

```
pgAdmin 4
File Object Tools Edit View Window Help

Welcome x postgres/postgres... x postgres/postgres... x postgres/postgres@PostgreSQL 17* x

postgres/postgres@PostgreSQL 17

Query Query History

1 CREATE TABLE Airline_info (
2     airline_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
3     airline_code VARCHAR(30) NOT NULL,
4     airline_name VARCHAR(50) NOT NULL,
5     airline_country VARCHAR(50) NOT NULL,
6     created_at TIMESTAMP NOT NULL DEFAULT now(),
7     updated_at TIMESTAMP NOT NULL DEFAULT now(),
8     info VARCHAR(50) NOT NULL
9 );
10
11 CREATE TABLE Airport (
12     airport_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
13     airport_name VARCHAR(50) NOT NULL,
14     country VARCHAR(50) NOT NULL,
15     state VARCHAR(50) NOT NULL,
16     city VARCHAR(50) NOT NULL,
17     created_at TIMESTAMP NOT NULL DEFAULT now(),
18     updated_at TIMESTAMP NOT NULL DEFAULT now()
19 );
20
21 CREATE TABLE Passengers (
22     passenger_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
23     first_name VARCHAR(50) NOT NULL,
24     last_name VARCHAR(50) NOT NULL,
25     date_of_birth DATE NOT NULL,
26     gender VARCHAR(50) NOT NULL,
27     country_of_citizenship VARCHAR(50) NOT NULL,
28     country_of_residence VARCHAR(50) NOT NULL,
29     passport_number VARCHAR(20) NOT NULL,
30     created_at TIMESTAMP NOT NULL DEFAULT now(),
31     updated_at TIMESTAMP NOT NULL DEFAULT now()
32 );
33
34 CREATE TABLE Flights (
35     flight_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
36     sch_departure_time TIMESTAMP NOT NULL,
37     sch_arrival_time TIMESTAMP NOT NULL,
38     departing_airport_id INTEGER NOT NULL,
39     arriving_airport_id INTEGER NOT NULL,
40     departing_gate VARCHAR(50) NOT NULL,
41     arriving_gate VARCHAR(50) NOT NULL,
42     airline_id INTEGER NOT NULL,
43     act_departure_time TIMESTAMP NOT NULL,
44     act_arrival_time TIMESTAMP NOT NULL,
45
Total rows: Query complete 00:00:00.068
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postgres/postgres@PostgreSQL 17

Query Query History

42 airline_id INTEGER NOT NULL,
43 act_departure_time TIMESTAMP NOT NULL,
44 act_arrival_time TIMESTAMP NOT NULL,
45 created_at TIMESTAMP NOT NULL DEFAULT now(),
46 updated_at TIMESTAMP NOT NULL DEFAULT now()
47 );
48
49 CREATE TABLE Booking (
50     booking_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
51     flight_id INTEGER NOT NULL,
52     passenger_id INTEGER NOT NULL,
53     booking_platform VARCHAR(50) NOT NULL,
54     created_at TIMESTAMP NOT NULL DEFAULT now(),
55     updated_at TIMESTAMP NOT NULL DEFAULT now(),
56     status VARCHAR(50) NOT NULL,
57     price DECIMAL(7,2) NOT NULL
58 );
59
60 CREATE TABLE Booking_flight (
61     booking_flight_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
62     booking_id INTEGER NOT NULL,
63     flight_id INTEGER NOT NULL,
64     created_at TIMESTAMP NOT NULL DEFAULT now(),
65     updated_at TIMESTAMP NOT NULL DEFAULT now()
66 );
67
68 CREATE TABLE Boarding_pass (
69     boarding_pass_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
70     booking_id INTEGER NOT NULL,
71     seat VARCHAR(50) NOT NULL,
72     boarding_time TIMESTAMP NOT NULL,
73     created_at TIMESTAMP NOT NULL DEFAULT now(),
74     updated_at TIMESTAMP NOT NULL DEFAULT now()
75 );
76
77 CREATE TABLE Baggage (
78     baggage_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
79     weight_in_kg DECIMAL(4,2) NOT NULL,
80     created_at TIMESTAMP NOT NULL DEFAULT now(),
81     updated_at TIMESTAMP NOT NULL DEFAULT now(),
82     booking_id INTEGER NOT NULL
83 );
84
85 CREATE TABLE Baggage_check (
86     baggage_check_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
87     check_result VARCHAR(50) NOT NULL,
88     created_at TIMESTAMP NOT NULL DEFAULT now(),
89     updated_at TIMESTAMP NOT NULL DEFAULT now(),
90     booking_id INTEGER NOT NULL,
91     passenger_id INTEGER NOT NULL
92 );
93
94 CREATE TABLE Security_check (
95     security_check_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
96     check_result VARCHAR(20) NOT NULL,
97     created_at TIMESTAMP NOT NULL DEFAULT now(),
98     updated_at TIMESTAMP NOT NULL DEFAULT now(),
99     passenger_id INTEGER NOT NULL
100 );

Total rows: Query complete 00:00:00.068
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Welcome x postgres/postgres... x postgres/postgres... x postgres/postgres@PostgreSQL 17* x

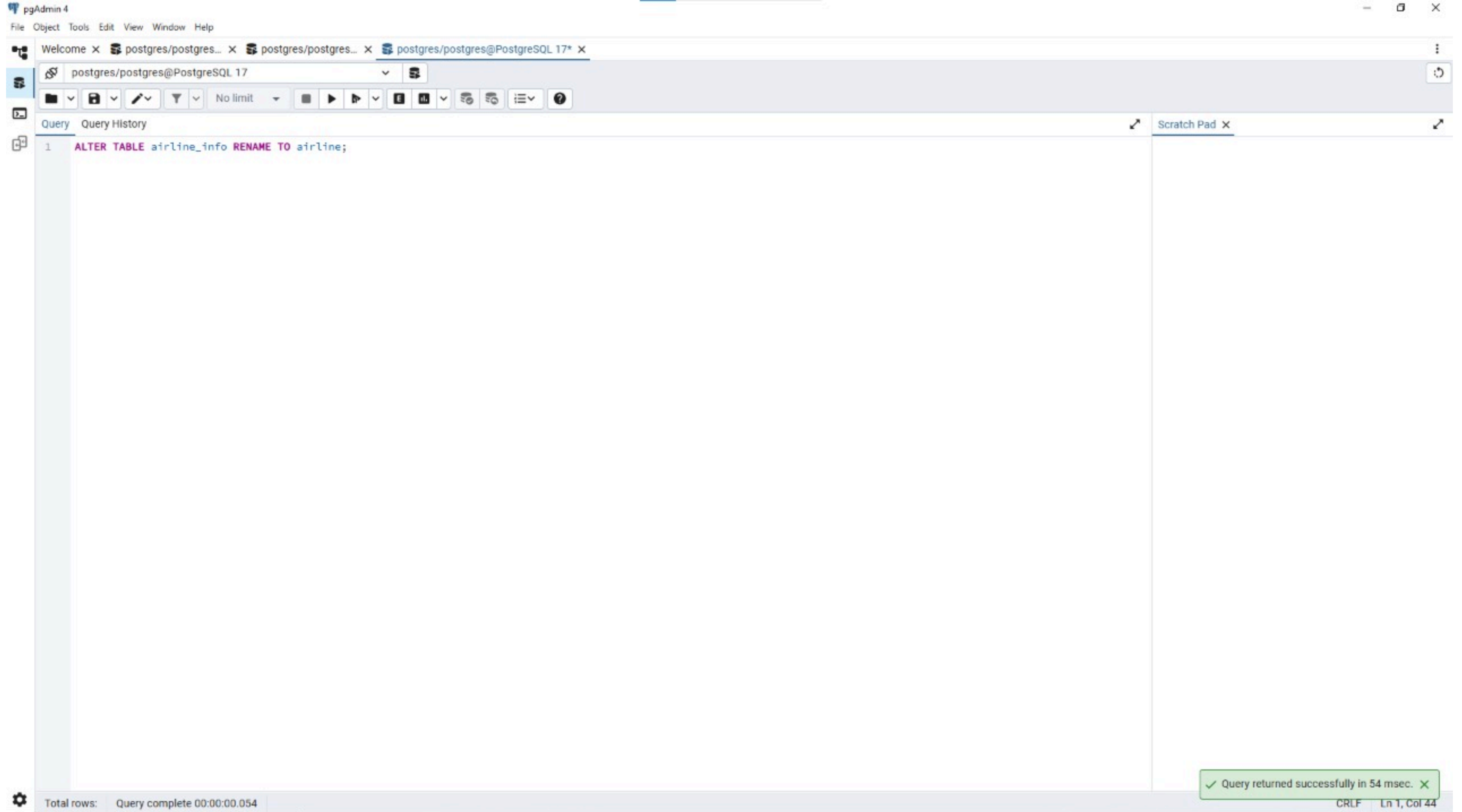
postgres/postgres@PostgreSQL 17

Query Query History

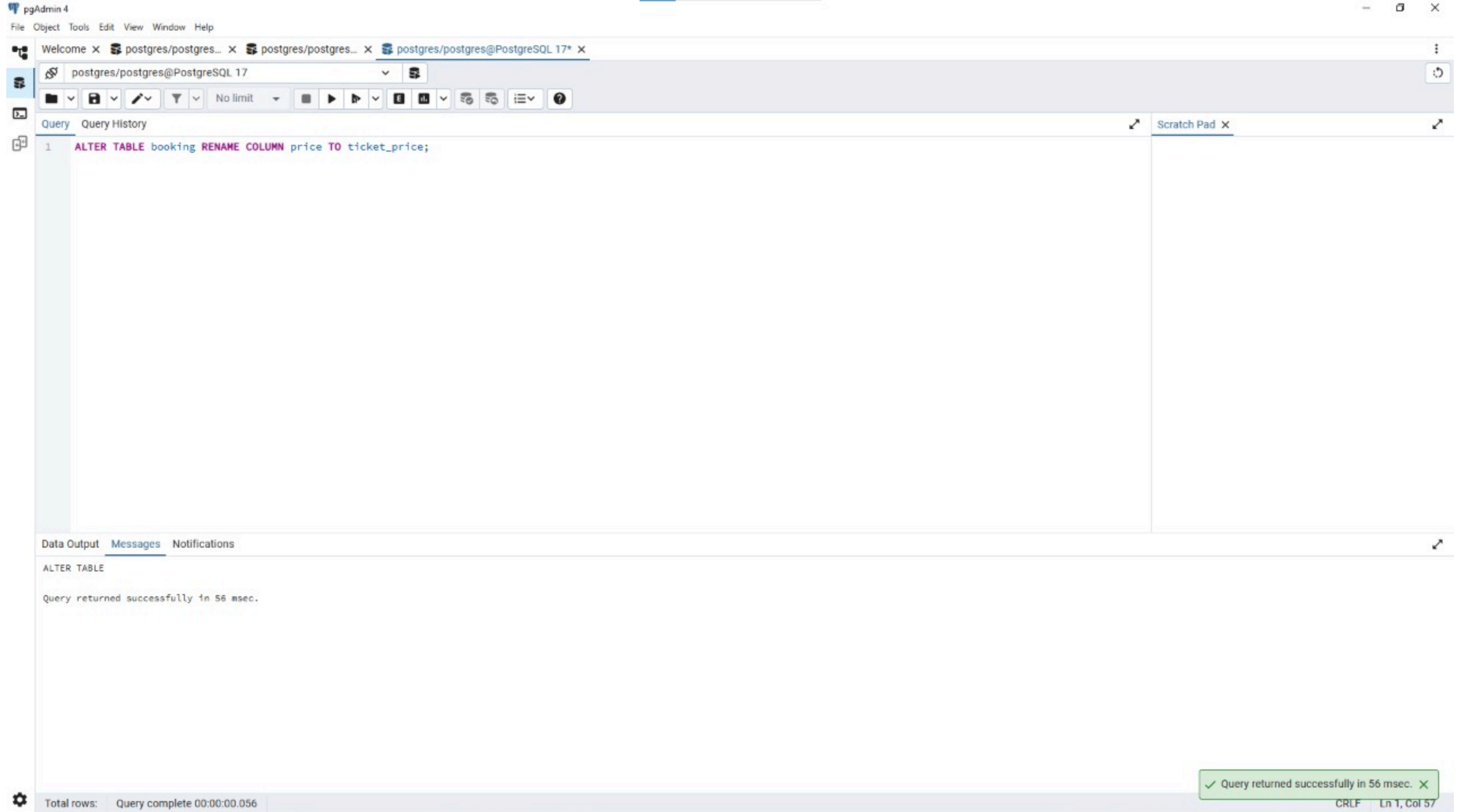
57 price DECIMAL(7,2) NOT NULL
58 );
59
60 CREATE TABLE Booking_flight (
61     booking_flight_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
62     booking_id INTEGER NOT NULL,
63     flight_id INTEGER NOT NULL,
64     created_at TIMESTAMP NOT NULL DEFAULT now(),
65     updated_at TIMESTAMP NOT NULL DEFAULT now()
66 );
67
68 CREATE TABLE Boarding_pass (
69     boarding_pass_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
70     booking_id INTEGER NOT NULL,
71     seat VARCHAR(50) NOT NULL,
72     boarding_time TIMESTAMP NOT NULL,
73     created_at TIMESTAMP NOT NULL DEFAULT now(),
74     updated_at TIMESTAMP NOT NULL DEFAULT now()
75 );
76
77 CREATE TABLE Baggage (
78     baggage_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
79     weight_in_kg DECIMAL(4,2) NOT NULL,
80     created_at TIMESTAMP NOT NULL DEFAULT now(),
81     updated_at TIMESTAMP NOT NULL DEFAULT now(),
82     booking_id INTEGER NOT NULL
83 );
84
85 CREATE TABLE Baggage_check (
86     baggage_check_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
87     check_result VARCHAR(50) NOT NULL,
88     created_at TIMESTAMP NOT NULL DEFAULT now(),
89     updated_at TIMESTAMP NOT NULL DEFAULT now(),
90     booking_id INTEGER NOT NULL,
91     passenger_id INTEGER NOT NULL
92 );
93
94 CREATE TABLE Security_check (
95     security_check_id INTEGER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
96     check_result VARCHAR(20) NOT NULL,
97     created_at TIMESTAMP NOT NULL DEFAULT now(),
98     updated_at TIMESTAMP NOT NULL DEFAULT now(),
99     passenger_id INTEGER NOT NULL
100 );

Total rows: Query complete 00:00:00.068
```

