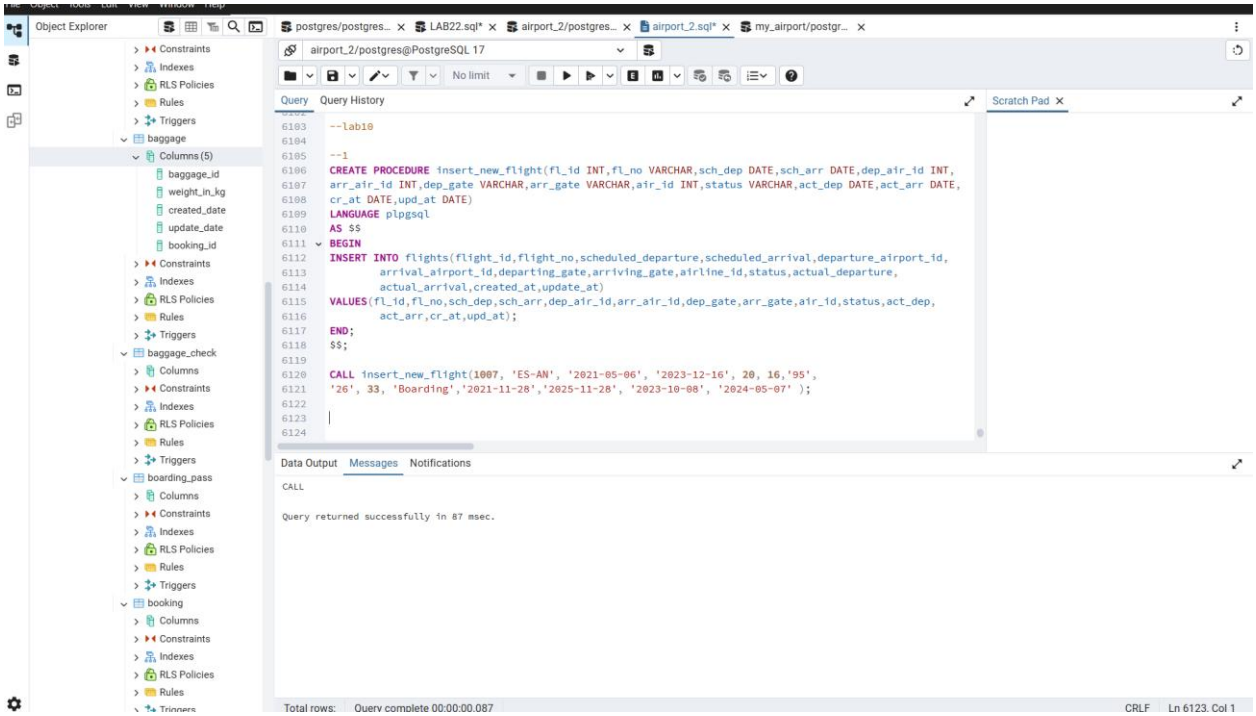
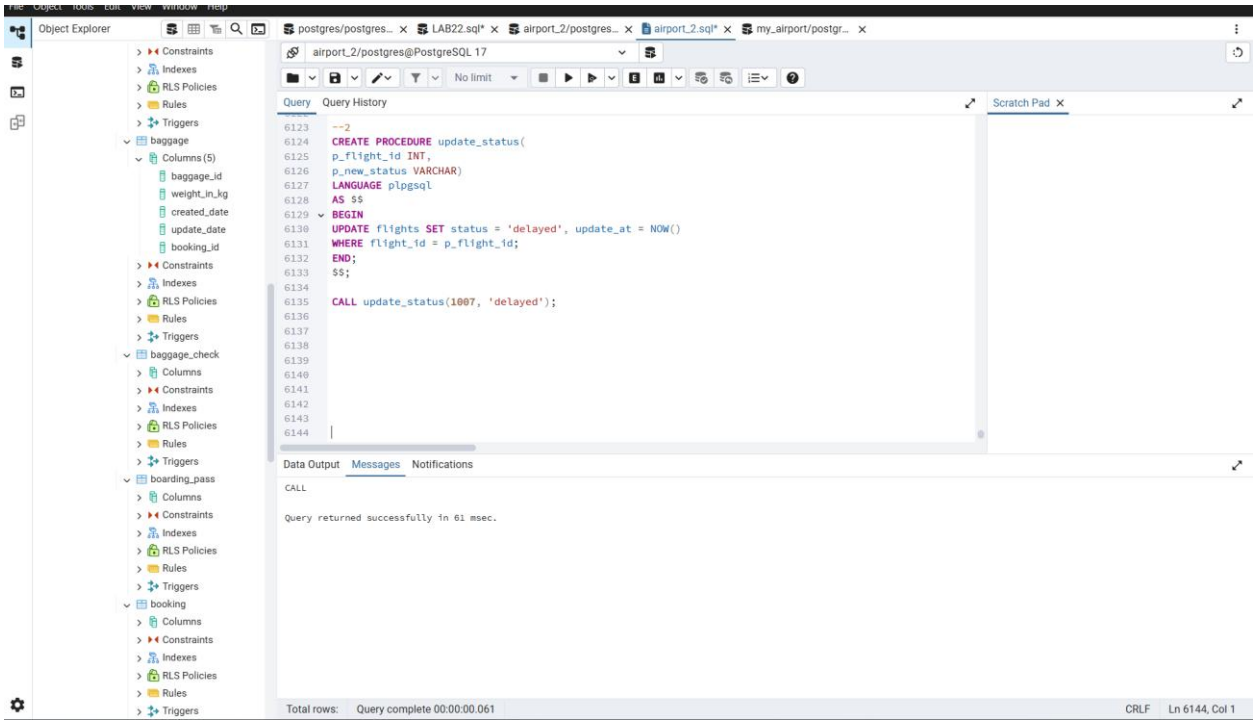
