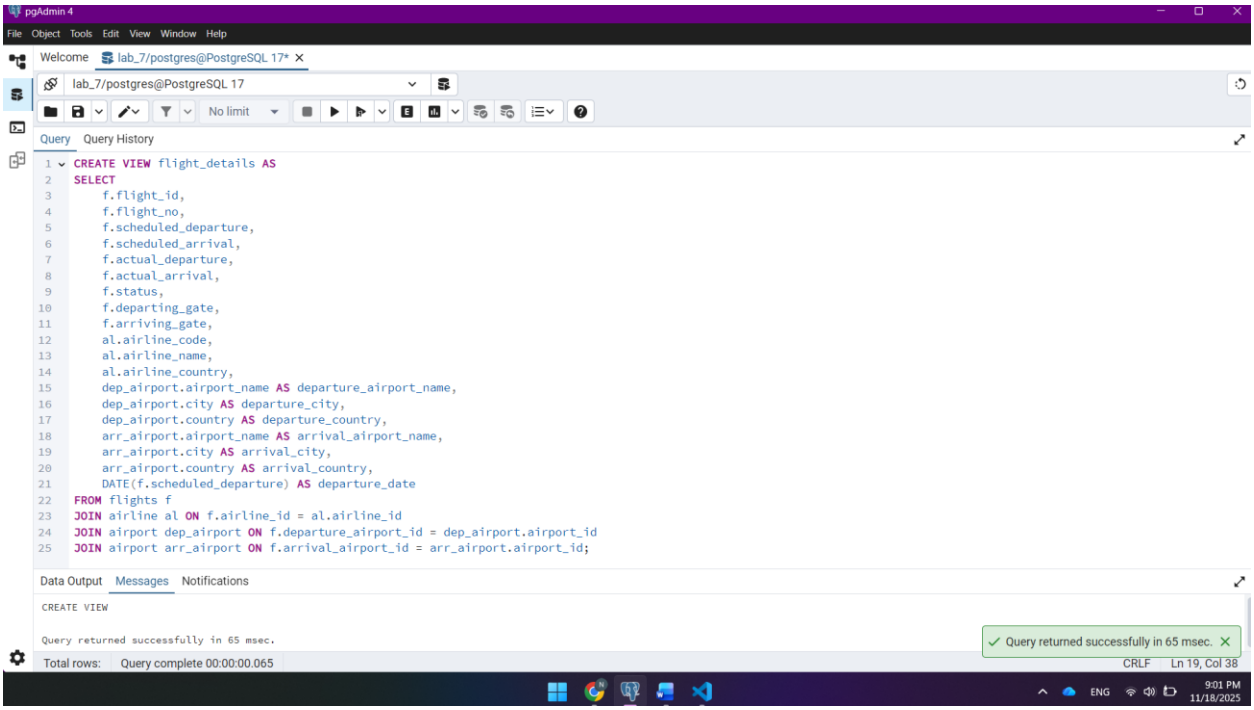
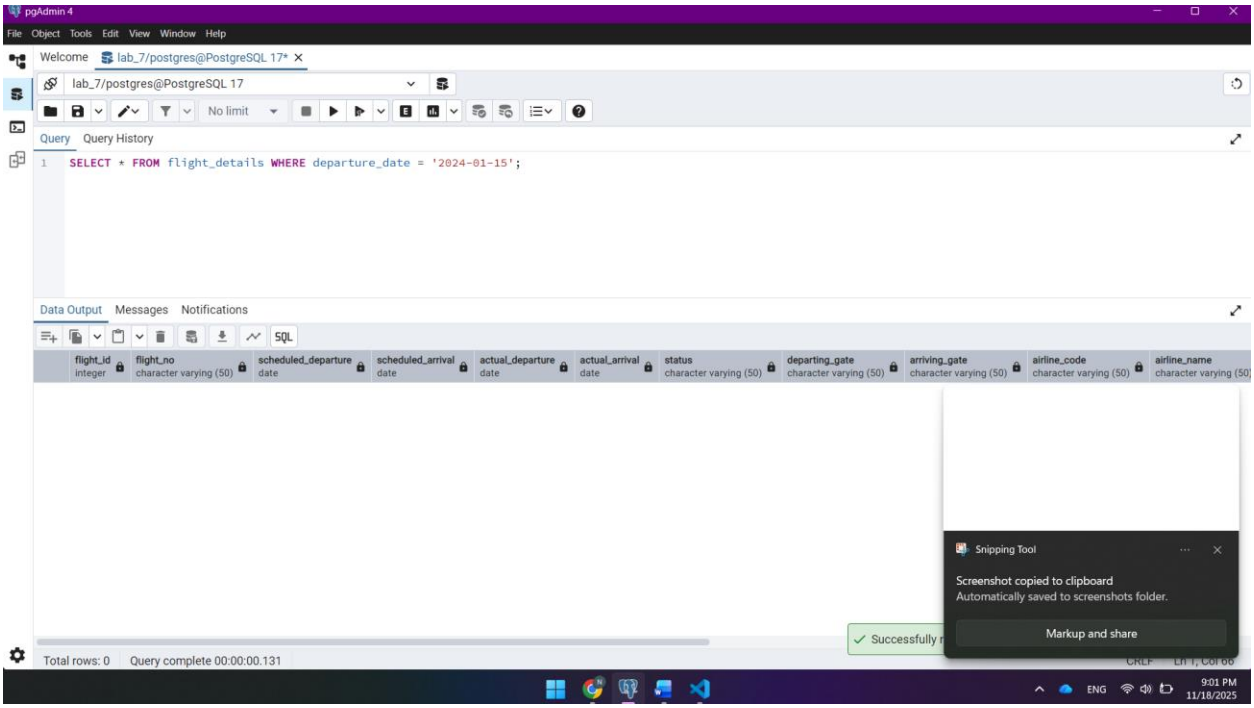
# Lab-8

