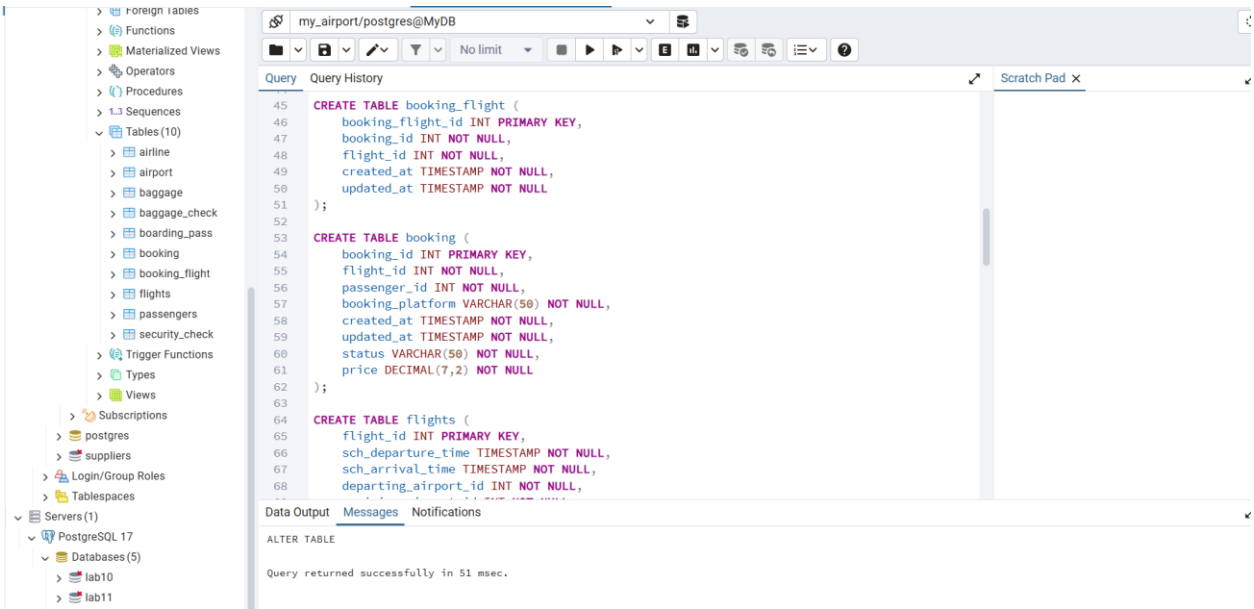
DDL

1,2,4

```
CREATE TABLE airline_info (
    airline_id INT PRIMARY KEY,
    airline_code VARCHAR(30) NOT NULL,
    airline_name VARCHAR(50) NOT NULL,
    airline_country VARCHAR(50) NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL,
    info VARCHAR(50) NOT NULL
);

CREATE TABLE airport (
    airport_id INT PRIMARY KEY,
    airport_name VARCHAR(50) NOT NULL,
    country VARCHAR(50) NOT NULL,
    state VARCHAR(50) NOT NULL,
    city VARCHAR(50) NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL
);
CREATE TABLE baggage_check (
    baggage_check_id INT PRIMARY KEY,
    check_result VARCHAR(50) NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL,
```