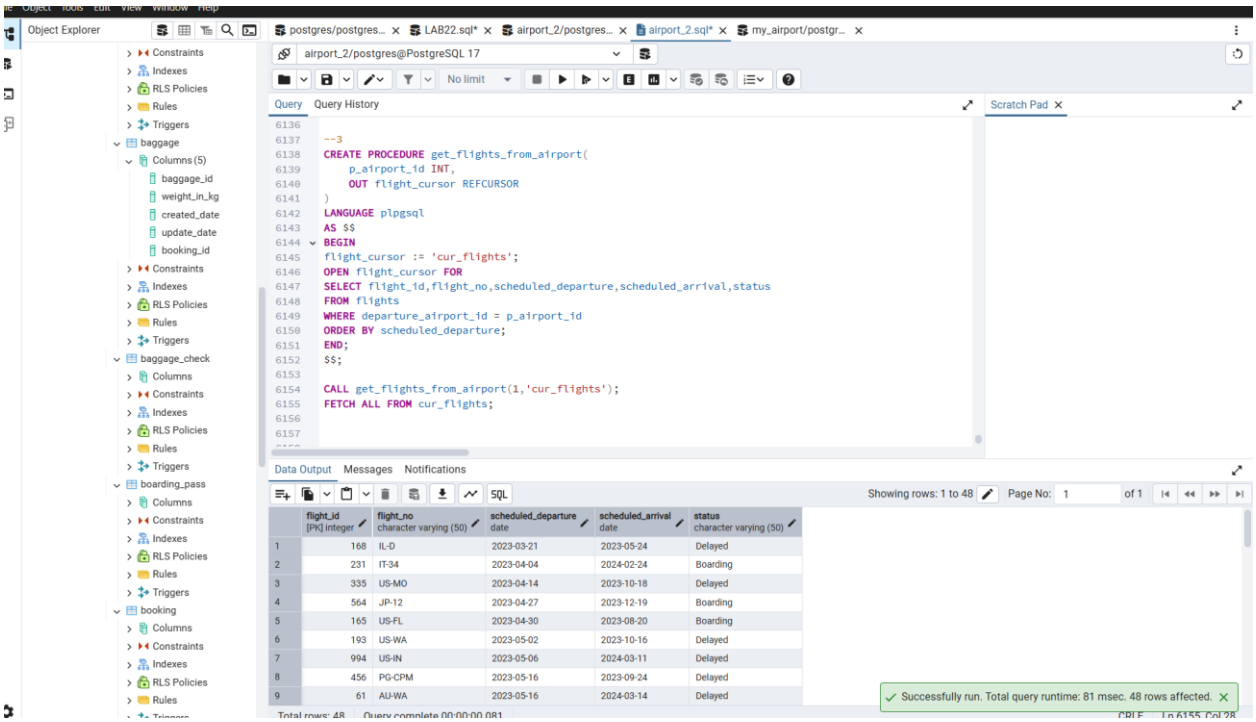
1 task