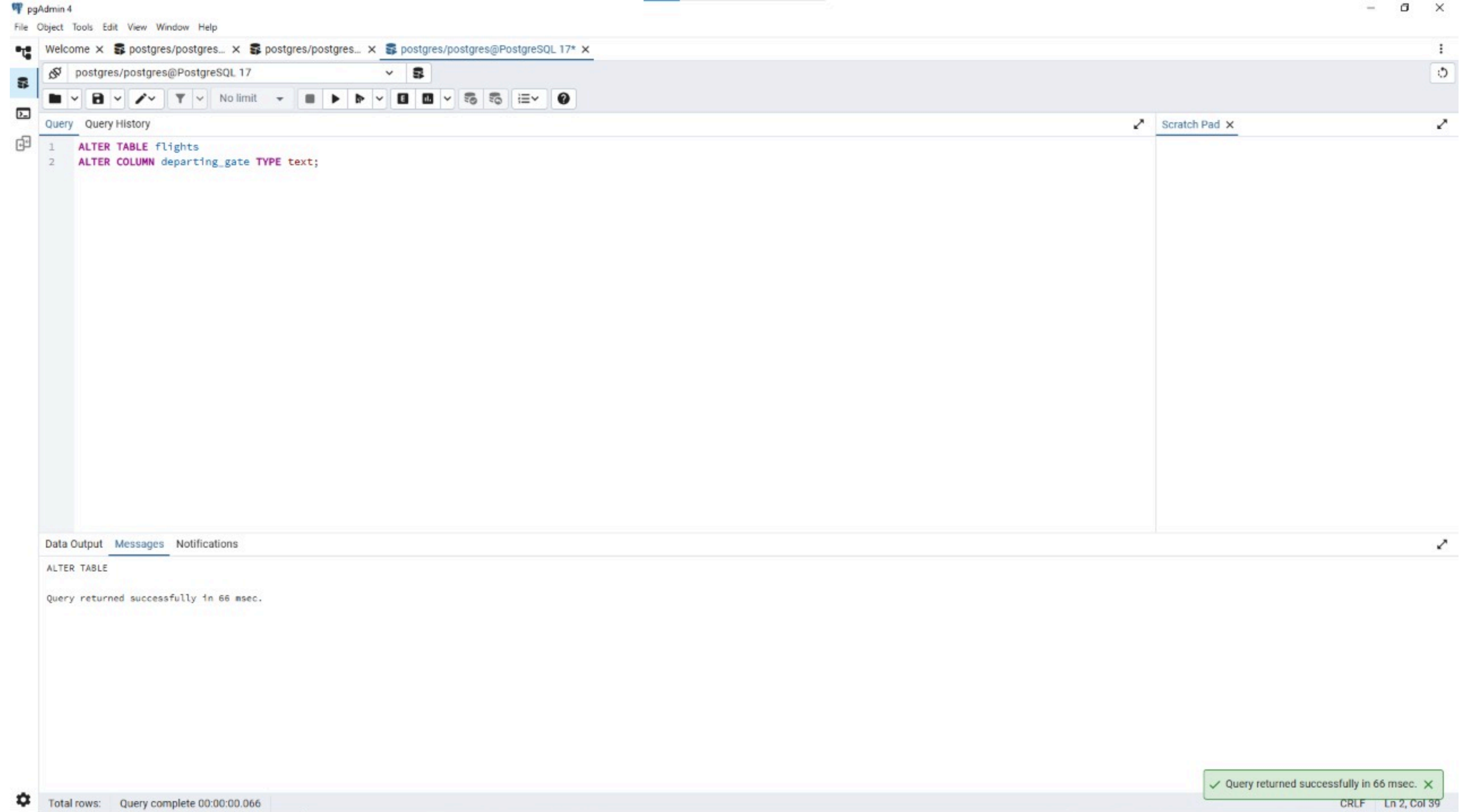
Create following tables with corresponding attributes:
Define Primary Keys for each tables;
Define for all attributes not null constraint;