## 1



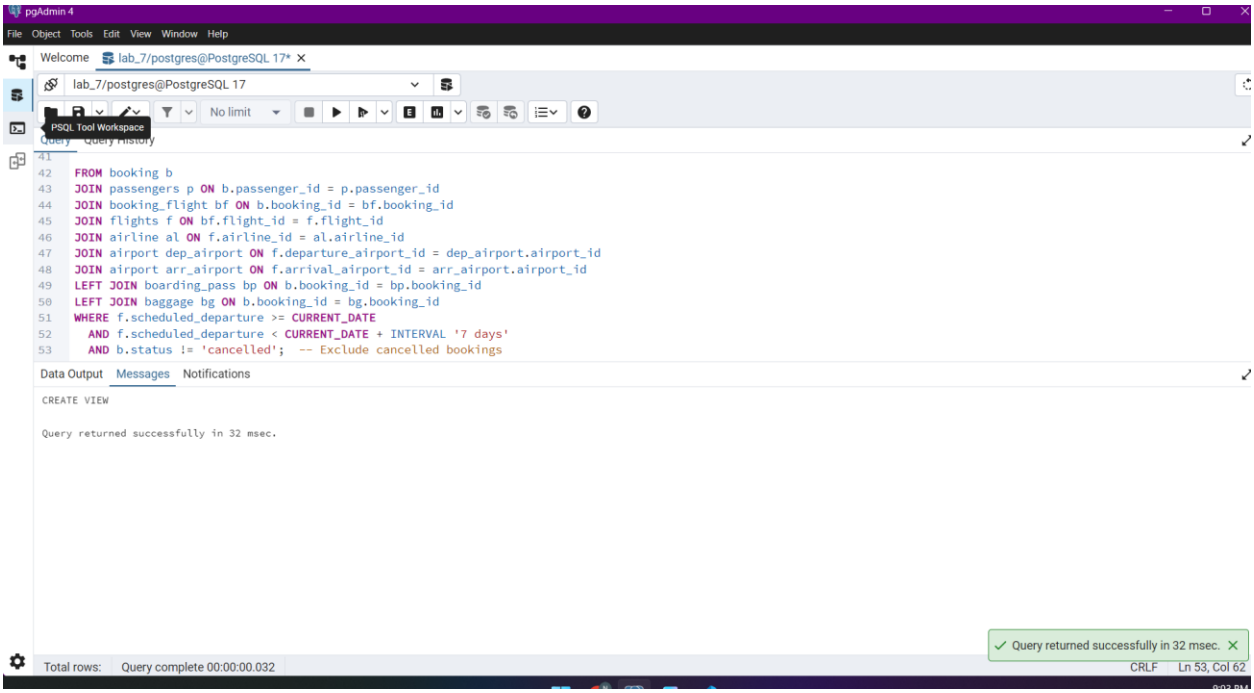



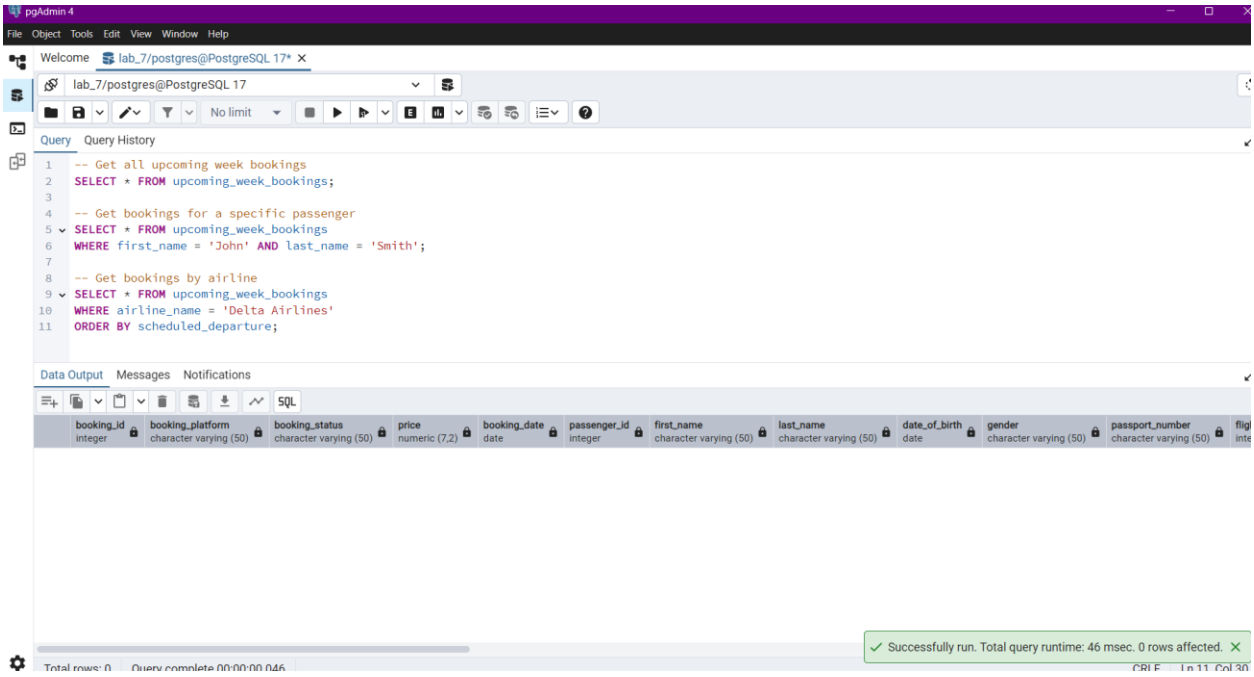

# CREATE VIEW flight_details AS

```
SELECT
    f.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.scheduled_arrival,
    f.actual_departure,
    f.actual_arrival,
    f.status,
    f.departing_gate,
    f.arriving_gate,
    al.airline_code,
    al.airline_name,
    al.airline_country,
    dep_airport.airport_name AS
departure_airport_name,
    dep_airport.city AS departure_city,
    dep_airport.country AS departure_country,
    arr_airport.airport_name AS
arrival_airport_name,
```

```
    arr_airport.city AS arrival_city,
    arr_airport.country AS arrival_country,
    DATE(f.scheduled_departure) AS
departure_date
FROM flights f
JOIN airline al ON f.airline_id = al.airline_id
JOIN airport dep_airport ON
f.departure_airport_id = dep_airport.airport_id
JOIN airport arr_airport ON f.arrival_airport_id =
arr_airport.airport_id;


SELECT * FROM flight_details WHERE
departure_date = '2024-01-15';
```