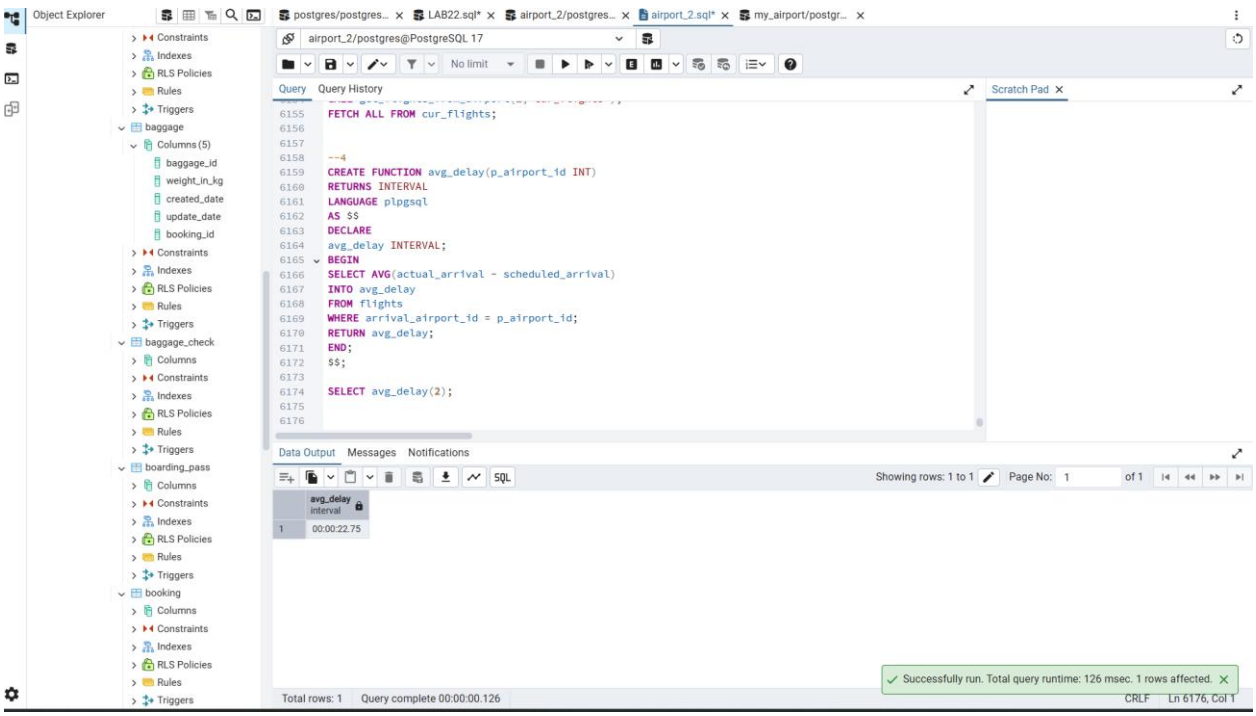
2 task



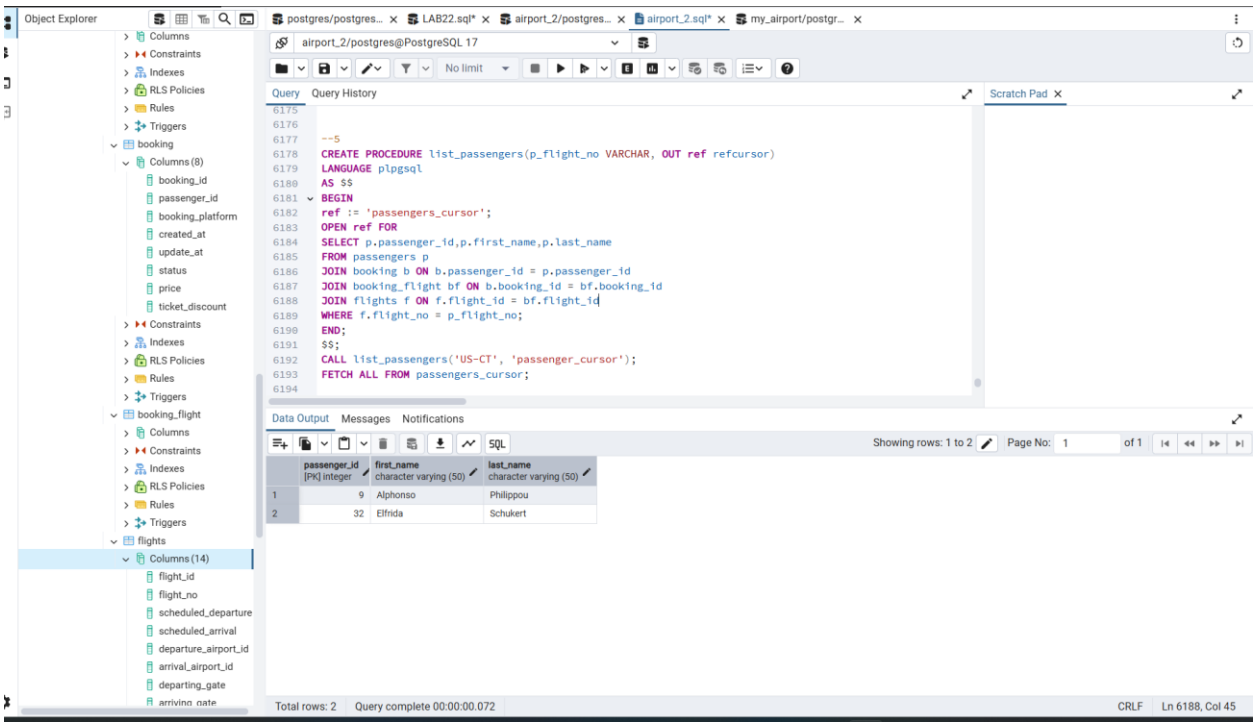
3 task


Object Explorer
postgres/postgres... LAB22.sql* airport_2/postgres... airport_2.sql* my_airport/postgr...
airport_2/postgres@PostgreSQL 17
No limit
Query Query History
Scratch Pad
6136
6137 --3
6138 CREATE PROCEDURE get_flights_from_airport(
6139 p_airport_id INT,
6140 OUT flight_cursor REFCURSOR
6141)
6142 LANGUAGE plpgsql
6143 AS $$
6144 BEGIN
6145 flight_cursor := 'cur_flights';
6146 OPEN flight_cursor FOR
6147 SELECT flight_id,flight_no,scheduled_departure,scheduled_arrival,status
6148 FROM flights
6149 WHERE departure_airport_id = p_airport_id
6150 ORDER BY scheduled_departure;
6151 END;
6152 $$;
6153
6154 CALL get_flights_from_airport(1,'cur_flights');
6155 FETCH ALL FROM cur_flights;
6156
6157
Data Output Messages Notifications
SQL
Showing rows: 1 to 48 Page No: 1 of 1
flight_id [PK] integer
flight_no character varying (50)
scheduled_departure date
scheduled_arrival date
status character varying (50)
1 168 IL-D 2023-03-21 2023-05-24 Delayed
2 231 IT-34 2023-04-04 2024-02-24 Boarding
3 335 US-MO 2023-04-14 2023-10-18 Delayed
4 564 JP-12 2023-04-27 2023-12-19 Boarding
5 165 US-FL 2023-04-30 2023-08-20 Boarding
6 193 US-WA 2023-05-02 2023-10-16 Delayed
7 994 US-IN 2023-05-06 2024-03-11 Delayed
8 456 PG-CPM 2023-05-16 2023-09-24 Delayed
9 61 AU-WA 2023-05-16 2024-03-14 Delayed
Successfully run. Total query runtime: 81 msec. 48 rows affected.
Total rows: 48 Query complete 00:00:00.081
CRLF Ln 6155, Col 28