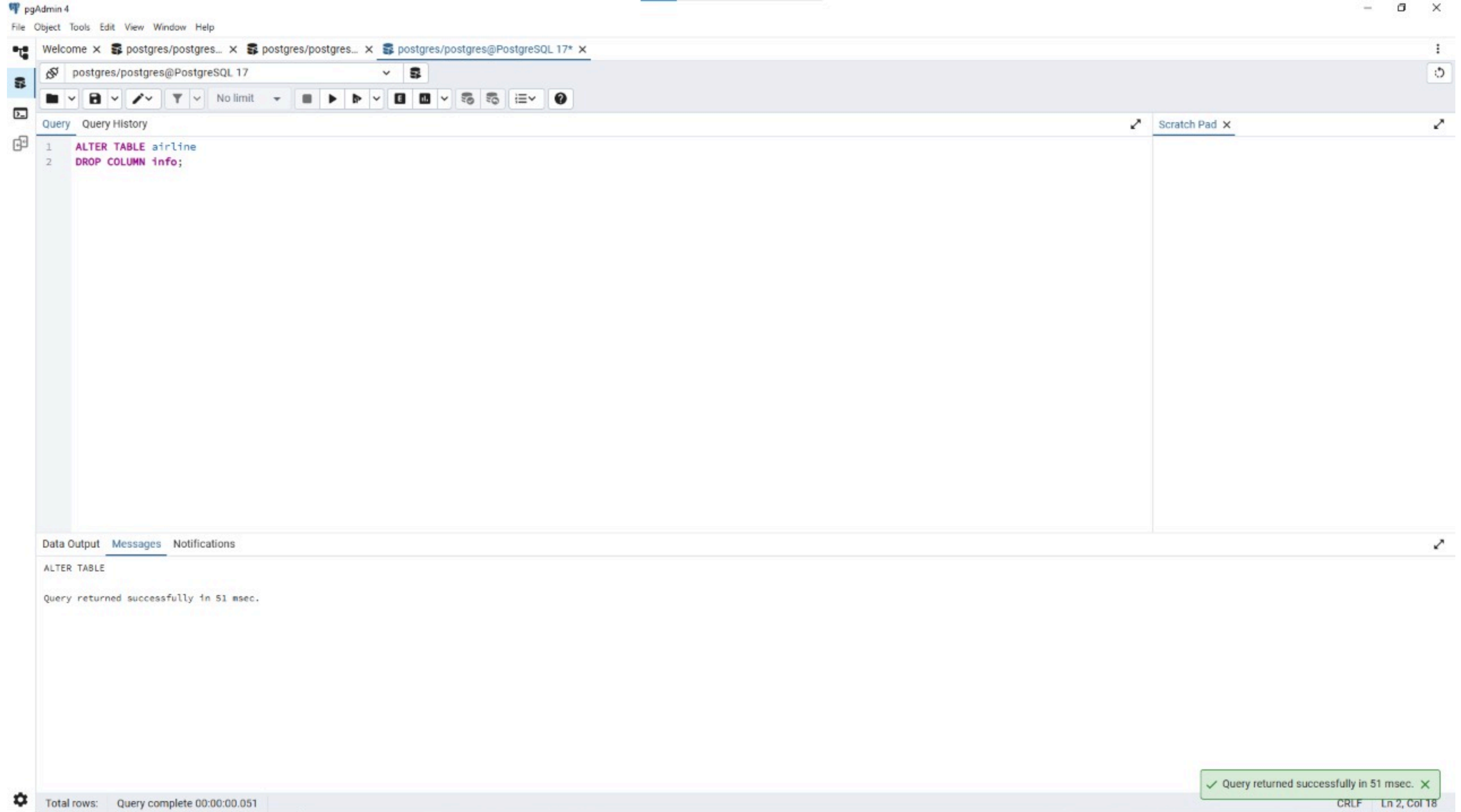
Rename airline_info table to airline;



