQL code:

```
1 SELECT
2     f.flight_id,
3     f.flight_no,
4     AVG(b.price) AS average_price,
5     SUM(b.price) AS total_price,
6     MAX(b.price) AS max_price,
7     MIN(b.price) AS min_price
8 FROM flights f
9 JOIN booking_flight bf ON f.flight_id = bf.flight_id
10 JOIN booking b ON bf.booking_id = b.booking_id
11 GROUP BY f.flight_id, f.flight_no;
```

The Data Output tab shows the results of the query. The table has 5 columns: flight\_id [PK] integer, flight\_no character varying (50), average\_price numeric, total\_price numeric, max\_price numeric, and min\_price numeric. The results are as follows:

flight_id	flight_no	average_price	total_price	max_price	min_price
273	AU-WA	8929.2000000000000000	8929.20	8929.20	8929.20
951	PG-MPL	3034.5400000000000000	6069.08	5888.12	180.96
70	MY-12	683.2700000000000000	683.27	683.27	683.27
350	CN-41	5936.7680000000000000	29683.84	9792.28	2520.04
539	FR-F	5874.0900000000000000	17622.27	7927.75	3116.63

At the bottom, a green message box states: "Successfully run. Total query runtime: 165 msec. 614 rows affected." The status bar at the bottom indicates "Total rows: 614 Query complete 00:00:00.165".