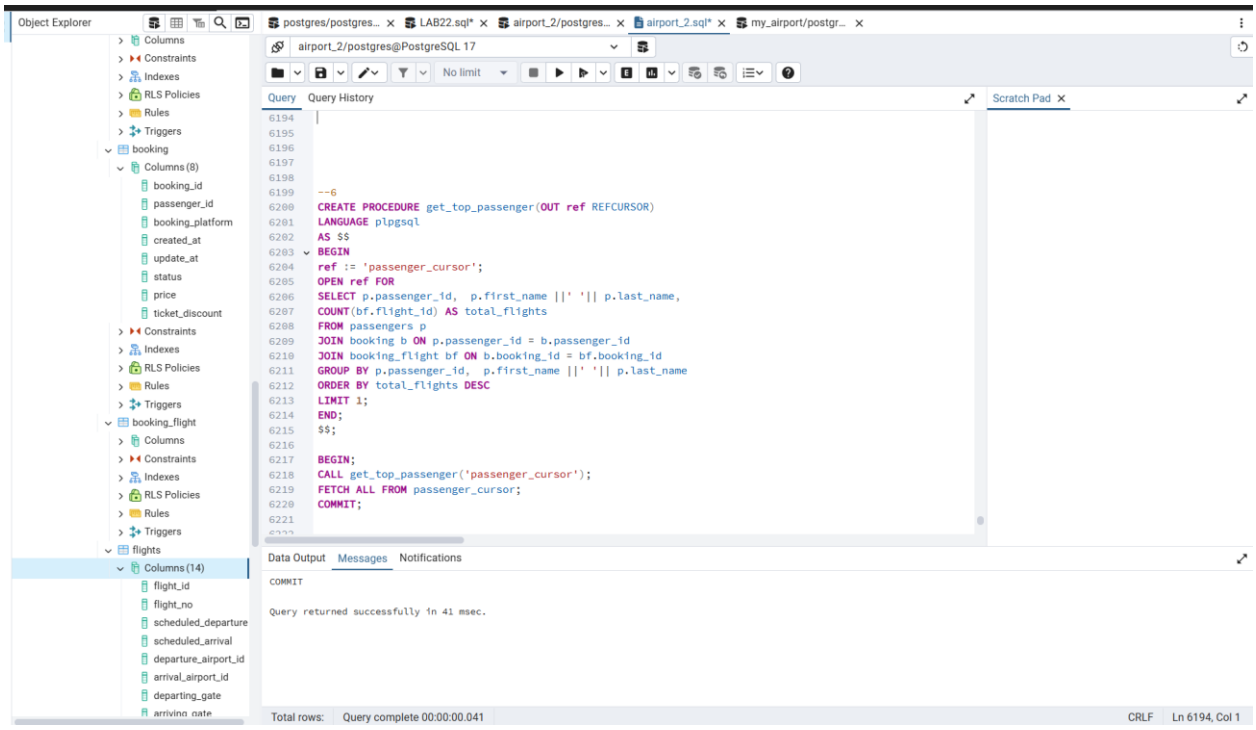
4 task


Object Explorer
postgres/postgres... LAB22.sql* airport_2/postgres... airport_2.sql* my_airport/postgr...
airport_2/postgres@PostgreSQL 17
No limit
Query Query History
Scratch Pad
6155 FETCH ALL FROM cur_flights;
6156
6157
6158 --4
6159 CREATE FUNCTION avg_delay(p_airport_id INT)
6160 RETURNS INTERVAL
6161 LANGUAGE plpgsql
6162 AS $$
6163 DECLARE
6164 avg_delay INTERVAL;
6165 BEGIN
6166 SELECT AVG(actual_arrival - scheduled_arrival)
6167 INTO avg_delay
6168 FROM flights
6169 WHERE arrival_airport_id = p_airport_id;
6170 RETURN avg_delay;
6171 END;
6172 $$;
6173
6174 SELECT avg_delay(2);
6175
6176
Data Output Messages Notifications
SQL
Showing rows: 1 to 1 Page No: 1 of 1
avg_delay interval
1 00:00:22.75
Successfully run. Total query runtime: 126 msec. 1 rows affected.
Total rows: 1 Query complete 00:00:00.126
CRLF Ln 6176, Col 1