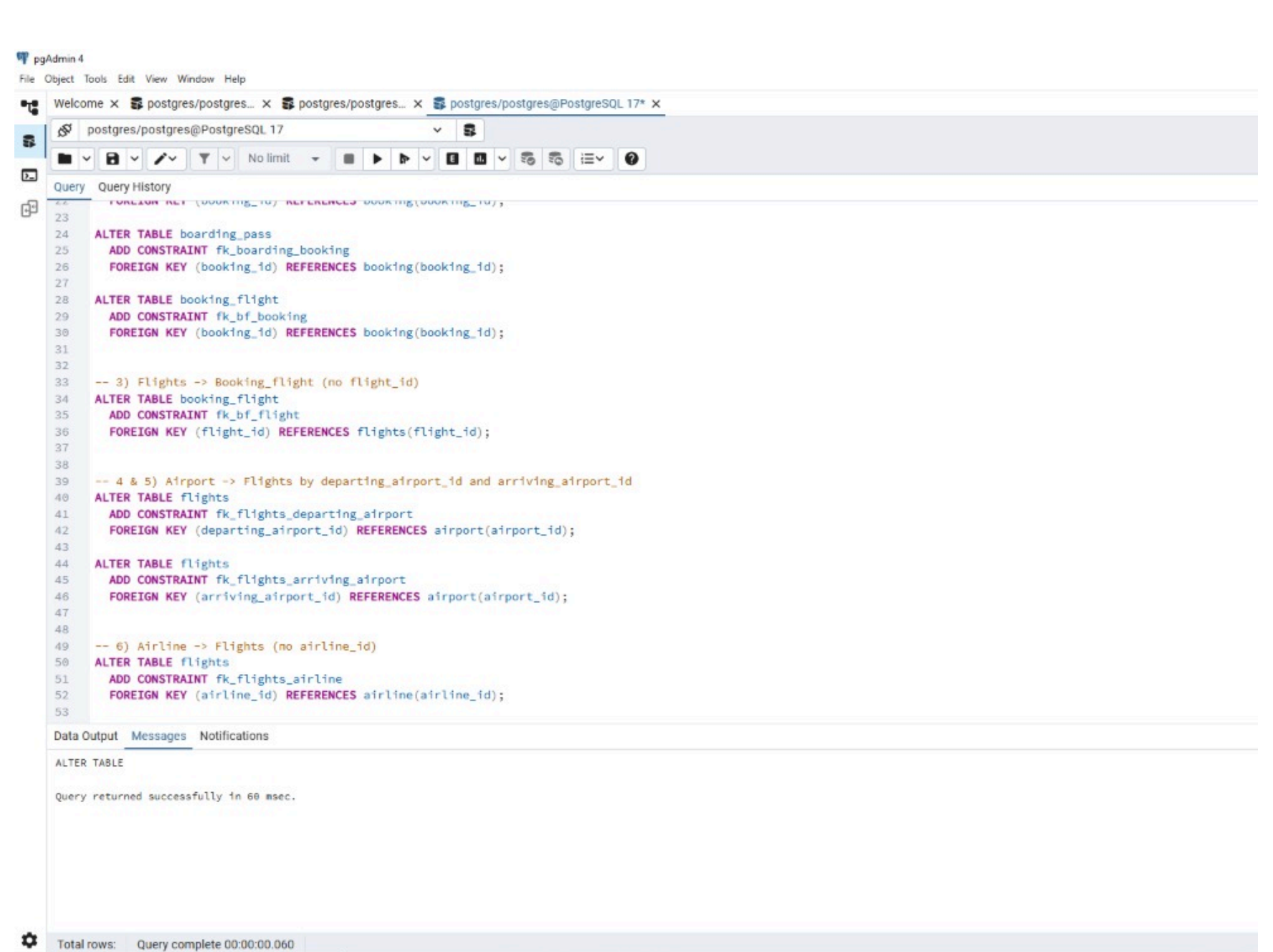
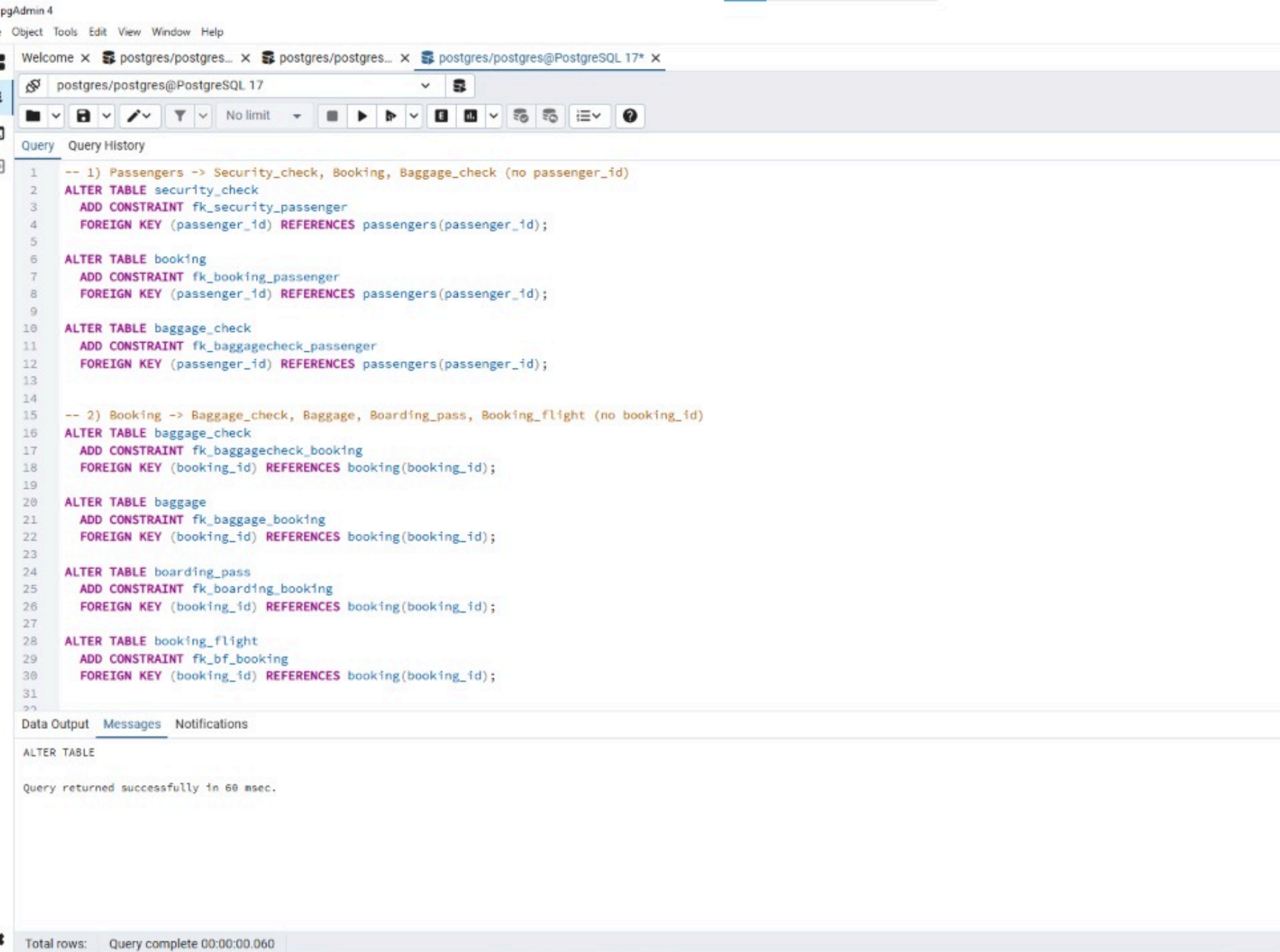
Rename column price to ticket_price in booking table;