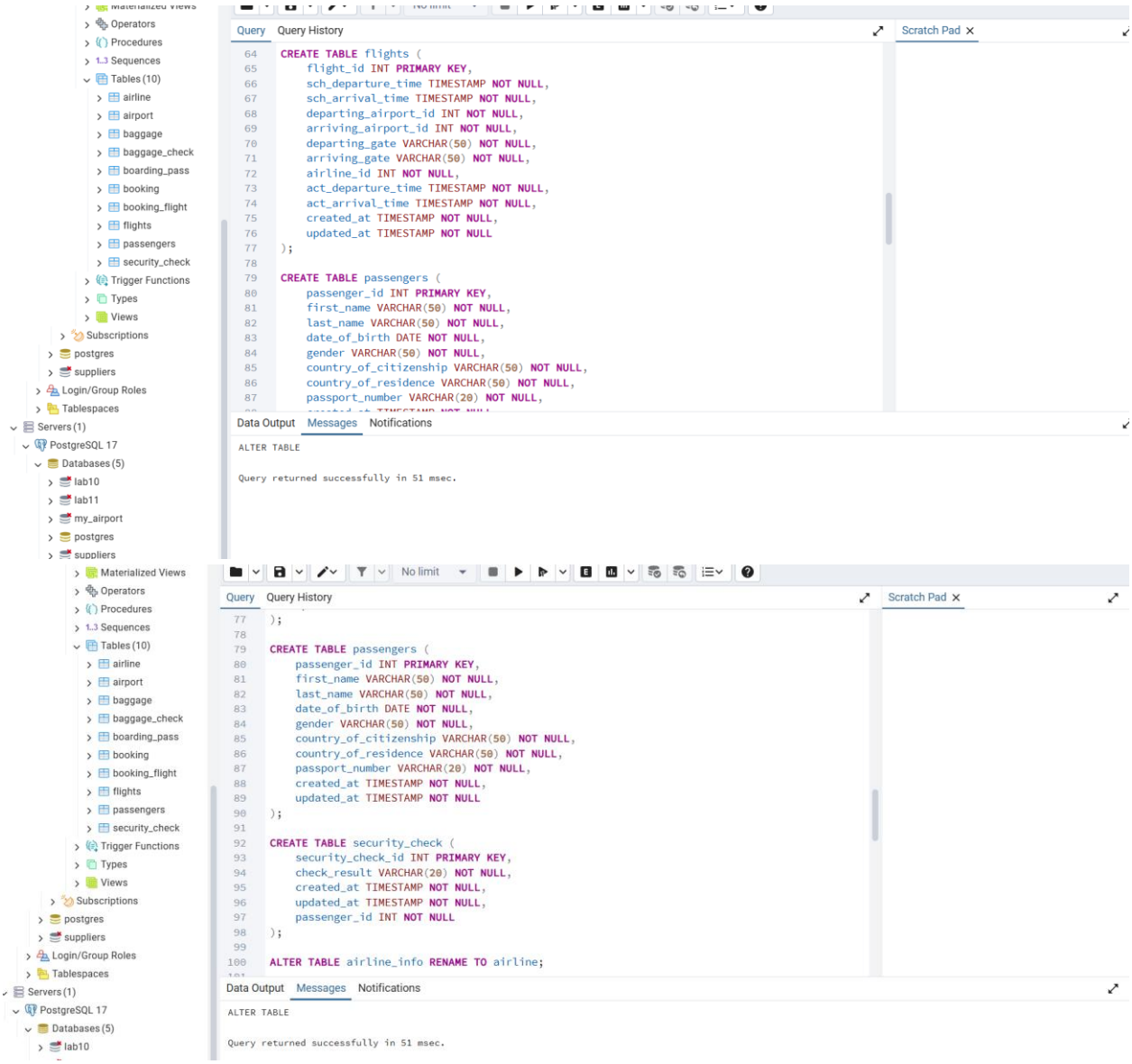
```
CREATE TABLE baggage_check (
    baggage_check_id INT PRIMARY KEY,
    check_result VARCHAR(50) NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL,
    booking_id INT NOT NULL,
    passenger_id INT NOT NULL
);
CREATE TABLE baggage (
    baggage_id INT PRIMARY KEY,
    weight_in_kg DECIMAL(4,2) NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL,
    booking_id INT NOT NULL
);

CREATE TABLE boarding_pass (
    boarding_pass_id INT PRIMARY KEY,
    booking_id INT NOT NULL,
    seat VARCHAR(50) NOT NULL,
    boarding_time TIMESTAMP NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL
);
```

```
ALTER TABLE

Query returned successfully in 51 msec.
```



```
CREATE TABLE booking_flight (
    booking_flight_id INT PRIMARY KEY,
    booking_id INT NOT NULL,
    flight_id INT NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL
);

CREATE TABLE booking (
    booking_id INT PRIMARY KEY,
    flight_id INT NOT NULL,
    passenger_id INT NOT NULL,
    booking_platform VARCHAR(50) NOT NULL,
    created_at TIMESTAMP NOT NULL,
    updated_at TIMESTAMP NOT NULL,
    status VARCHAR(50) NOT NULL,
    price DECIMAL(7,2) NOT NULL
);

CREATE TABLE flights (
    flight_id INT PRIMARY KEY,
    sch_departure_time TIMESTAMP NOT NULL,
    sch_arrival_time TIMESTAMP NOT NULL,
    departing_airport_id INT NOT NULL,
```

```
ALTER TABLE

Query returned successfully in 51 msec.
```



5.

6.

```
ALTER TABLE booking RENAME COLUMN price TO ticket_price;
```

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)

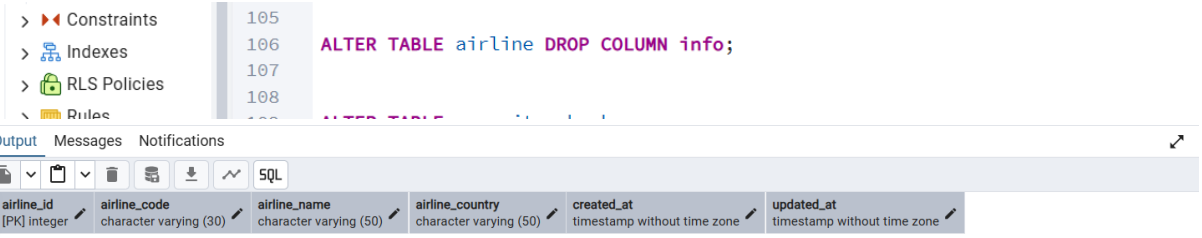
7.

```
ALTER TABLE flights ALTER COLUMN departing_gate TYPE text;
```

Data Output Messages Notifications

,departure_time stamp 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	act_departure_time timestamp without time zone

8.



Successfully run. Total query runtime: 71 msec. 0 rows affected.

9.