**5**

**SELECT**

**f.flight\_id,**

**f.flight\_no,**

**AVG(b.price) AS average\_price,**

**SUM(b.price) AS total\_price,**

**MAX(b.price) AS max\_price,**

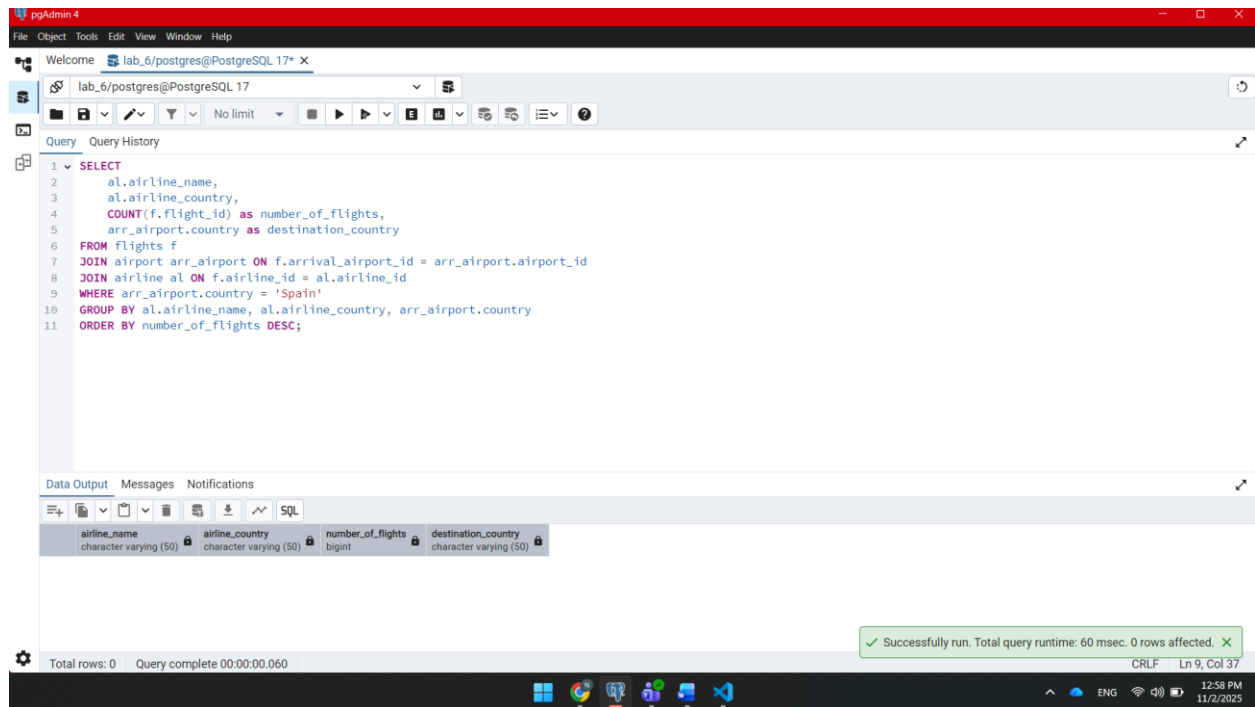
**MIN(b.price) AS min\_price**

**FROM flights f**

**JOIN booking\_flight bf ON f.flight\_id = bf.flight\_id**

**JOIN booking b ON bf.booking\_id = b.booking\_id**

**GROUP BY f.flight\_id, f.flight\_no;**



6

**SELECT**

**al.airline\_name,**

**al.airline\_country,**

**COUNT(f.flight\_id) as number\_of\_flights,**

**arr\_airport.country as destination\_country**

**FROM flights f**

**JOIN airport arr\_airport ON f.arrival\_airport\_id = arr\_airport.airport\_id**

**JOIN airline al ON f.airline\_id = al.airline\_id**

**WHERE arr\_airport.country = 'Spain'**

**GROUP BY al.airline\_name, al.airline\_country, arr\_airport.country**

**ORDER BY number\_of\_flights DESC;**

The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query selects passenger details and flight information for passengers under 18 years old. The results table shows 5 rows of data.

```
1 SELECT
2   p.passenger_id,
3   p.first_name,
4   p.last_name,
5   p.date_of_birth,
6   a.airport_name AS arrival_airport,
7   a.city AS arrival_city,
8   a.country AS arrival_country
9 FROM passengers p
10 JOIN booking b
11   ON p.passenger_id = b.passenger_id
12 JOIN booking_flight bf
13   ON b.booking_id = bf.booking_id
14 JOIN flights f
15   ON bf.flight_id = f.flight_id
16 JOIN airport a
17   ON f.arrival_airport_id = a.airport_id
18 WHERE AGE(CURRENT_DATE, p.date_of_birth) < INTERVAL '18 years';
19
```

passenger_id	first_name	last_name	date_of_birth	arrival_airport	arrival_city	arrival_country
159	Vivyan	Mallabone	2009-11-01	Alert Bay Airport	Dubrava	Croatia
70	Lester	Blades	2008-07-04	Armidale Airport	Sirari	Tanzania
70	Lester	Blades	2008-07-04	Figari Sud-Corse Airport	Itapetinga	Brazil
41	Cleve	Edgeler	2009-04-20	Industrial Airpark	Gulhulligan	Philippines
80	Bradlev	Grolle	2008-01-02	Armidale Airoort	Sirari	Tanzania

Successfully run. Total query runtime: 64 msec. 37 rows affected.

7

**SELECT**

**p.passenger\_id,**  
**p.first\_name,**  
**p.last\_name,**  
**p.date\_of\_birth,**  
**a.airport\_name AS arrival\_airport,**  
**a.city AS arrival\_city,**  
**a.country AS arrival\_country**