2




```
CREATE VIEW upcoming_week_bookings AS
SELECT
    b.booking_id,
    b.booking_platform,
```

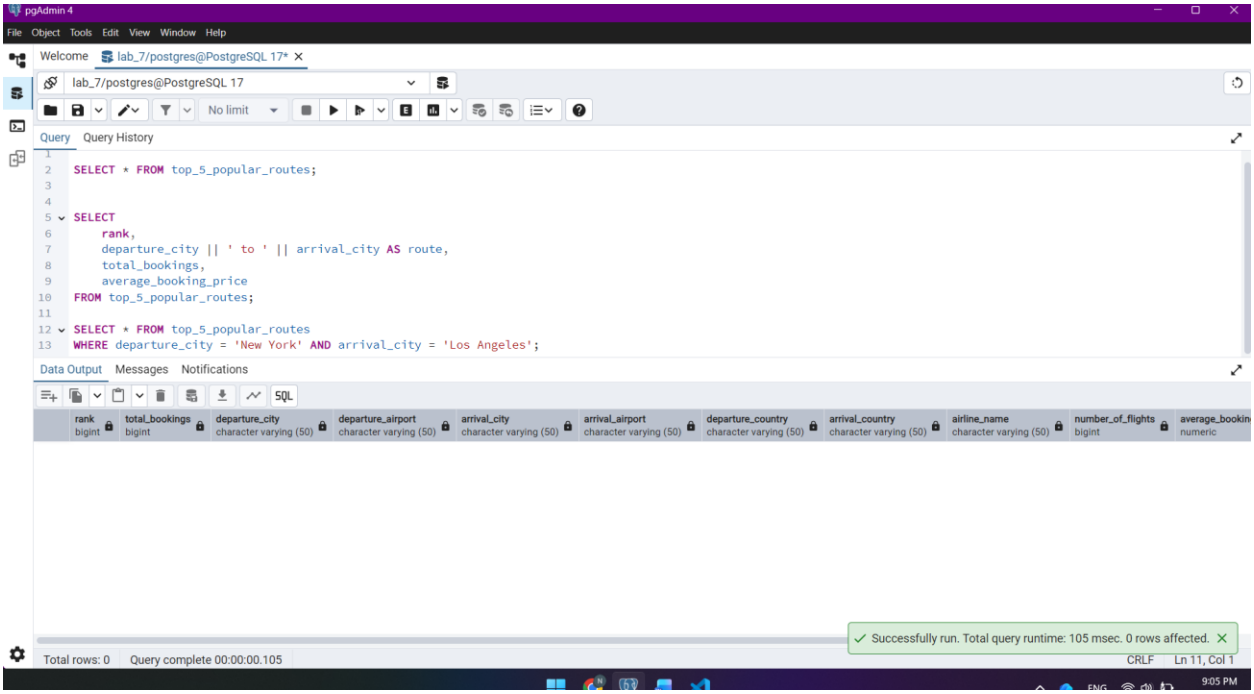
```
b.status AS booking_status,
b.price,
b.created_at AS booking_date,

p.passenger_id,
p.first_name,
p.last_name,
p.date_of_birth,
p.gender,
p.passport_number,

f.flight_id,
f.flight_no,
f.scheduled_departure,
f.scheduled_arrival,
f.actual_departure,
f.actual_arrival,
f.status AS flight_status,
f.departing_gate,
```