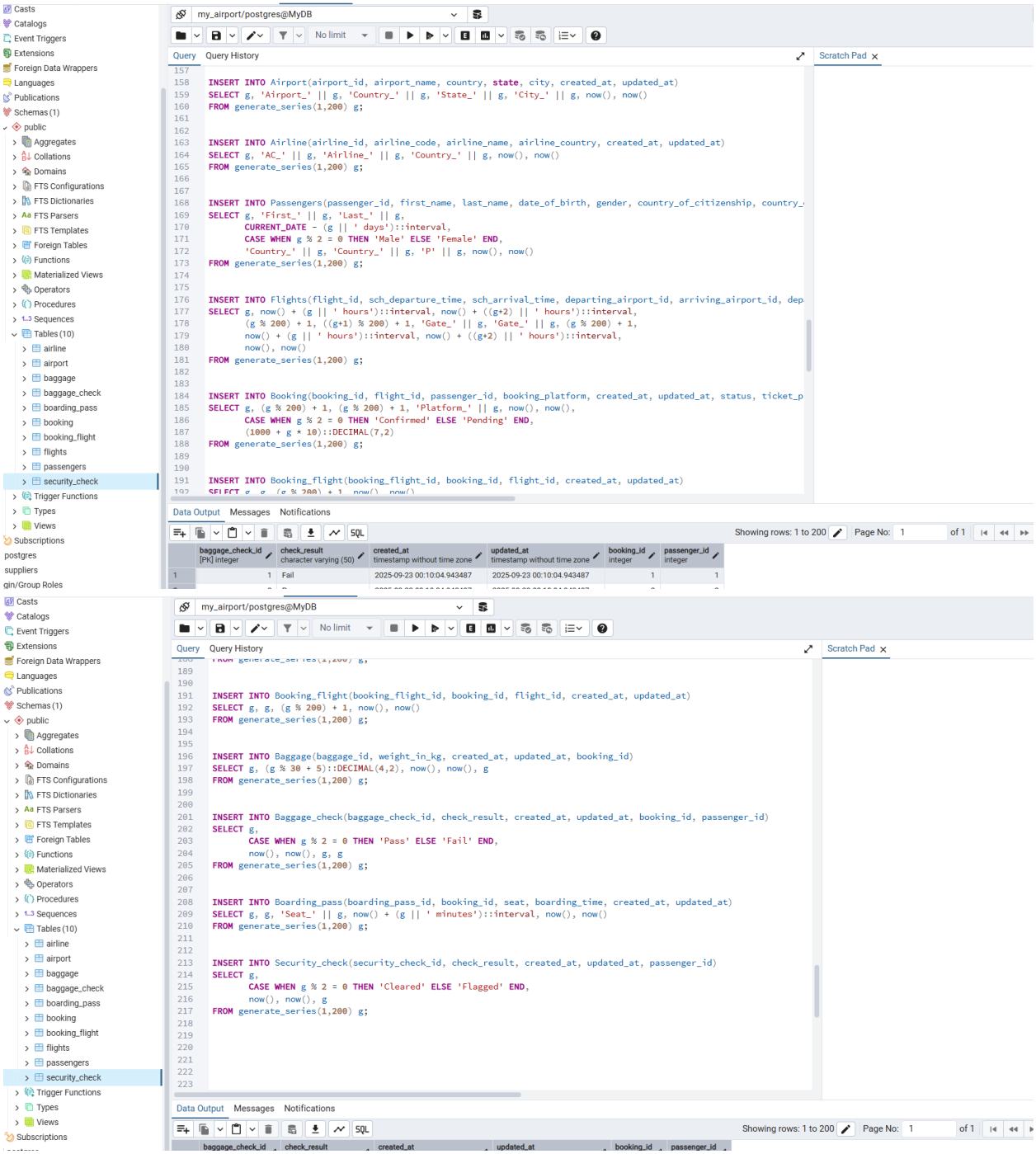
```
108
109 ALTER TABLE security_check
110 ADD CONSTRAINT fk_security_passenger FOREIGN KEY (passenger_id)
111 REFERENCES passengers (passenger_id);
112
113
114 ALTER TABLE booking
115 ADD CONSTRAINT fk_booking_passenger FOREIGN KEY (passenger_id)
116 REFERENCES passengers (passenger_id);
117
118
119 ALTER TABLE baggage_check
120 ADD CONSTRAINT fk_baggage_check_passenger FOREIGN KEY (passenger_id)
121 REFERENCES passengers (passenger_id);
122
123
```

```sql
ALTER TABLE baggage_check
ADD CONSTRAINT fk_baggage_check_booking FOREIGN KEY (booking_id)
REFERENCES booking (booking_id);

ALTER TABLE baggage
ADD CONSTRAINT fk_baggage_booking FOREIGN KEY (booking_id)
REFERENCES booking (booking_id);

ALTER TABLE boarding_pass
ADD CONSTRAINT fk_boarding_pass_booking FOREIGN KEY (booking_id)
REFERENCES booking (booking_id);
```

```sql
ALTER TABLE booking_flight
ADD CONSTRAINT fk_booking_flight_booking FOREIGN KEY (booking_id)
REFERENCES booking (booking_id);

ALTER TABLE booking_flight
ADD CONSTRAINT fk_booking_flight_flight FOREIGN KEY (flight_id)
REFERENCES flights (flight_id);

ALTER TABLE flights
ADD CONSTRAINT fk_flight_departure_airport FOREIGN KEY (departing_airport_id)
REFERENCES airport (airport_id);

ALTER TABLE flights
ADD CONSTRAINT fk_flight_arrival_airport FOREIGN KEY (arriving_airport_id)
REFERENCES airport (airport_id);

ALTER TABLE flights
ADD CONSTRAINT fk_flight_airline FOREIGN KEY (airline_id)
REFERENCES airline (airline_id);
```

DML

1.


