

# DDL

The image shows two separate sessions in pgAdmin 4, both connected to the same PostgreSQL 17 database named 'lab2/postgres'.

**Query 1 (Top Window):**

```
1 CREATE TABLE airline_info (
2     airline_id INT 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,
7     updated_at TIMESTAMP NOT NULL,
8     info VARCHAR(50) NOT NULL
9 );
10
11 CREATE TABLE Airport(
12     airport_id INT 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,
18     updated_at TIMESTAMP NOT NULL
19 );
20
21 CREATE TABLE Baggage_check(
22     baggage_check_id INT PRIMARY KEY,
23     check_result VARCHAR(50) NOT NULL,
24     created_at TIMESTAMP NOT NULL,
25     updated_at TIMESTAMP NOT NULL,
26     booking_id INT NOT NULL,
27     passenger_id INT NOT NULL
28 );
29
30 CREATE TABLE Baggage(
31     baggage_id INT PRIMARY KEY,
32     weight_in_kg DECIMAL(4, 2) NOT NULL,
33     created_at TIMESTAMP NOT NULL,
34     updated_at TIMESTAMP NOT NULL,
35     booking_id INT NOT NULL
36 );
37
38 CREATE TABLE Boarding_pass(
39     boarding_pass_id INT PRIMARY KEY,
40     booking_id INT NOT NULL,
41     seat VARCHAR(50) NOT NULL,
42     boarding_time TIMESTAMP NOT NULL,
43     created_at TIMESTAMP NOT NULL,
44     updated_at TIMESTAMP NOT NULL
45 );
46
47 CREATE TABLE Booking_flight(
48     booking_flight_id INT PRIMARY KEY,
49     booking_id INT NOT NULL,
50     seat VARCHAR(50) NOT NULL,
51     boarding_time TIMESTAMP NOT NULL,
52     created_at TIMESTAMP NOT NULL,
53     updated_at TIMESTAMP NOT NULL
54 );
55
56 CREATE TABLE Booking(
57     booking_id INT PRIMARY KEY,
58     flight_id INT NOT NULL,
59     passenger_id INT NOT NULL,
60     booking_platform VARCHAR(50) NOT NULL,
61     created_at TIMESTAMP NOT NULL,
62     updated_at TIMESTAMP NOT NULL,
63     status VARCHAR(50) NOT NULL,
64     price DECIMAL(7, 2) NOT NULL
65 );
```

Total rows: 0 CRLF Ln 114, Col 42

**Query 2 (Bottom Window):**

```
33     created_at TIMESTAMP NOT NULL,
34     updated_at TIMESTAMP NOT NULL,
35     booking_id INT NOT NULL
36 );
37
38 CREATE TABLE Boarding_pass(
39     boarding_pass_id INT PRIMARY KEY,
40     booking_id INT NOT NULL,
41     seat VARCHAR(50) NOT NULL,
42     boarding_time TIMESTAMP NOT NULL,
43     created_at TIMESTAMP NOT NULL,
44     updated_at TIMESTAMP NOT NULL
45 );
46
47 CREATE TABLE Booking_flight(
48     booking_flight_id INT PRIMARY KEY,
49     booking_id INT NOT NULL,
50     seat VARCHAR(50) NOT NULL,
51     boarding_time TIMESTAMP NOT NULL,
52     created_at TIMESTAMP NOT NULL,
53     updated_at TIMESTAMP NOT NULL
54 );
55
56 CREATE TABLE Booking(
57     booking_id INT PRIMARY KEY,
58     flight_id INT NOT NULL,
59     passenger_id INT NOT NULL,
60     booking_platform VARCHAR(50) NOT NULL,
61     created_at TIMESTAMP NOT NULL,
62     updated_at TIMESTAMP NOT NULL,
63     status VARCHAR(50) NOT NULL,
64     price DECIMAL(7, 2) NOT NULL
65 );
```