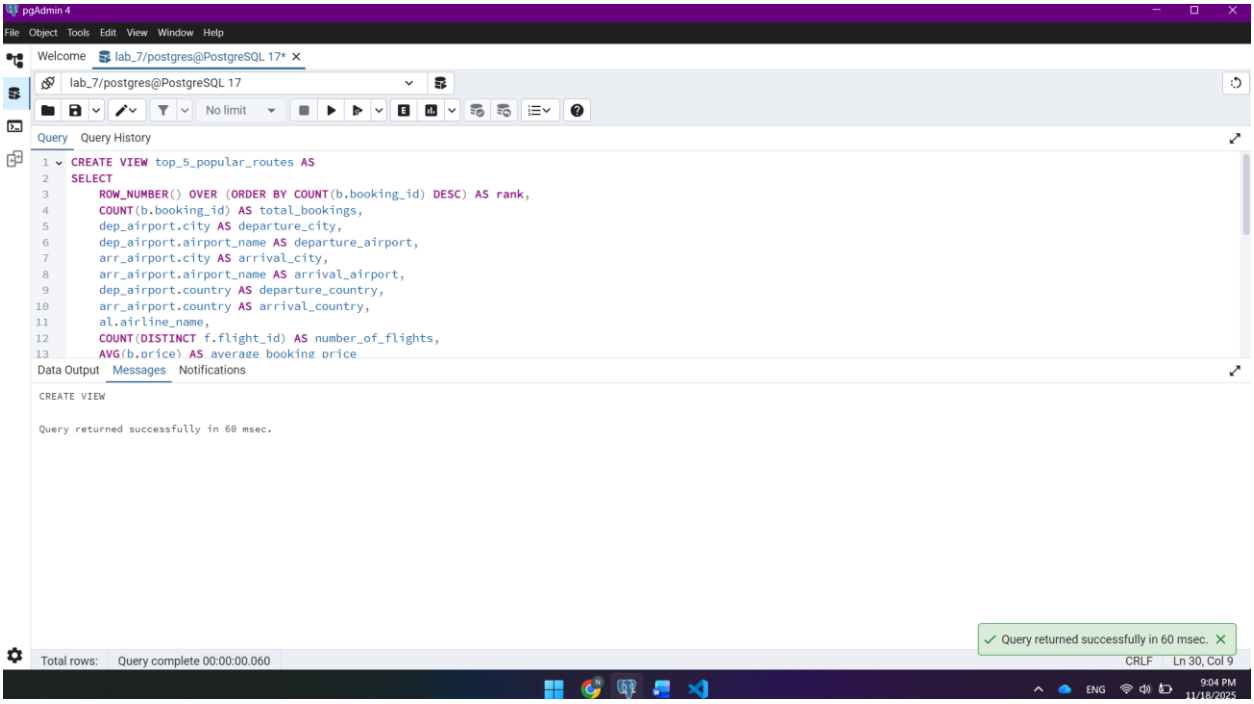
```
    f.arriving_gate,

    al.airline_code,
    al.airline_name,

    dep_airport.airport_name AS
departure_airport_name,
    dep_airport.city AS departure_city,
    dep_airport.country AS departure_country,

    arr_airport.airport_name AS
arrival_airport_name,
    arr_airport.city AS arrival_city,
    arr_airport.country AS arrival_country,

    bp.seat,
    bp.boarding_time,

    bg.weight_in_kg AS baggage_weight
```

```
FROM booking b
JOIN passengers p ON b.passenger_id = p.passenger_id
JOIN booking_flight bf ON b.booking_id = bf.booking_id
JOIN flights f ON bf.flight_id = f.flight_id
JOIN airline al ON f.airline_id = al.airline_id
JOIN airport dep_airport ON f.departure_airport_id = dep_airport.airport_id
JOIN airport arr_airport ON f.arrival_airport_id = arr_airport.airport_id
LEFT JOIN boarding_pass bp ON b.booking_id = bp.booking_id
LEFT JOIN baggage bg ON b.booking_id = bg.booking_id
WHERE f.scheduled_departure >= CURRENT_DATE
  AND f.scheduled_departure < CURRENT_DATE + INTERVAL '7 days'
```

```
  AND b.status != 'cancelled';  -- Exclude cancelled bookings



SELECT * FROM upcoming_week_bookings;


SELECT * FROM upcoming_week_bookings
WHERE first_name = 'John' AND last_name = 'Smith';


SELECT * FROM upcoming_week_bookings
WHERE airline_name = 'Delta Airlines'
ORDER BY scheduled_departure;
```

# 3



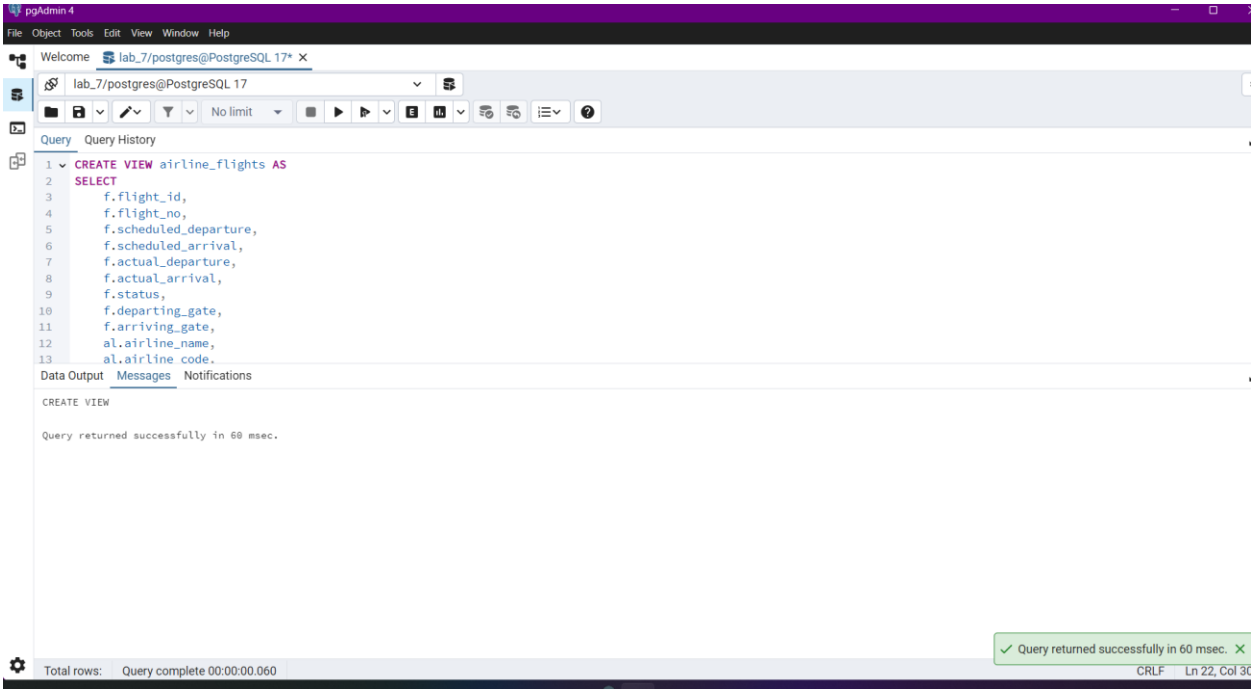




```
CREATE VIEW top_5_popular_routes AS
SELECT
```

```
    ROW_NUMBER() OVER (ORDER BY
COUNT(b.booking_id) DESC) AS rank,
    COUNT(b.booking_id) AS total_bookings,
    dep_airport.city AS departure_city,
    dep_airport.airport_name AS
departure_airport,
    arr_airport.city AS arrival_city,
    arr_airport.airport_name AS arrival_airport,
    dep_airport.country AS departure_country,
    arr_airport.country AS arrival_country,
    al.airline_name,
    COUNT(DISTINCT f.flight_id) AS
number_of_flights,
    AVG(b.price) AS average_booking_price
FROM booking b
JOIN booking_flight bf ON b.booking_id =
bf.booking_id
JOIN flights f ON bf.flight_id = f.flight_id
JOIN airline al ON f.airline_id = al.airline_id
```

```
JOIN airport dep_airport ON
f.departure_airport_id = dep_airport.airport_id

JOIN airport arr_airport ON f.arrival_airport_id =
arr_airport.airport_id

WHERE b.status != 'cancelled'  -- Exclude
cancelled bookings

GROUP BY

    dep_airport.city,

    dep_airport.airport_name,

    arr_airport.city,

    arr_airport.airport_name,

    dep_airport.country,

    arr_airport.country,

    al.airline_name

ORDER BY total_bookings DESC

LIMIT 5;



SELECT * FROM top_5_popular_routes;
```