my_airport/postgres@MyDB
No limit
Query
Query History
Scratch Pad
INSERT INTO Airport(airport_id, airport_name, country, state, city, created_at, updated_at)
SELECT g, 'Airport_' || g, 'Country_' || g, 'State_' || g, 'City_' || g, now(), now()
FROM generate_series(1,200) g;
INSERT INTO Airline(airline_id, airline_code, airline_name, airline_country, created_at, updated_at)
SELECT g, 'AC_' || g, 'Airline_' || g, 'Country_' || g, now(), now()
FROM generate_series(1,200) g;
INSERT INTO Passengers(passenger_id, first_name, last_name, date_of_birth, gender, country_of_citizenship, country_
SELECT g, 'First_' || g, 'Last_' || g,
CURRENT_DATE - (g || ' days')::interval,
CASE WHEN g % 2 = 0 THEN 'Male' ELSE 'Female' END,
'Country_' || g, 'Country_' || g, 'P' || g, now(), now()
FROM generate_series(1,200) g;
INSERT INTO Flights(flight_id, sch_departure_time, sch_arrival_time, departing_airport_id, arriving_airport_id, dep
SELECT g, now() + (g || ' hours')::interval, now() + ((g+2) || ' hours')::interval,
(g % 200) + 1, ((g+1) % 200) + 1, 'Gate_' || g, 'Gate_' || g, (g % 200) + 1,
now() + (g || ' hours')::interval, now() + ((g+2) || ' hours')::interval,
now(), now()
FROM generate_series(1,200) g;
INSERT INTO Booking(booking_id, flight_id, passenger_id, booking_platform, created_at, updated_at, status, ticket_p
SELECT g, (g % 200) + 1, (g % 200) + 1, 'Platform_' || g, now(), now(),
CASE WHEN g % 2 = 0 THEN 'Confirmed' ELSE 'Pending' END,
(1000 + g * 10)::DECIMAL(7,2)
FROM generate_series(1,200) g;
INSERT INTO Booking_flight(booking_flight_id, booking_id, flight_id, created_at, updated_at)
Data Output
Messages
Notifications
Showing rows: 1 to 200
Page No: 1
of 1
baggage_check_id [PK] integer
check_result character varying (50)
created_at timestamp without time zone
updated_at timestamp without time zone
booking_id integer
passenger_id integer
1 Fail 2025-09-23 00:10:04.943487 2025-09-23 00:10:04.943487 1 1
Casts
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Foreign Tables
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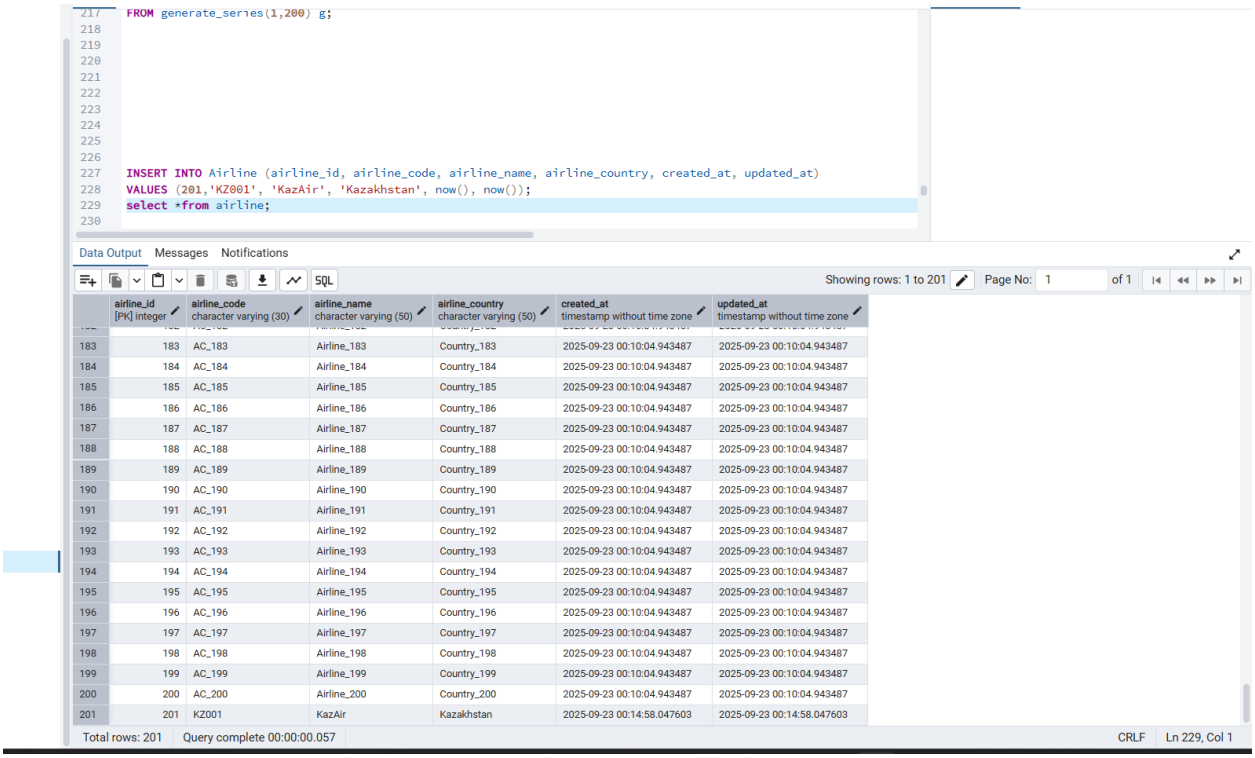
Procedures
Sequences
Tables (10)
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Views
Subscriptions
postgres
suppliers
qin/Group Roles
INSERT INTO Booking_flight(booking_flight_id, booking_id, flight_id, created_at, updated_at)
SELECT g, g, (g % 200) + 1, now(), now()
FROM generate_series(1,200) g;
INSERT INTO Baggage(baggage_id, weight_in_kg, created_at, updated_at, booking_id)
SELECT g, (g % 30 + 5)::DECIMAL(4,2), now(), now(), g
FROM generate_series(1,200) g;
INSERT INTO Baggage_check(baggage_check_id, check_result, created_at, updated_at, booking_id, passenger_id)
SELECT g,
CASE WHEN g % 2 = 0 THEN 'Pass' ELSE 'Fail' END,
now(), now(), g, g
FROM generate_series(1,200) g;
INSERT INTO Boarding_pass(boarding_pass_id, booking_id, seat, boarding_time, created_at, updated_at)
SELECT g, g, 'Seat_' || g, now() + (g || ' minutes')::interval, now(), now()
FROM generate_series(1,200) g;
INSERT INTO Security_check(security_check_id, check_result, created_at, updated_at, passenger_id)
SELECT g,
CASE WHEN g % 2 = 0 THEN 'Cleared' ELSE 'Flagged' END,
now(), now(), g
FROM generate_series(1,200) g;