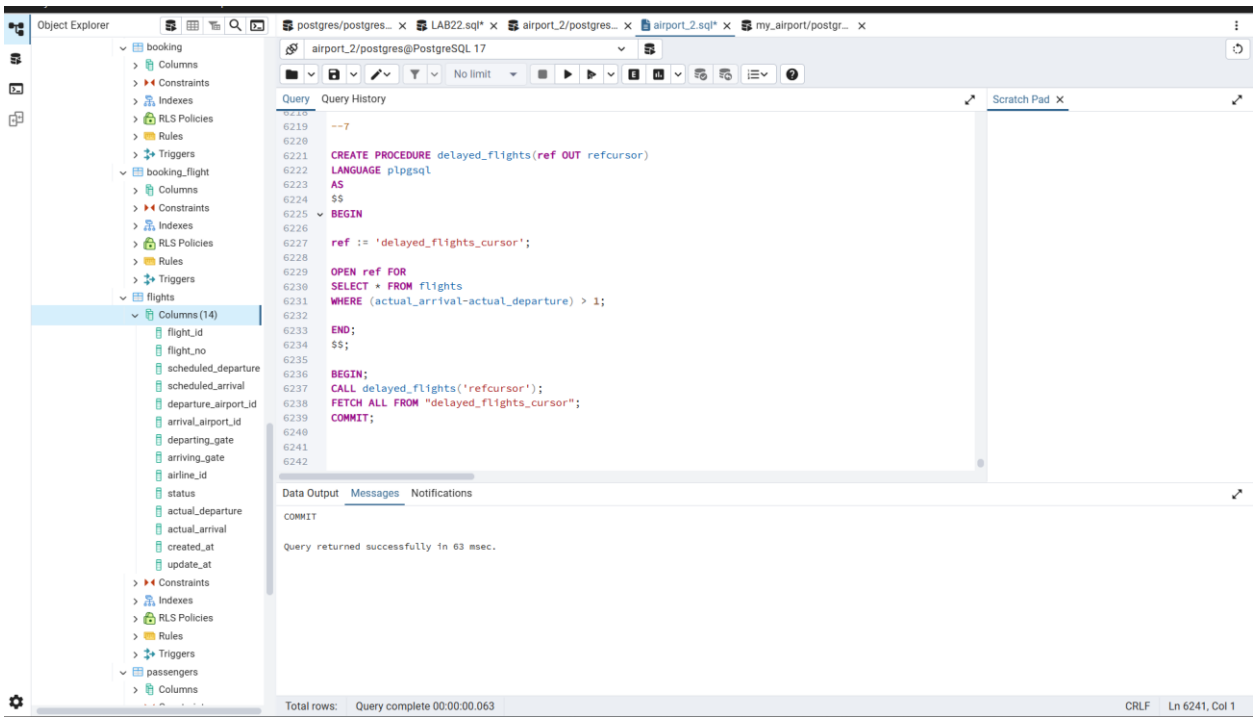
5 task


Object Explorer
postgres/postgres... LAB22.sql* airport_2/postgres... airport_2.sql* my_airport/postgr...
airport_2/postgres@PostgreSQL 17
No limit
Query Query History
Scratch Pad
--5
CREATE PROCEDURE list_passengers(p_flight_no VARCHAR, OUT ref refcursor)
LANGUAGE plpgsql
AS $$
BEGIN
ref := 'passengers_cursor';
OPEN ref FOR
SELECT p.passenger_id,p.first_name,p.last_name
FROM passengers p
JOIN booking b ON b.passenger_id = p.passenger_id
JOIN booking_flight bf ON b.booking_id = bf.booking_id
JOIN flights f ON f.flight_id = bf.flight_id
WHERE f.flight_no = p_flight_no;
END;
$$;
CALL list_passengers('US-CT', 'passenger_cursor');
FETCH ALL FROM passengers_cursor;
Data Output Messages Notifications
Showing rows: 1 to 2 Page No: 1 of 1
passenger_id [PK] integer
first_name character varying (50)
last_name character varying (50)
1 9 Alphonso Philippou
2 32 Elfrida Schukert