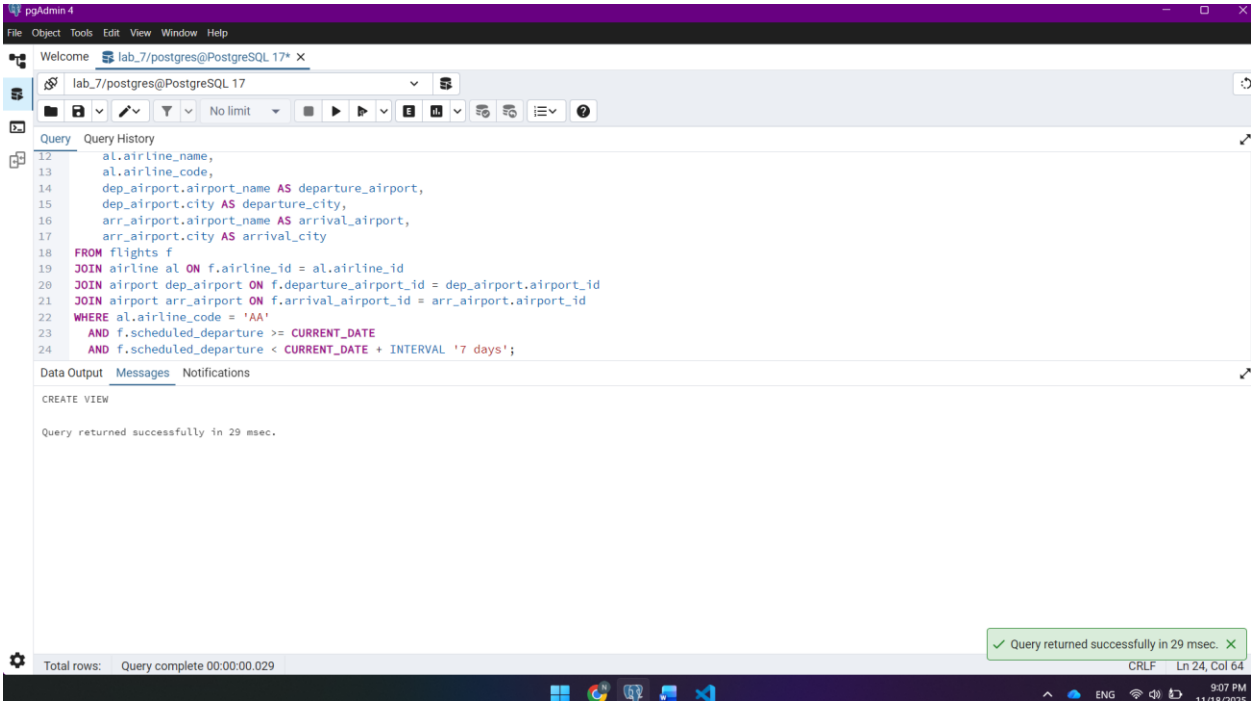
```
SELECT
    rank,
    departure_city || ' to ' || arrival_city AS route,
    total_bookings,
    average_booking_price
FROM top_5_popular_routes;

SELECT * FROM top_5_popular_routes
WHERE departure_city = 'New York' AND
arrival_city = 'Los Angeles';
4
```




```
CREATE VIEW airline_flights AS
SELECT
    f.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.scheduled_arrival,
    f.actual_departure,
    f.actual_arrival,
    f.status,
    f.departing_gate,
    f.arriving_gate,
```