2.



```
FROM generate_series(1,200) g;


INSERT INTO Airline (airline_id, airline_code, airline_name, airline_country, created_at, updated_at)
VALUES (201,'KZ001', 'KazAir', 'Kazakhstan', now(), now());
select *from airline;
```

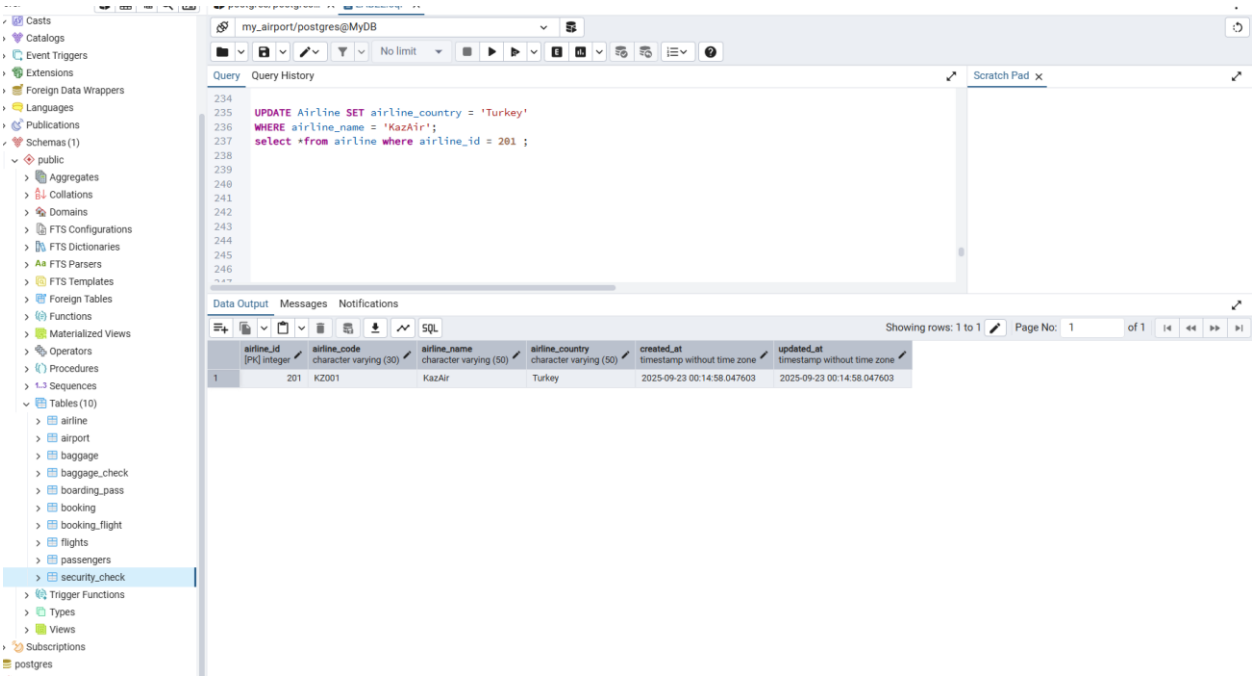
Data Output | Messages | Notifications

Showing rows: 1 to 201 | Page No: 1 of 1

	airline_id [PK] integer	airline_code character varying (30)	airline_name character varying (50)	airline_country character varying (50)	created_at timestamp without time zone	updated_at timestamp without time zone
183	183	AC_183	Airline_183	Country_183	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
184	184	AC_184	Airline_184	Country_184	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
185	185	AC_185	Airline_185	Country_185	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
186	186	AC_186	Airline_186	Country_186	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
187	187	AC_187	Airline_187	Country_187	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
188	188	AC_188	Airline_188	Country_188	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
189	189	AC_189	Airline_189	Country_189	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
190	190	AC_190	Airline_190	Country_190	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
191	191	AC_191	Airline_191	Country_191	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
192	192	AC_192	Airline_192	Country_192	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