Change data type of departing_gate from varchar(50) to text;



Drop the column info(varchar(50)) from the airline table.



Make a relationship between following tables:

- Passengers with Secuitiry_check, Booking, Baggage_check by passenger_id;
- Booking with Baggage_check, Baggage, Boarding_pass, Booking_flight by booking_id;
 - Flights with Booking_flight by flight_id;
- Airport with Flights by departing_airport_id;
- Airport with Flights by arriving_airport_id;
- Airline with Flights by airline_id;

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postgres/postgres@PostgreSQL 17

No limit

Query Query History

```
1  -- 1. Airport
2  INSERT INTO airport (airport_name, country, state, city, created_at, updated_at)
3  SELECT
4      'Airport_' || substr(md5(random()::text), 1, 6),
5      'Country_' || substr(md5(random()::text), 1, 6),
6      'State_' || substr(md5(random()::text), 1, 6),
7      'City_' || substr(md5(random()::text), 1, 6),
8      now(), now()
9  FROM generate_series(1,200);
10
11 -- 2. Airline
12 INSERT INTO airline (airline_code, airline_name, airline_country, created_at, updated_at)
13 SELECT
14     upper(substr(md5(random()::text), 1, 3)), -- случайный код
15     'Air_' || substr(md5(random()::text), 1, 6),
16     'Country_' || substr(md5(random()::text), 1, 6),
17     now(), now()
18 FROM generate_series(1,200);
19
20 -- 3. Passengers
21 INSERT INTO passengers (first_name, last_name, date_of_birth, gender,
22                        country_of_citizenship, country_of_residence,
23                        passport_number, created_at, updated_at)
24 SELECT
25     'FN_' || substr(md5(random()::text), 1, 6),
26     'LN_' || substr(md5(random()::text), 1, 6),
27     date '1970-01-01' + (random() * 18000)::int, -- случайная дата 1970-2019
28     CASE WHEN random() < 0.5 THEN 'Male' ELSE 'Female' END,
29     'Cit_' || substr(md5(random()::text), 1, 6),
30     'Res_' || substr(md5(random()::text), 1, 6),
31     upper(substr(md5(random()::text), 1, 8)),
32     now(), now()
33 FROM generate_series(1,200);
34
35 -- 4. Flights
36 INSERT INTO flights (sch_departure_time, sch_arrival_time,
37                    departing_airport_id, arriving_airport_id,
38                    departing_gate, arriving_gate,
39                    airline_id,
40                    act_departure_time, act_arrival_time,
41                    created_at, updated_at)
42 SELECT
43     now() + (random() * interval '30 days'),
44     now() + (random() * interval '40 days'),
```

Total rows: 0 Query complete 00:00:00.112

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postgres/postgres@PostgreSQL 17

No limit

Query Query History

```
42  SELECT
43      now() + (random() * interval '30 days'),
44      now() + (random() * interval '40 days'),
45      (SELECT airport_id FROM airport ORDER BY random() LIMIT 1),
46      (SELECT airport_id FROM airport ORDER BY random() LIMIT 1),
47      'G' || (10 + (random()*89)::int),
48      'G' || (10 + (random()*89)::int),
49      (SELECT airline_id FROM airline ORDER BY random() LIMIT 1),
50      now() + (random() * interval '30 days'),
51      now() + (random() * interval '40 days'),
52      now(), now()
53 FROM generate_series(1,200);
54
55 -- 5. Booking
56 INSERT INTO booking (flight_id, passenger_id, booking_platform,
57                    created_at, updated_at, status, ticket_price)
58 SELECT
59     (SELECT flight_id FROM flights ORDER BY random() LIMIT 1),
60     (SELECT passenger_id FROM passengers ORDER BY random() LIMIT 1),
61     'Platform_' || substr(md5(random()::text), 1, 6),
62     now(), now(),
63     CASE WHEN random() < 0.5 THEN 'Confirmed' ELSE 'Cancelled' END,
64     round((100 + random() * 900)::numeric, 2)
65 FROM generate_series(1,200);
66
67 -- 6. Booking_flight
68 INSERT INTO booking_flight (booking_id, flight_id, created_at, updated_at)
69 SELECT
70     (SELECT booking_id FROM booking ORDER BY random() LIMIT 1),
71     (SELECT flight_id FROM flights ORDER BY random() LIMIT 1),
72     now(), now()
73 FROM generate_series(1,200);
74
75 -- 7. Boarding_pass
76 INSERT INTO boarding_pass (booking_id, seat, boarding_time, created_at, updated_at)
77 SELECT
78     (SELECT booking_id FROM booking ORDER BY random() LIMIT 1),
79     'Seat_' || (1 + (random()*100)::int),
80     now() + (random() * interval '5 hours'),
81     now(), now()
82 FROM generate_series(1,200);
83
84 -- 8. Baggage
85 INSERT INTO baggage (weight_in_kg, created_at, updated_at, booking_id)
```

Total rows: 0 Query complete 00:00:00.112

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postgres/postgres@PostgreSQL 17