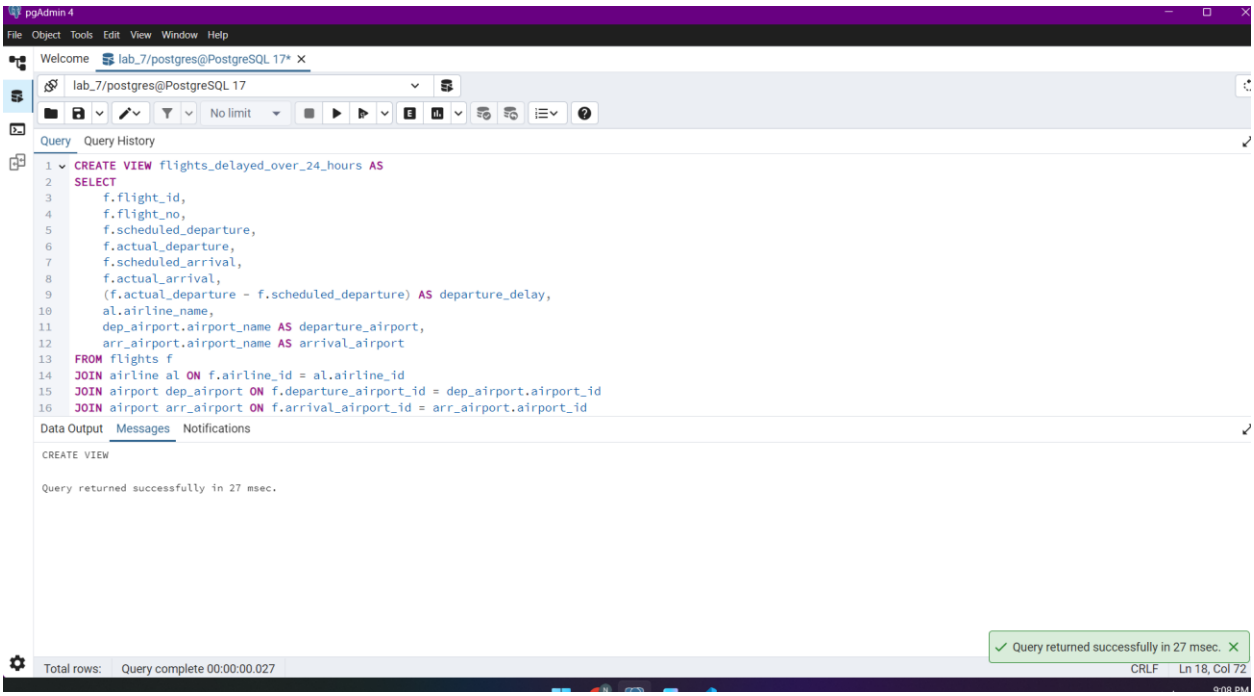
```
    al.airline_name,
    al.airline_code,
    dep_airport.airport_name AS
departure_airport,
    dep_airport.city AS departure_city,
    arr_airport.airport_name AS arrival_airport,
    arr_airport.city AS arrival_city
FROM flights f
JOIN airline al ON f.airline_id = al.airline_id
JOIN airport dep_airport ON
f.departure_airport_id = dep_airport.airport_id
JOIN airport arr_airport ON f.arrival_airport_id =
arr_airport.airport_id
WHERE al.airline_code = 'AA';
```

5




```
CREATE OR REPLACE VIEW airline_flights AS
SELECT
    f.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.scheduled_arrival,
    f.actual_departure,
    f.actual_arrival,
    f.status,
    f.departing_gate,
    f.arriving_gate,
```

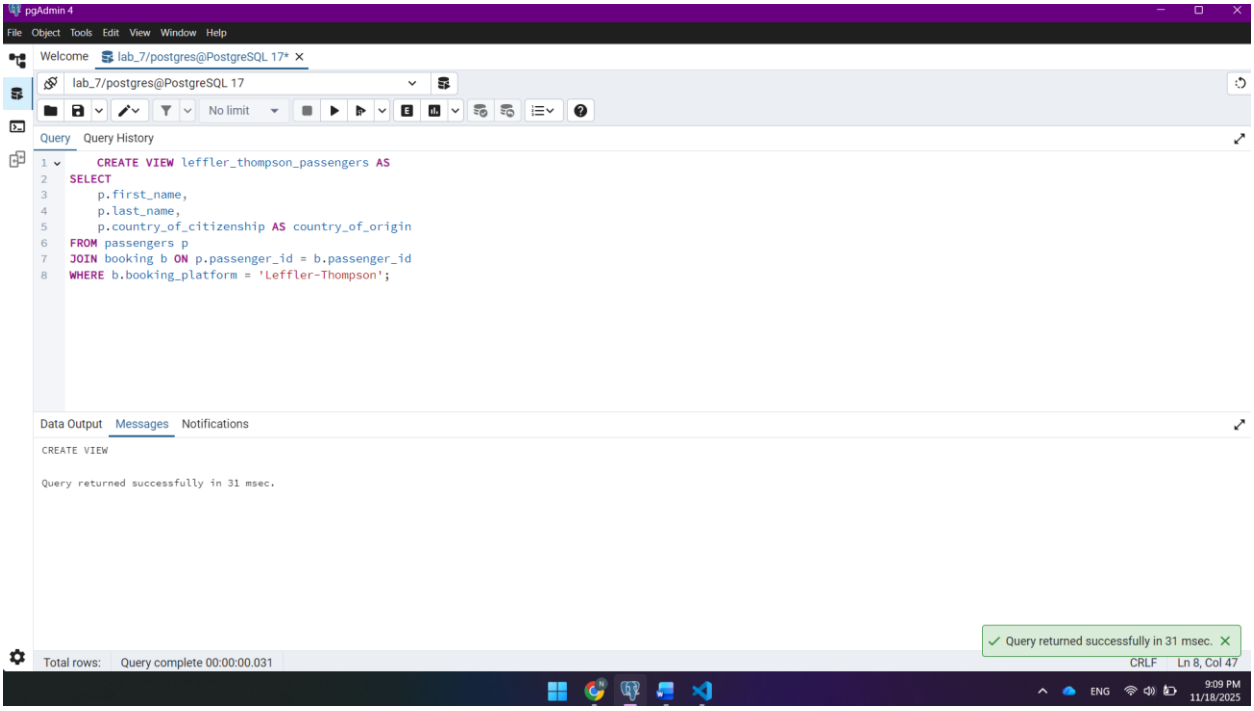
```
    al.airline_name,
    al.airline_code,
    dep_airport.airport_name AS
departure_airport,
    dep_airport.city AS departure_city,
    arr_airport.airport_name AS arrival_airport,
    arr_airport.city AS arrival_city
FROM flights f
JOIN airline al ON f.airline_id = al.airline_id
JOIN airport dep_airport ON
f.departure_airport_id = dep_airport.airport_id
JOIN airport arr_airport ON f.arrival_airport_id =
arr_airport.airport_id
WHERE al.airline_code = 'AA'
  AND f.scheduled_departure >=
CURRENT_DATE
  AND f.scheduled_departure < CURRENT_DATE
+ INTERVAL '7 days';
```




```
CREATE VIEW flights_delayed_over_24_hours
AS
SELECT
    f.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.actual_departure,
    f.scheduled_arrival,
    f.actual_arrival,
    (f.actual_departure - f.scheduled_departure)
AS departure_delay,
```