193	193	AC_193	Airline_193	Country_193	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
194	194	AC_194	Airline_194	Country_194	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
195	195	AC_195	Airline_195	Country_195	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
196	196	AC_196	Airline_196	Country_196	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
197	197	AC_197	Airline_197	Country_197	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
198	198	AC_198	Airline_198	Country_198	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
199	199	AC_199	Airline_199	Country_199	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
200	200	AC_200	Airline_200	Country_200	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
201	201	KZ001	KazAir	Kazakhstan	2025-09-23 00:14:58.047603	2025-09-23 00:14:58.047603

Total rows: 201 | Query complete 00:00:00.057 | CRLF | Ln 229, Col 1

3.



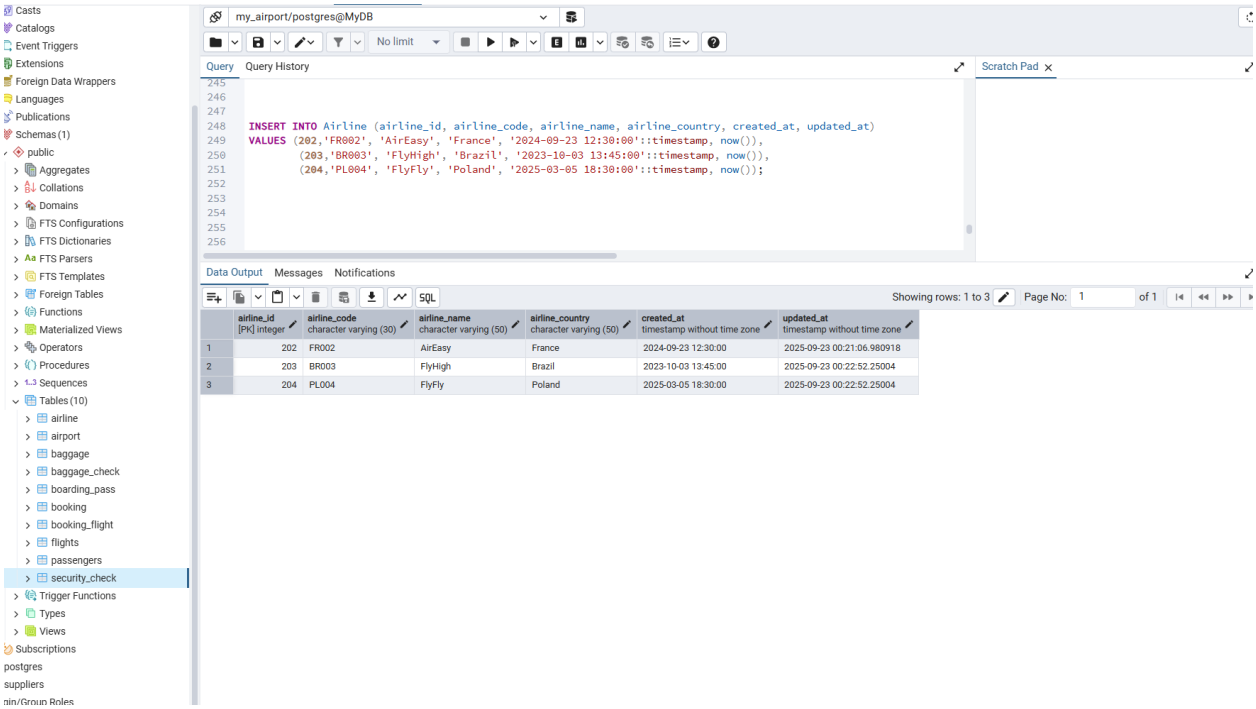
```
UPDATE Airline SET airline_country = 'Turkey'
WHERE airline_name = 'KazAir';
select *from airline where airline_id = 201 ;
```

Data Output | Messages | Notifications

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

	airline_id [PK] integer	airline_code character varying (30)	airline_name character varying (50)	airline_country character varying (50)	created_at timestamp without time zone	updated_at timestamp without time zone
1	201	KZ001	KazAir	Turkey	2025-09-23 00:14:58.047603	2025-09-23 00:14:58.047603

4.