Total rows: 2 Query complete 00:00:00.072 CRLF Ln 6188, Col 45

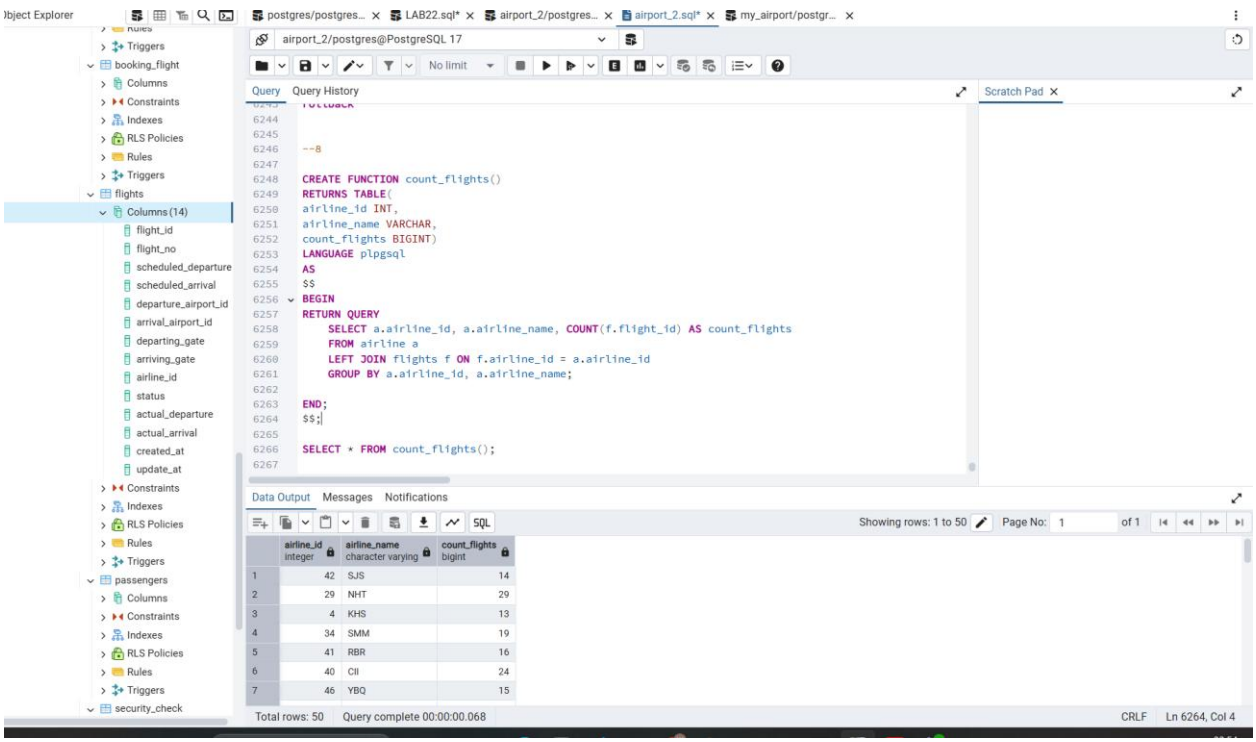
6 task


Object Explorer
postgres/postgres... LAB22.sql* airport_2/postgres... airport_2.sql* my_airport/postgr...
airport_2/postgres@PostgreSQL 17
No limit
Query Query History
Scratch Pad
--6
CREATE PROCEDURE get_top_passenger(OUT ref REFCURSOR)
LANGUAGE plpgsql
AS $$
BEGIN
ref := 'passenger_cursor';
OPEN ref FOR
SELECT p.passenger_id, p.first_name ||' '|| p.last_name,
COUNT(bf.flight_id) AS total_flights
FROM passengers p
JOIN booking b ON p.passenger_id = b.passenger_id
JOIN booking_flight bf ON b.booking_id = bf.booking_id
GROUP BY p.passenger_id, p.first_name ||' '|| p.last_name
ORDER BY total_flights DESC
LIMIT 1;
END;
$$;
BEGIN;
CALL get_top_passenger('passenger_cursor');
FETCH ALL FROM passenger_cursor;
COMMIT;
Data Output Messages Notifications
COMMIT
Query returned successfully in 41 msec.
Total rows: Query complete 00:00:00.041 CRLF Ln 6194, Col 1