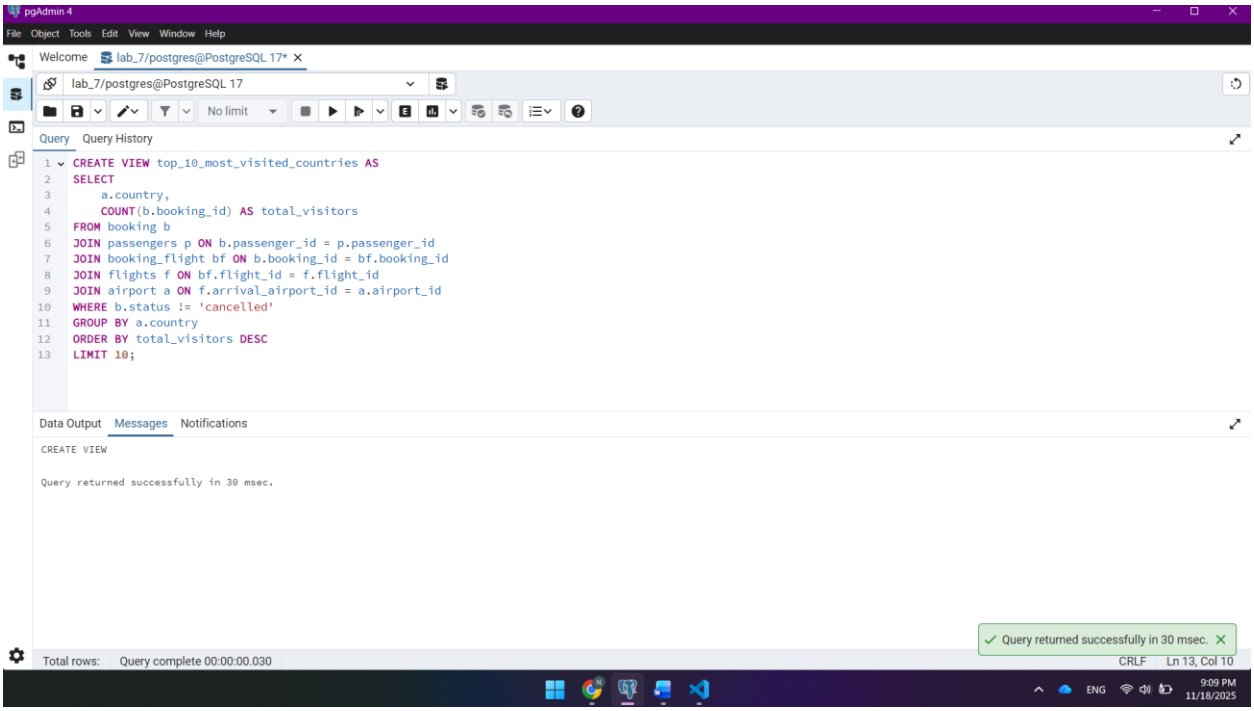
```
    al.airline_name,
    dep_airport.airport_name AS
departure_airport,
    arr_airport.airport_name AS arrival_airport
FROM flights f
JOIN airline al ON f.airline_id = al.airline_id
JOIN airport dep_airport ON
f.departure_airport_id = dep_airport.airport_id
JOIN airport arr_airport ON f.arrival_airport_id =
arr_airport.airport_id
WHERE f.actual_departure IS NOT NULL
  AND f.actual_departure >
f.scheduled_departure + INTERVAL '24 hours';
```

7




```
CREATE VIEW leffler_thompson_passengers AS
SELECT
    p.first_name,
    p.last_name,
    p.country_of_citizenship AS country_of_origin
FROM passengers p
JOIN booking b ON p.passenger_id = b.passenger_id
WHERE b.booking_platform = 'Leffler-Thompson';
```