my_airport/postgres@MyDB
No limit
Query
Query History
Scratch Pad
INSERT INTO Airline (airline_id, airline_code, airline_name, airline_country, created_at, updated_at)
VALUES (202,'FR002', 'AirEasy', 'France', '2024-09-23 12:30:00'::timestamp, now()),
(203,'BR003', 'FlyHigh', 'Brazil', '2023-10-03 13:45:00'::timestamp, now()),
(204,'PL004', 'FlyFly', 'Poland', '2025-03-05 18:30:00'::timestamp, now());
Data Output
Messages
Notifications
Showing rows: 1 to 3
Page No: 1 of 1
airline_id [PK] integer
airline_code character varying (30)
airline_name character varying (50)
airline_country character varying (50)
created_at timestamp without time zone
updated_at timestamp without time zone
1 202 FR002 AirEasy France 2024-09-23 12:30:00 2025-09-23 00:21:06.980918
2 203 BR003 FlyHigh Brazil 2023-10-03 13:45:00 2025-09-23 00:22:52.25004
3 204 PL004 FlyFly Poland 2025-03-05 18:30:00 2025-09-23 00:22:52.25004
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Sequences
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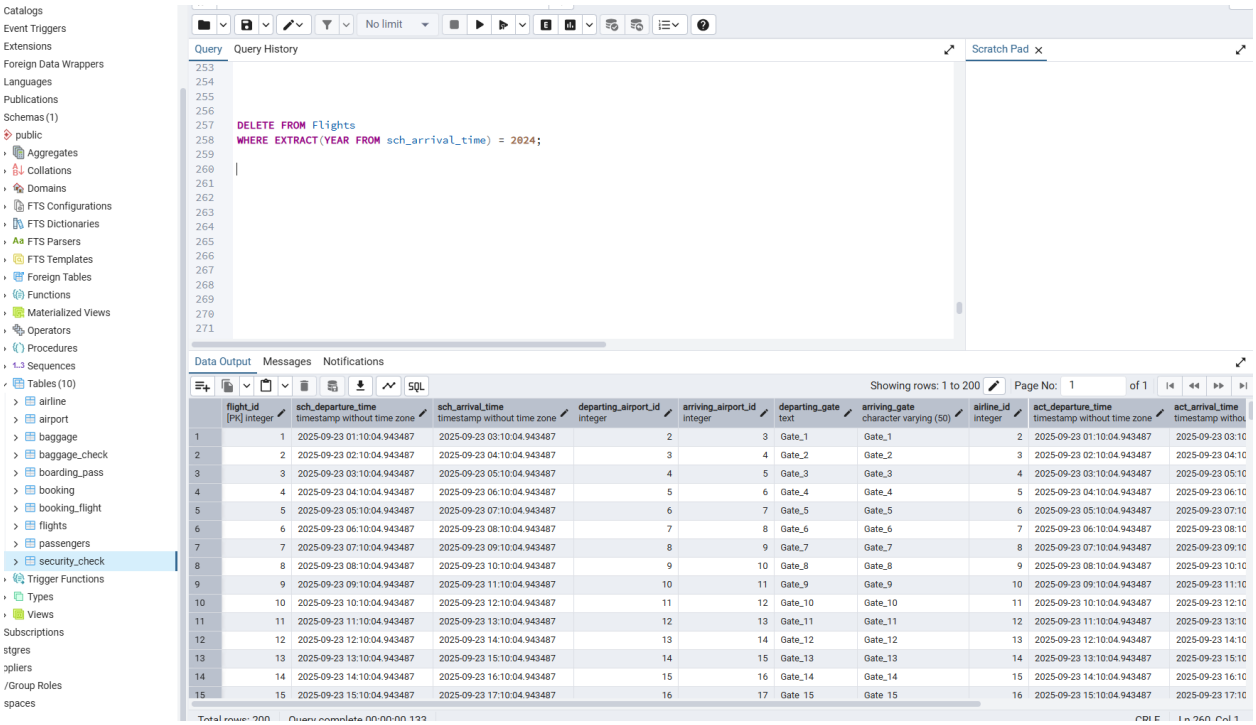
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Views
Subscriptions
postgres
suppliers

5.