**FROM passengers p**

**JOIN booking b**

**ON p.passenger\_id = b.passenger\_id**

**JOIN booking\_flight bf**

**ON b.booking\_id = bf.booking\_id**

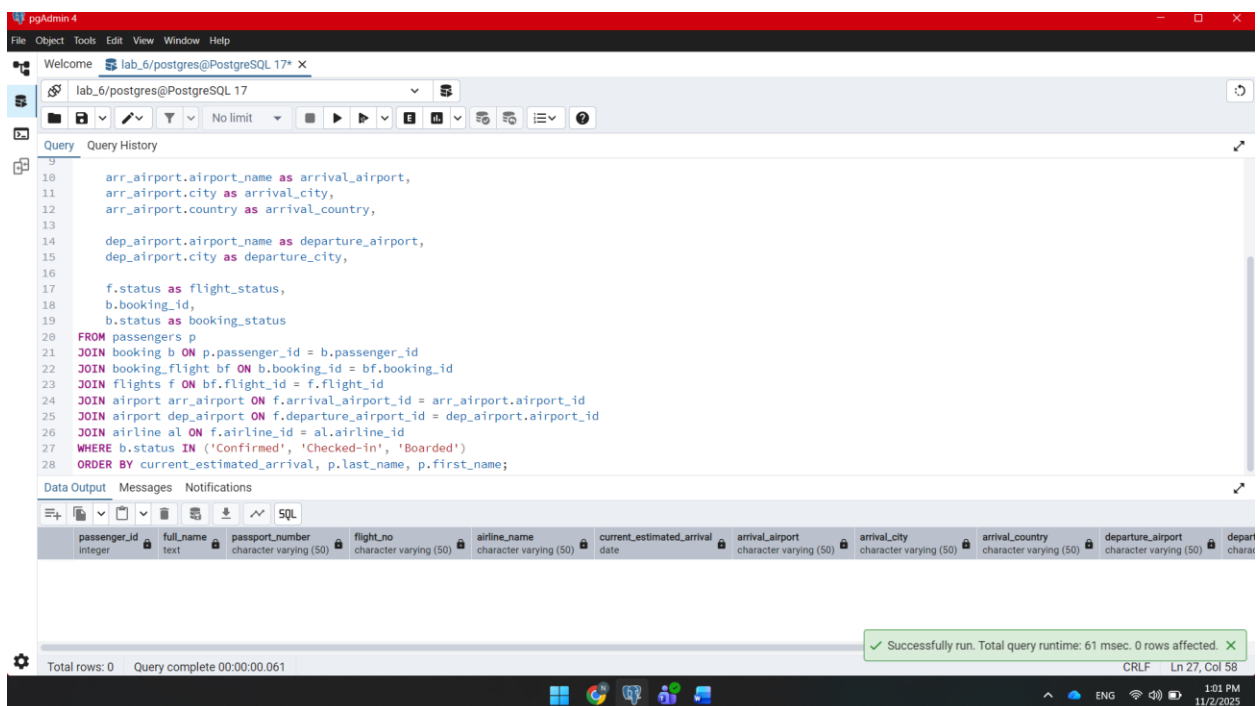
**JOIN flights f**

**ON bf.flight\_id = f.flight\_id**

**JOIN airport a**

**ON f.arrival\_airport\_id = a.airport\_id**

**WHERE AGE(CURRENT\_DATE, p.date\_of\_birth) < INTERVAL '18 years';**



**8**

**SELECT**

**p.passenger\_id,**

**CONCAT(p.first\_name, ' ', p.last\_name) as full\_name,**

**p.passport\_number,**

**f.flight\_no,**

**al.airline\_name,**



**COALESCE(f.actual\_arrival, f.scheduled\_arrival) as  
current\_estimated\_arrival,**

**arr\_airport.airport\_name as arrival\_airport,**

**arr\_airport.city as arrival\_city,**

**arr\_airport.country as arrival\_country,**

**dep\_airport.airport\_name as departure\_airport,**

**dep\_airport.city as departure\_city,**

**f.status as flight\_status,**

**b.booking\_id,**

**b.status as booking\_status**

**FROM passengers p**

**JOIN booking