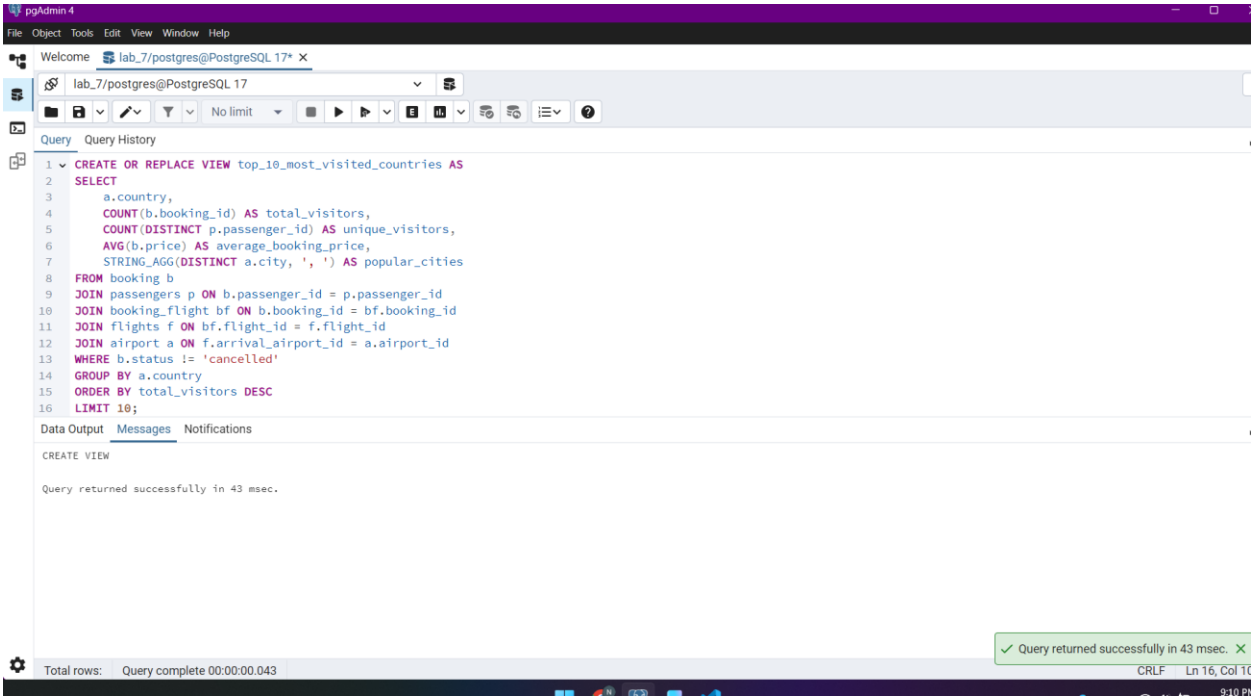
# 8




```
CREATE VIEW top_10_most_visited_countries AS
SELECT
    a.country,
    COUNT(b.booking_id) AS total_visitors
FROM booking b
JOIN passengers p ON b.passenger_id = p.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 b.status != 'cancelled'
GROUP BY a.country
ORDER BY total_visitors DESC
LIMIT 10;
```

9




**CREATE OR REPLACE VIEW top_10_most_visited_countries AS**

**SELECT**

**a.country,**

**COUNT(b.booking_id) AS total_visitors,**

**COUNT(DISTINCT p.passenger_id) AS unique_visitors,**

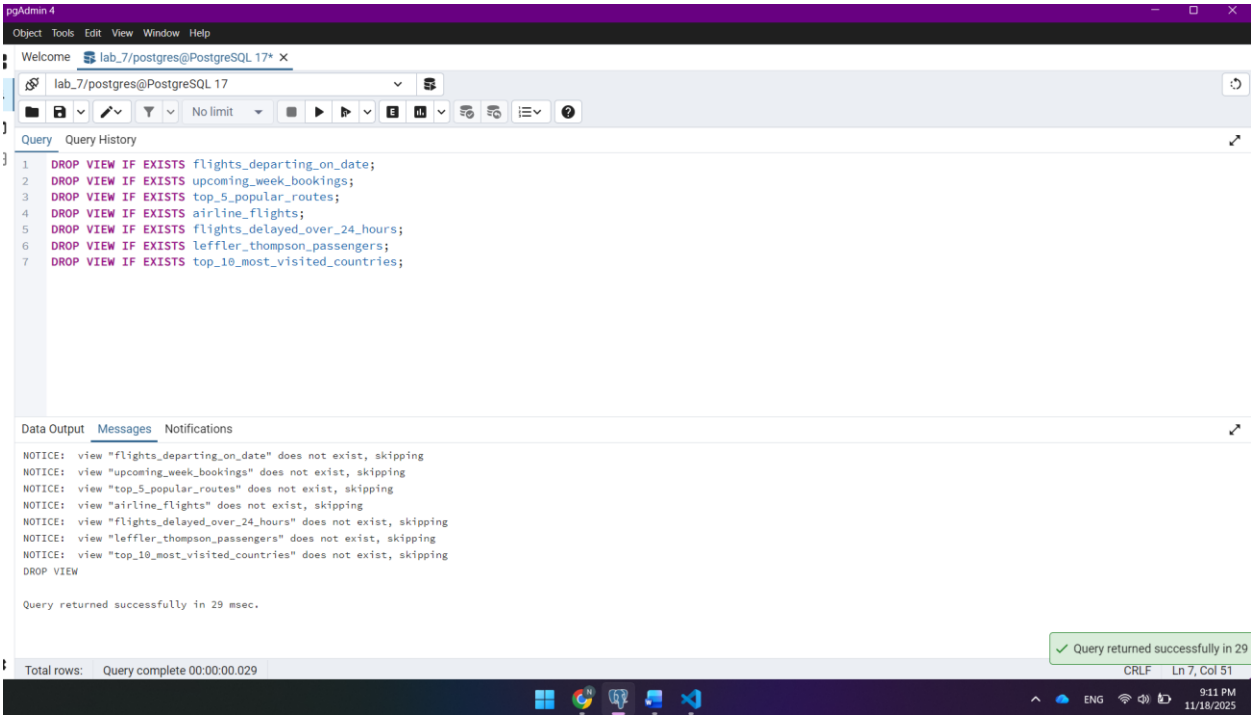
**AVG(b.price) AS average_booking_price,**

**STRING_AGG(DISTINCT a.city, ', ') AS popular_cities**

**FROM booking b**

```
JOIN passengers p ON b.passenger_id =
p.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 b.status != 'cancelled'
GROUP BY a.country
ORDER BY total_visitors DESC
LIMIT 10;
```

10




**DROP VIEW IF EXISTS flights_departing_on_date;**

**DROP VIEW IF EXISTS upcoming_week_bookings;**

**DROP VIEW IF EXISTS top_5_popular_routes;**

**DROP VIEW IF EXISTS airline_flights;**

**DROP VIEW IF EXISTS flights_delayed_over_24_hours;**

**DROP VIEW IF EXISTS leffler_thompson_passengers;**

**DROP VIEW IF EXISTS top_10_most_visited_countries;**