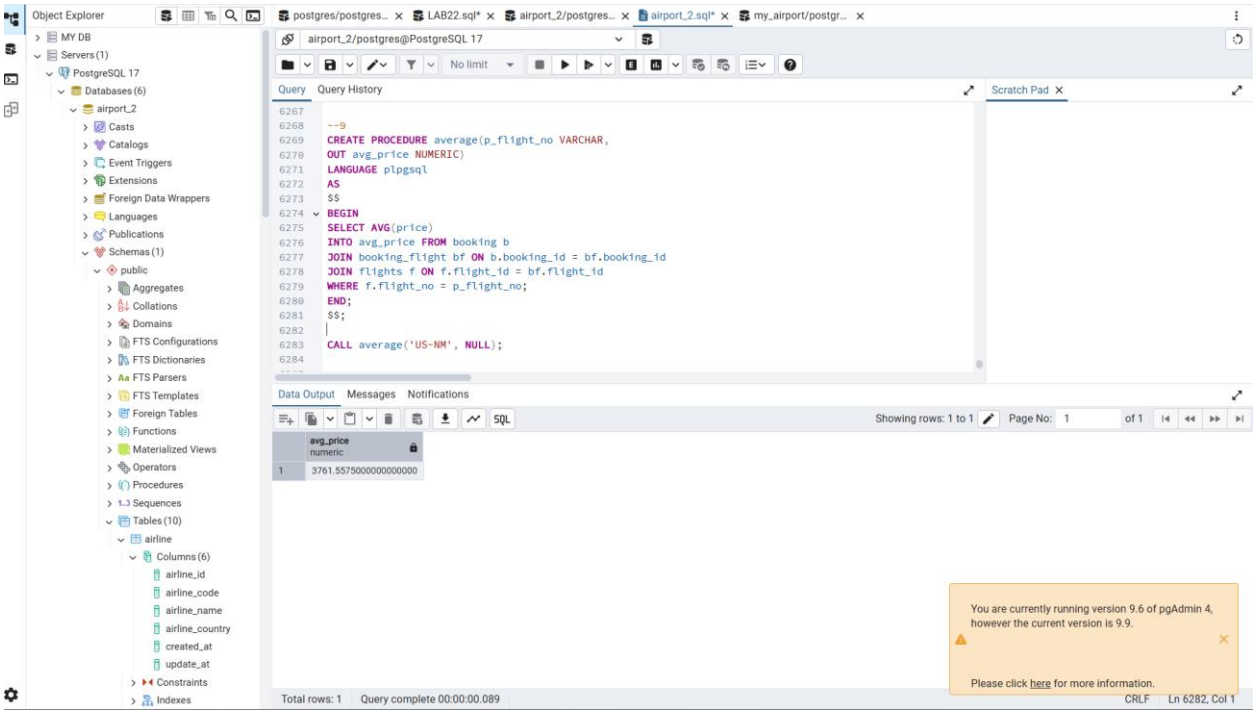
7 task


--7
CREATE PROCEDURE delayed_flights(ref OUT refcursor)
LANGUAGE plpgsql
AS
$$
BEGIN
ref := 'delayed_flights_cursor';
OPEN ref FOR
SELECT * FROM flights
WHERE (actual_arrival-actual_departure) > 1;
END;
$$;
BEGIN;
CALL delayed_flights('refcursor');
FETCH ALL FROM "delayed_flights_cursor";
COMMIT;
COMMIT
Query returned successfully in 63 msec.