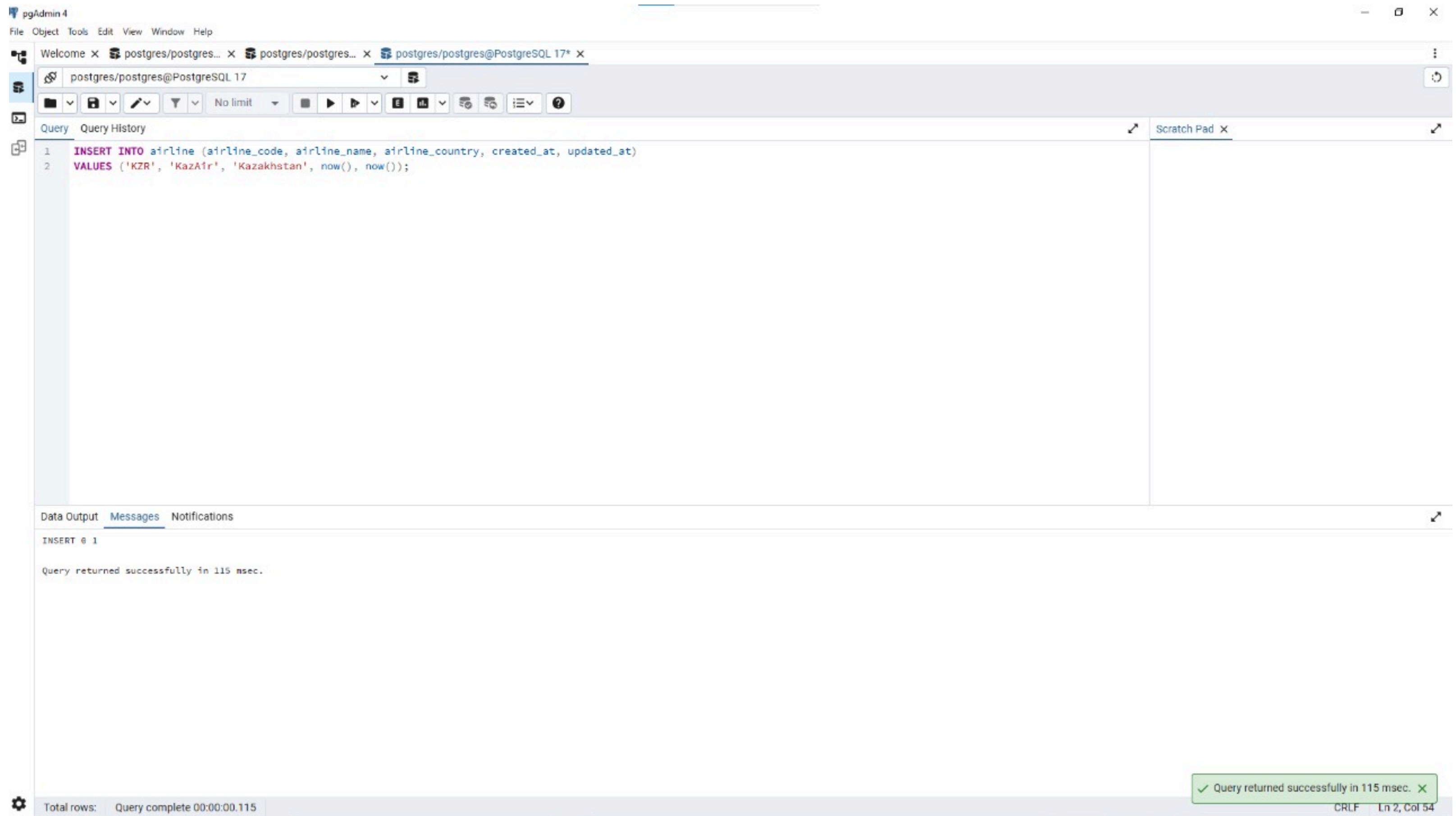
No limit

Query Query History

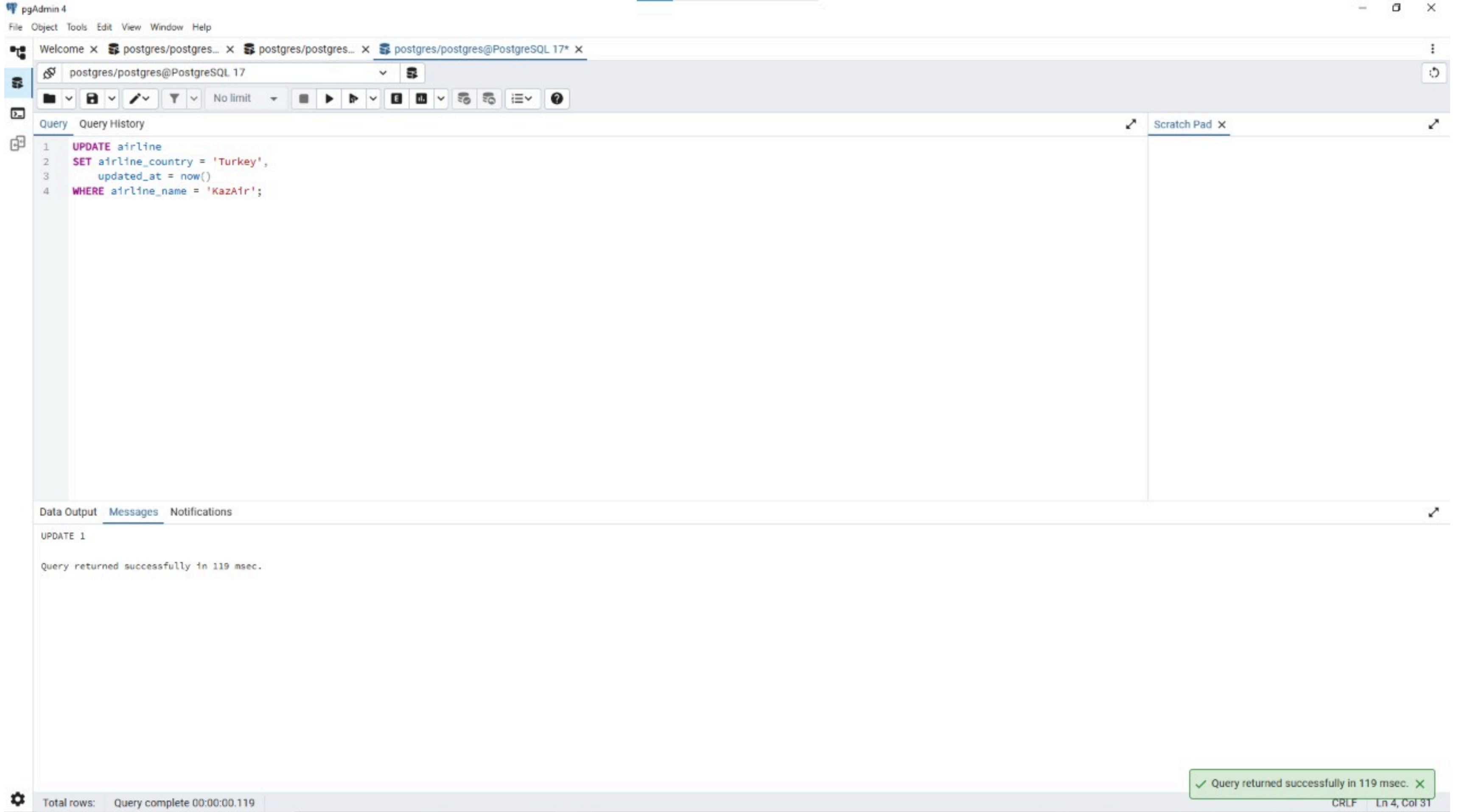
```
65  FROM generate_series(1,200);
66
67 -- 6. Booking_flight
68 INSERT INTO booking_flight (booking_id, flight_id, created_at, updated_at)
69 SELECT
70     (SELECT booking_id FROM booking ORDER BY random() LIMIT 1),
71     (SELECT flight_id FROM flights ORDER BY random() LIMIT 1),
72     now(), now()
73 FROM generate_series(1,200);
74
75 -- 7. Boarding_pass
76 INSERT INTO boarding_pass (booking_id, seat, boarding_time, created_at, updated_at)
77 SELECT
78     (SELECT booking_id FROM booking ORDER BY random() LIMIT 1),
79     'Seat_' || (1 + (random()*100)::int),
80     now() + (random() * interval '5 hours'),
81     now(), now()
82 FROM generate_series(1,200);
83
84 -- 8. Baggage
85 INSERT INTO baggage (weight_in_kg, created_at, updated_at, booking_id)
86 SELECT
87     round((10 + random() * 30)::numeric, 2),
88     now(), now(),
89     (SELECT booking_id FROM booking ORDER BY random() LIMIT 1)
90 FROM generate_series(1,200);
91
92 -- 9. Baggage_check
93 INSERT INTO baggage_check (check_result, created_at, updated_at, booking_id, passenger_id)
94 SELECT
95     CASE WHEN random() < 0.9 THEN 'OK' ELSE 'Issue' END,
96     now(), now(),
97     (SELECT booking_id FROM booking ORDER BY random() LIMIT 1),
98     (SELECT passenger_id FROM passengers ORDER BY random() LIMIT 1)
99 FROM generate_series(1,200);
100
101 -- 10. Security_check
102 INSERT INTO security_check (check_result, created_at, updated_at, passenger_id)
103 SELECT
104     CASE WHEN random() < 0.95 THEN 'Clear' ELSE 'Alert' END,
105     now(), now(),
106     (SELECT passenger_id FROM passengers ORDER BY random() LIMIT 1)
107 FROM generate_series(1,200);
108
```