Total rows: 0 CRLF Ln 114, Col 42

```

pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
> Servers
lab2/postgres@PostgreSQL 17* X
lab2/postgres@PostgreSQL 17* X
Query History
Scratch Pad X
Query History
Scratch Pad X
66     sch_arrival_time TIMESTAMP NOT NULL,
67     departing_airport_id INT NOT NULL,
68     arriving_airport_id INT NOT NULL,
69     departing_gate VARCHAR(50) NOT NULL,
70     arriving_gate VARCHAR(50) NOT NULL,
71     airline_id INT NOT NULL,
72     act_departure_time TIMESTAMP NOT NULL,
73     act_arrival_time TIMESTAMP NOT NULL,
74     created_at TIMESTAMP NOT NULL,
75     updated_at TIMESTAMP NOT NULL
76 );
77 CREATE TABLE Passengers(
78     passenger_id INT PRIMARY KEY,
79     first_name VARCHAR(50) NOT NULL,
80     last_name VARCHAR(50) NOT NULL,
81     date_of_birth DATE NOT NULL,
82     gender VARCHAR(50) NOT NULL,
83     country_of_citizenship VARCHAR(50) NOT NULL,
84     country_of_residence VARCHAR(50) NOT NULL,
85     passport_number VARCHAR(20) NOT NULL,
86     created_at TIMESTAMP NOT NULL,
87     updated_at TIMESTAMP NOT NULL
88 );
89 CREATE TABLE Security_check(
90     security_check_id INT PRIMARY KEY,
91     check_result VARCHAR(20) NOT NULL,
92     created_at TIMESTAMP NOT NULL,
93     updated_at TIMESTAMP NOT NULL,
94     passenger_id INT NOT NULL
95 );
96 ALTER TABLE airline_info RENAME TO airline;
97
Total rows: CRLF Ln 114, Col 42
pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
> Servers
lab2/postgres@PostgreSQL 17* X
lab2/postgres@PostgreSQL 17* X
Query History
Scratch Pad X
Query History
Scratch Pad X
83     country_of_citizenship VARCHAR(50) NOT NULL,
84     country_of_residence VARCHAR(50) NOT NULL,
85     passport_number VARCHAR(20) NOT NULL,
86     created_at TIMESTAMP NOT NULL,
87     updated_at TIMESTAMP NOT NULL
88 );
89 CREATE TABLE Security_check(
90     security_check_id INT PRIMARY KEY,
91     check_result VARCHAR(20) NOT NULL,
92     created_at TIMESTAMP NOT NULL,
93     updated_at TIMESTAMP NOT NULL,
94     passenger_id INT NOT NULL
95 );
96 ALTER TABLE airline_info RENAME TO airline;
97
ALTER TABLE Booking RENAME COLUMN price TO ticket_price;
98
ALTER TABLE Flights ALTER COLUMN departing_gate TYPE TEXT;
99
ALTER TABLE airline DROP COLUMN info;
100
ALTER TABLE Security_check
101 ADD CONSTRAINT fk_passenger_security
102 FOREIGN KEY (passenger_id) REFERENCES Passengers(passenger_id);
103
ALTER TABLE Booking
104 ADD CONSTRAINT fk_passenger_booking
105 FOREIGN KEY (passenger_id) REFERENCES Passengers(passenger_id);
106
ALTER TABLE Baggage_check
107 ADD CONSTRAINT fk_passenger_booking_check
108 FOREIGN KEY (passenger_id) REFERENCES Passengers(passenger_id);
109
110
111
112
113
114
115
Total rows: CRLF Ln 114, Col 42

```

# DML

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Query History

```
1 COPY Airport(airport_id, airport_name, country, state, city, created_at, updated_at)
2 FROM 'C:/airports.csv'
3 DELIMITER ',';
4 CSV HEADER;
```

Scratch Pad

Scratch Pad

Data Output Messages Notifications

Showing rows: 1 to 10 Page No: 1 of 1

airport_id	airport_name	country	state	city	created_at	updated_at
2	Airport_2	Country_3	State_3	City_2	2025-09-23 18:37:35	2025-09-23 18:37:35
3	Airport_3	Country_4	State_4	City_3	2025-09-23 18:37:35	2025-09-23 18:37:35
4	Airport_4	Country_5	State_5	City_4	2025-09-23 18:37:35	2025-09-23 18:37:35
5	Airport_5	Country_6	State_6	City_5	2025-09-23 18:37:35	2025-09-23 18:37:35
6	Airport_6	Country_7	State_7	City_6	2025-09-23 18:37:35	2025-09-23 18:37:35
7	Airport_7	Country_8	State_8	City_7	2025-09-23 18:37:35	2025-09-23 18:37:35
8	Airport_8	Country_9	State_9	City_8	2025-09-23 18:37:35	2025-09-23 18:37:35
9	Airport_9	Country_10	State_10	City_9	2025-09-23 18:37:35	2025-09-23 18:37:35
10	Airport_10	Country_11	State_11	City_10	2025-09-23 18:37:35	2025-09-23 18:37:35

Total rows: 10 Query complete 00:00:00.068

LF Ln 4, Col 12

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Query History

```
1 INSERT INTO airline (airline_id, airline_code, airline_name, airline_country, created_at, updated_at)
2 VALUES (1, 'KZ001', 'KazAir', 'Kazakhstan', NOW(), NOW());
3
4 SELECT * FROM airline;
```