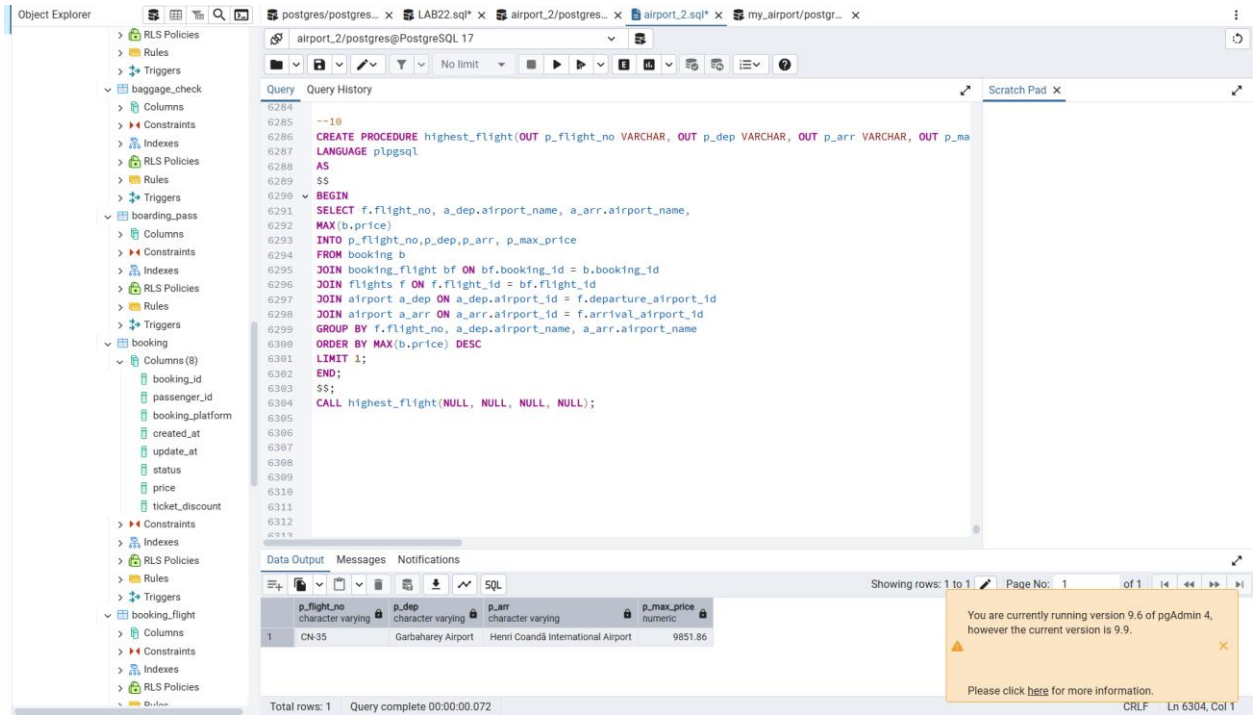
8 task


--8
CREATE FUNCTION count_flights()
RETURNS TABLE(
airline_id INT,
airline_name VARCHAR,
count_flights BIGINT)
LANGUAGE plpgsql
AS
$$
BEGIN
RETURN QUERY
SELECT a.airline_id, a.airline_name, COUNT(f.flight_id) AS count_flights
FROM airline a
LEFT JOIN flights f ON f.airline_id = a.airline_id
GROUP BY a.airline_id, a.airline_name;
END;
$$;
SELECT * FROM count_flights();
42 SJS 14
29 NHT 29
4 KHS 13
34 SMM 19
41 RBR 16
40 CII 24
46 YBQ 15

9 task


Object Explorer
postgres/postgres...
LAB22.sql*
airport_2/postgres...
airport_2.sql*
my_airport/postgr...
airport_2/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
--9
CREATE PROCEDURE average(p_flight_no VARCHAR,
OUT avg_price NUMERIC)
LANGUAGE plpgsql
AS
$$
BEGIN
SELECT AVG(price)
INTO avg_price FROM booking b
JOIN booking_flight bf ON b.booking_id = bf.booking_id
JOIN flights f ON f.flight_id = bf.flight_id
WHERE f.flight_no = p_flight_no;
END;
$$;
CALL average('US-NM', NULL);
Data Output
Messages
Notifications
Showing rows: 1 to 1
Page No: 1
of 1
avg_price
numeric
3761.5575000000000000
You are currently running version 9.6 of pgAdmin 4, however the current version is 9.9.
Please click here for more information.
Total rows: 1
Query complete 00:00:00.089
CRLF
Ln 6282, Col 1

10 task


Object Explorer
postgres/postgres...
LAB22.sql*
airport_2/postgres...
airport_2.sql*
my_airport/postgr...
airport_2/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
--10
CREATE PROCEDURE highest_flight(OUT p_flight_no VARCHAR, OUT p_dep VARCHAR, OUT p_arr VARCHAR, OUT p_ma
LANGUAGE plpgsql
AS
$$
BEGIN
SELECT f.flight_no, a_dep.airport_name, a_arr.airport_name,
MAX(b.price)
INTO p_flight_no,p_dep,p_arr, p_max_price
FROM booking b
JOIN booking_flight bf ON bf.booking_id = b.booking_id
JOIN flights f ON f.flight_id = bf.flight_id
JOIN airport a_dep ON a_dep.airport_id = f.departure_airport_id
JOIN airport a_arr ON a_arr.airport_id = f.arrival_airport_id
GROUP BY f.flight_no, a_dep.airport_name, a_arr.airport_name
ORDER BY MAX(b.price) DESC
LIMIT 1;
END;
$$;
CALL highest_flight(NULL, NULL, NULL, NULL);
Data Output
Messages
Notifications
Showing rows: 1 to 1
Page No: 1
of 1
p_flight_no
character varying
p_dep
character varying
p_arr
character varying
p_max_price
numeric
CN-35
Garbaharey Airport
Henri Coandă International Airport
9851.86
You are currently running version 9.6 of pgAdmin 4, however the current version is 9.9.
Please click here for more information.
Total rows: 1
Query complete 00:00:00.072
CRLF
Ln 6304, Col 1