Total rows: 0 Query complete 00:00:00.112

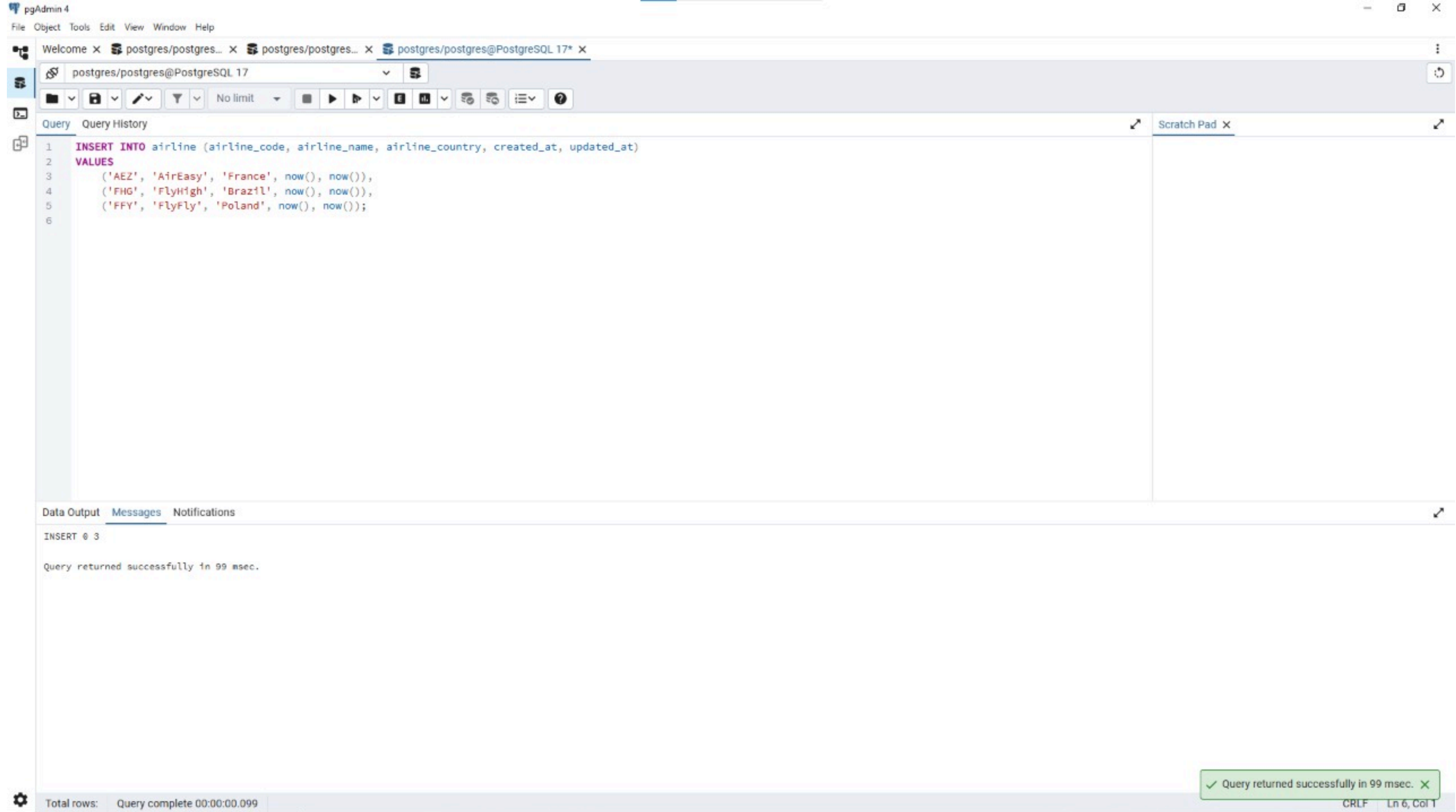
Generate and insert 200 random rows in your airport database



Add a new airline named "KazAir" based in "Kazakhstan" to the airline table.



Update the airline country "KazAir" to "Turkey".



Add three airlines at once: "AirEasy" in "France", "FlyHigh" in "Brazil" and "FlyFly" in "Poland".

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postgres/postgres@PostgreSQL 17

Query Query History

```
1 DELETE FROM flights
2 WHERE EXTRACT(YEAR FROM sch_arrival_time) = 2024
3    OR EXTRACT(YEAR FROM act_arrival_time) = 2024;
4
```