b ON p.passenger\_id = b.passenger\_id**

**JOIN booking\_flight bf ON b.booking\_id = bf.booking\_id**

**JOIN flights f ON bf.flight\_id = f.flight\_id**

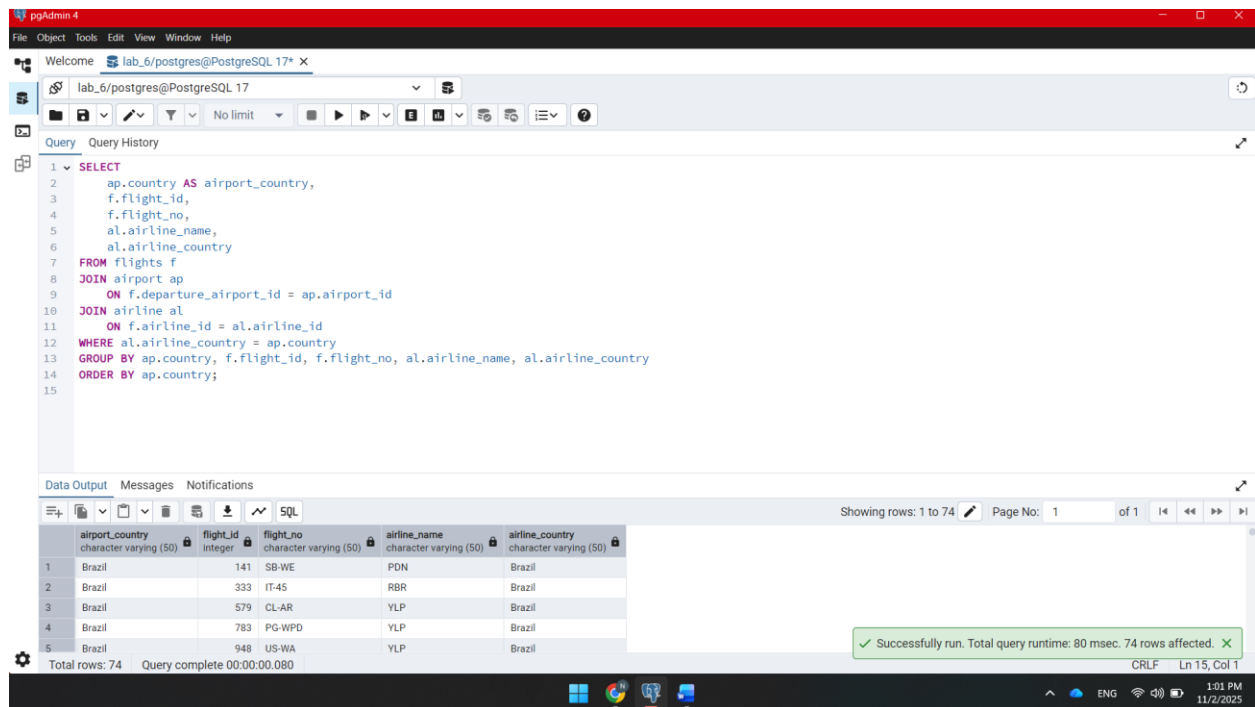
**JOIN airport arr\_airport ON f.arrival\_airport\_id = arr\_airport.airport\_id**

**JOIN airport dep\_airport ON f.departure\_airport\_id =  
dep\_airport.airport\_id**

**JOIN airline al ON f.airline\_id = al.airline\_id**

**WHERE b.status IN ('Confirmed', 'Checked-in', 'Boarded')**

**ORDER BY current\_estimated\_arrival, p.last\_name, p.first\_name;**



9

**SELECT**

**ap.country AS airport\_country,**

**f.flight\_id,**

**f.flight\_no,**

**al.airline\_name,**

**al.airline\_country**

**FROM flights f**

**JOIN airport ap**

**ON f.departure\_airport\_id = ap.airport\_id**

**JOIN airline al**

**ON f.airline\_id = al.airline\_id**

**WHERE al.airline\_country = ap.country**

**GROUP BY ap.country, f.flight\_id, f.flight\_no, al.airline\_name,  
al.airline\_country**

**ORDER BY ap.country;**