Scratch Pad

Data Output Messages Notifications

Showing rows: 1 to 1 Page No: 1 of 1

airline_id	airline_code	airline_name	airline_country	created_at	updated_at
1	KZ001	KazAir	Kazakhstan	2025-09-24 00:14:29.241882	2025-09-24 00:14:29.241882

Total rows: 1 Query complete 00:00:00.084

LF Ln 4, Col 1

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Query History

```
1 UPDATE airline
2 SET airline_country = 'Turkey',
3     updated_at = NOW()
4 WHERE airline_name = 'KazAir';
5
6
7 SELECT * FROM airline;
```

Data Output Messages Notifications

	airline_id	airline_code	airline_name	airline_country	created_at	updated_at
1	1	KZ001	KazAir	Turkey	2025-09-24 00:14:29.241882	2025-09-24 00:15:29.69134

Total rows: 1 Query complete 00:00:00.049 LF Ln 7, Col 23

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Query History

```
1 INSERT INTO airline (airline_id, airline_code, airline_name, airline_country, created_at)
2 VALUES
3 (2, 'FR001', 'AirEasy', 'France', NOW(), NOW()),
4 (3, 'BR001', 'FlyHigh', 'Brazil', NOW(), NOW()),
5 (4, 'PL001', 'FlyFly', 'Poland', NOW(), NOW());
6
7
8 SELECT * FROM airline;
```

Data Output Messages Notifications

	airline_id	airline_code	airline_name	airline_country	created_at	updated_at
1	1	KZ001	KazAir	Turkey	2025-09-24 00:14:29.241882	2025-09-24 00:15:29.69134
2	2	FR001	AirEasy	France	2025-09-24 00:16:00.605389	2025-09-24 00:16:00.605389
3	3	BR001	FlyHigh	Brazil	2025-09-24 00:16:00.605389	2025-09-24 00:16:00.605389
4	4	PL001	FlyFly	Poland	2025-09-24 00:16:00.605389	2025-09-24 00:16:00.605389

✓ Successfully run. Total query runtime: 50 msec. 4 rows affected. LF Ln 6, Col 1

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

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  
5  
6  
7 SELECT * FROM Flights;
```

Data Output Messages Notifications

flight\_id [PK] integer sch\_departure\_time timestamp without time zone sch\_arrival\_time timestamp without time zone departing\_airport\_id integer arriving\_airport\_id integer departing\_gate text arriving\_gate character varying (50) airline\_id integer

Total rows: 0 Query complete 00:00:00.053 ✓ Successfully run. Total query runtime: 53 msec. 0 rows affected. LF Ln 7, Col 23

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Query History

```
1 UPDATE Booking  
2 SET ticket_price = ticket_price * 1.15,  
3 updated_at = NOW();  
4  
5  
6 SELECT * FROM Booking;
```

Data Output Messages Notifications

booking\_id [PK] integer flight\_id integer passenger\_id integer booking\_platform character varying (50) created\_at timestamp without time zone updated\_at timestamp without time zone status character varying (50) ticket\_price numeric (7,2)

Total rows: 0 Query complete 00:00:00.067 ✓ Successfully run. Total query runtime: 67 msec. 0 rows affected. LF Ln 1, Col 1

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

lab2.sql\* lab2/postgres@PostgreSQL 17

Query History

```
1 DELETE FROM Booking
2 WHERE ticket_price < 10000;
3
4
5 SELECT * FROM Booking;
```

Scratch Pad

Data Output Messages Notifications

SQL

booking_id	[PK] integer	flight_id	integer	passenger_id	integer	booking_platform	character varying (50)	created_at	timestamp without time zone	updated_at	timestamp without time zone	status	character varying (50)	ticket_price	numeric (7,2)
------------	--------------	-----------	---------	--------------	---------	------------------	------------------------	------------	-----------------------------	------------	-----------------------------	--------	------------------------	--------------	---------------

Total rows: 0 Query complete 00:00:00.051

✓ Successfully run. Total query runtime: 51 msec. 0 rows affected. ✘

LF Ln 5, Col 22

The screenshot shows the pgAdmin 4 interface. In the Object Explorer, under the 'Tables' section, there is a table named 'airline'. The 'Columns' tab is selected, showing six columns: airline\_id, airline\_code, airline\_name, airline\_country, created\_at, and updated\_at. The 'Query' tab contains two SQL statements: a DELETE statement that removes all bookings where the ticket price is less than 10,000, and a SELECT statement that retrieves all columns from the Booking table. The Data Output tab shows the schema of the Booking table with its columns and data types. A message at the bottom indicates that the query was successfully run with a runtime of 51 msec and 0 rows affected.