Scratch Pad x

Data Output Messages Notifications

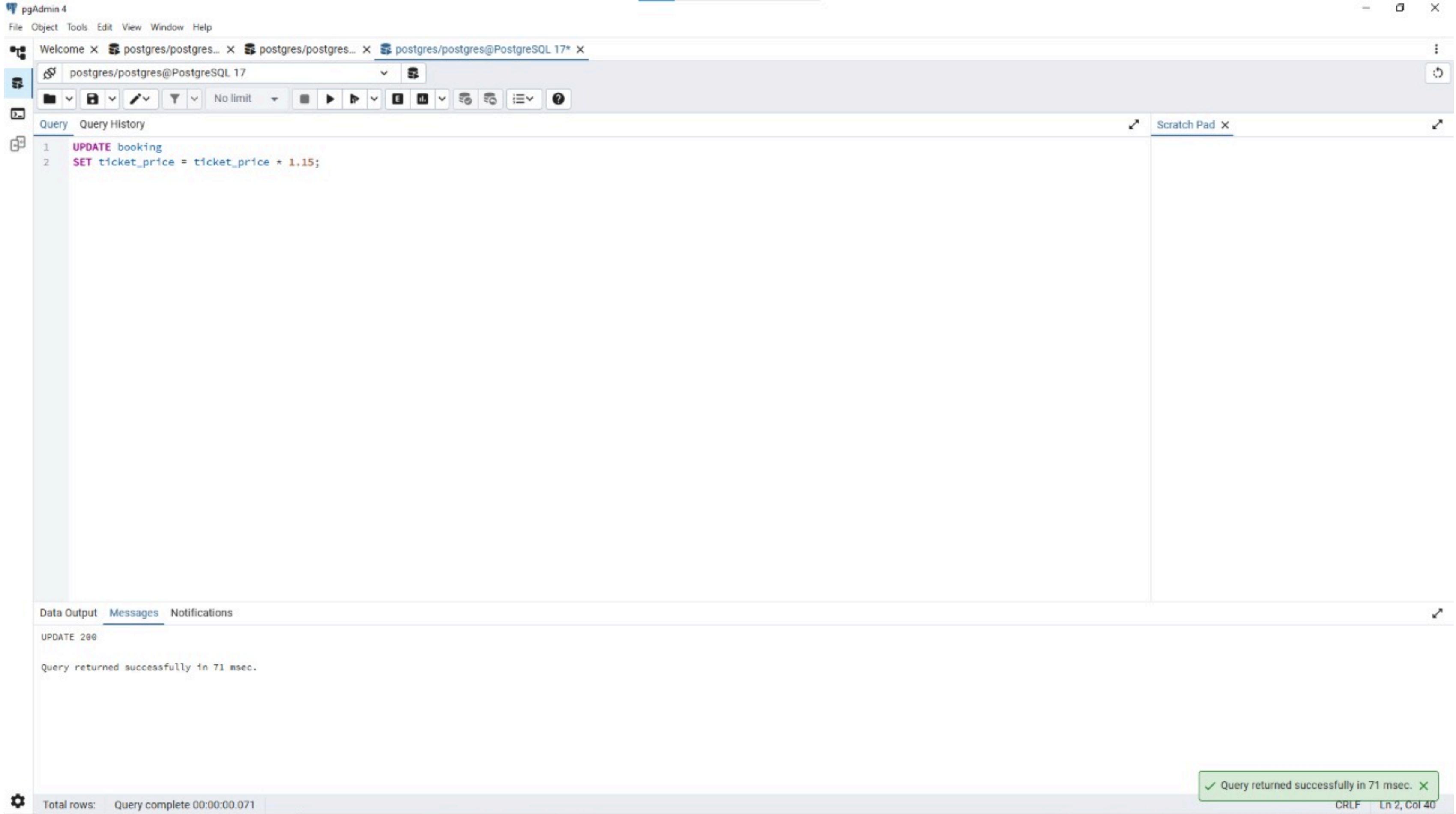
DELETE 0

Query returned successfully in 69 msec.

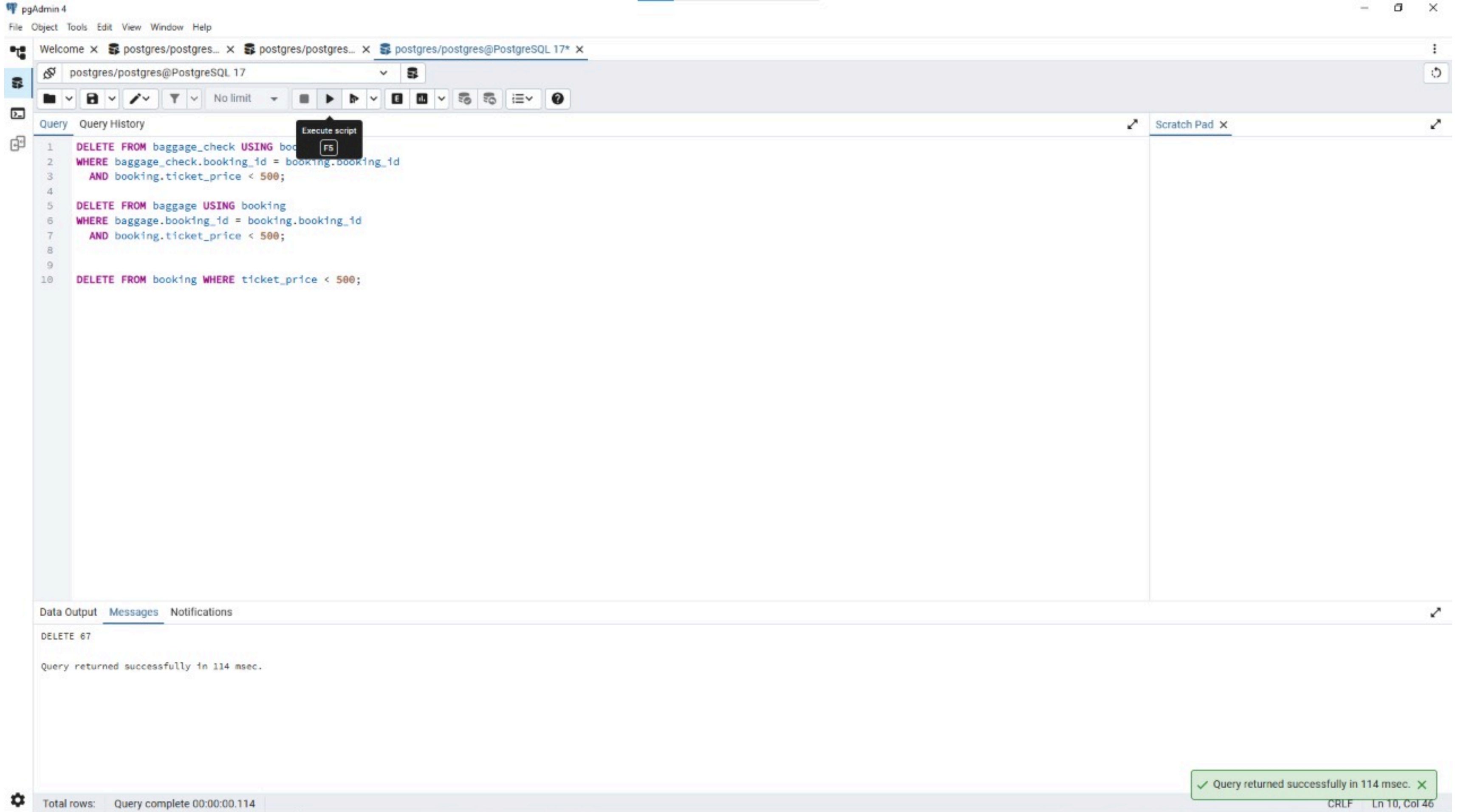
✓ Query returned successfully in 69 msec. ✕

Total rows: Query complete 00:00:00.069 CRLF Ln 4, Col 1

Delete all flights whose arrival in 2024 year.



Increase the price of all tickets in booking table for flights by 15%.



Delete all tickets where price is less than 10000.