No limit
Query
Query History
Scratch Pad
DELETE FROM Flights
WHERE EXTRACT(YEAR FROM sch_arrival_time) = 2024;
Data Output
Messages
Notifications
Showing rows: 1 to 200
Page No: 1 of 1
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
act_departure_time timestamp without time zone
act_arrival_time timestamp without time zone
1 1 2025-09-23 01:10:04.943487 2025-09-23 03:10:04.943487 2 3 Gate_1 Gate_1 2 2025-09-23 01:10:04.943487 2025-09-23 03:10:04.943487
2 2 2025-09-23 02:10:04.943487 2025-09-23 04:10:04.943487 3 4 Gate_2 Gate_2 3 2025-09-23 02:10:04.943487 2025-09-23 04:10:04.943487
3 3 2025-09-23 03:10:04.943487 2025-09-23 05:10:04.943487 4 5 Gate_3 Gate_3 4 2025-09-23 03:10:04.943487 2025-09-23 05:10:04.943487
4 4 2025-09-23 04:10:04.943487 2025-09-23 06:10:04.943487 5 6 Gate_4 Gate_4 5 2025-09-23 04:10:04.943487 2025-09-23 06:10:04.943487
5 5 2025-09-23 05:10:04.943487 2025-09-23 07:10:04.943487 6 7 Gate_5 Gate_5 6 2025-09-23 05:10:04.943487 2025-09-23 07:10:04.943487
6 6 2025-09-23 06:10:04.943487 2025-09-23 08:10:04.943487 7 8 Gate_6 Gate_6 7 2025-09-23 06:10:04.943487 2025-09-23 08:10:04.943487
7 7 2025-09-23 07:10:04.943487 2025-09-23 09:10:04.943487 8 9 Gate_7 Gate_7 8 2025-09-23 07:10:04.943487 2025-09-23 09:10:04.943487
8 8 2025-09-23 08:10:04.943487 2025-09-23 10:10:04.943487 9 10 Gate_8 Gate_8 9 2025-09-23 08:10:04.943487 2025-09-23 10:10:04.943487
9 9 2025-09-23 09:10:04.943487 2025-09-23 11:10:04.943487 10 11 Gate_9 Gate_9 10 2025-09-23 09:10:04.943487 2025-09-23 11:10:04.943487
10 10 2025-09-23 10:10:04.943487 2025-09-23 12:10:04.943487 11 12 Gate_10 Gate_10 11 2025-09-23 10:10:04.943487 2025-09-23 12:10:04.943487
11 11 2025-09-23 11:10:04.943487 2025-09-23 13:10:04.943487 12 13 Gate_11 Gate_11 12 2025-09-23 11:10:04.943487 2025-09-23 13:10:04.943487
12 12 2025-09-23 12:10:04.943487 2025-09-23 14:10:04.943487 13 14 Gate_12 Gate_12 13 2025-09-23 12:10:04.943487 2025-09-23 14:10:04.943487
13 13 2025-09-23 13:10:04.943487 2025-09-23 15:10:04.943487 14 15 Gate_13 Gate_13 14 2025-09-23 13:10:04.943487 2025-09-23 15:10:04.943487
14 14 2025-09-23 14:10:04.943487 2025-09-23 16:10:04.943487 15 16 Gate_14 Gate_14 15 2025-09-23 14:10:04.943487 2025-09-23 16:10:04.943487
15 15 2025-09-23 15:10:04.943487 2025-09-23 17:10:04.943487 16 17 Gate 15 Gate 15 16 2025-09-23 15:10:04.943487 2025-09-23 17:10:04.943487
Catalogs
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Foreign Data Wrappers
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public
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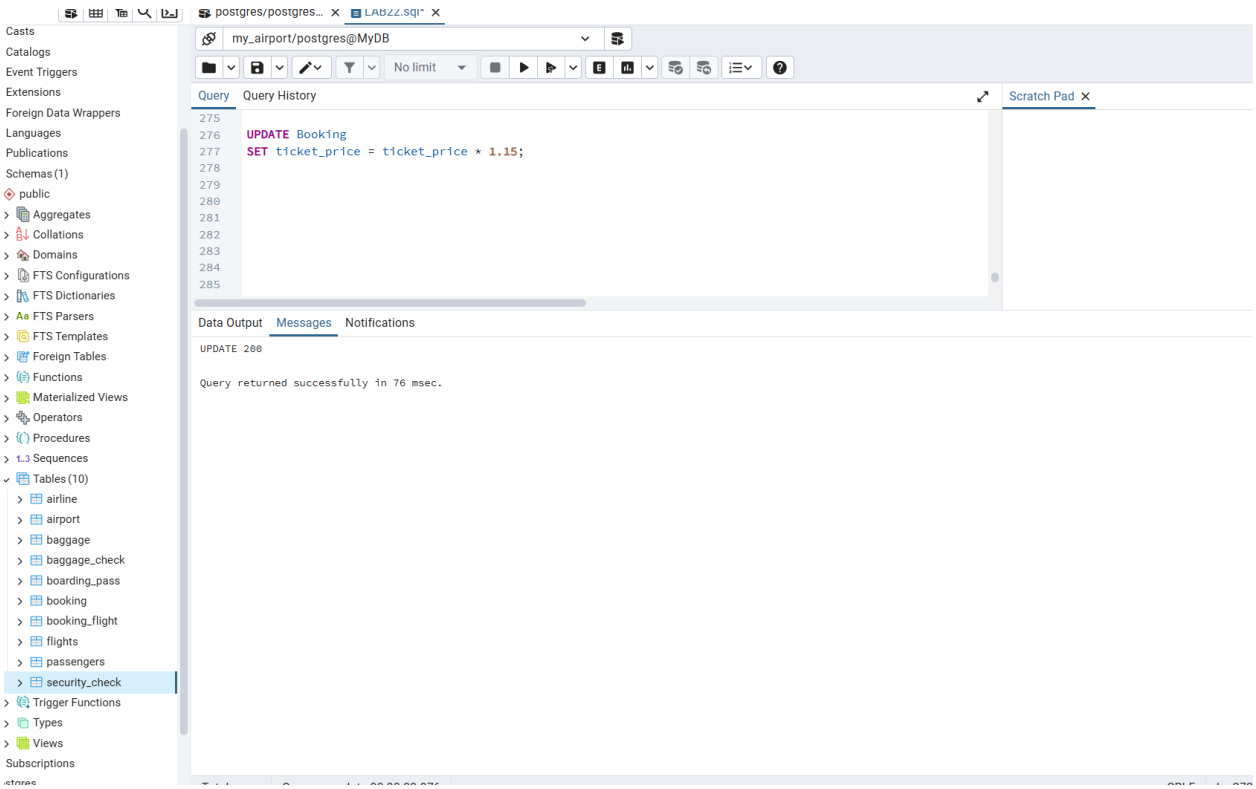
FTS Configurations
FTS Dictionaries
FTS Parsers
FTS Templates
Foreign Tables
Functions
Materialized Views
Operators
Procedures
Sequences
Tables (10)
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Views
Subscriptions

6.


postgres/postgres...
LAB22.sql*
my_airport/postgres@MyDB
No limit
Query
Query History
Scratch Pad
UPDATE Booking
SET ticket_price = ticket_price * 1.15;
Data Output
Messages
Notifications
UPDATE 200
Query returned successfully in 76 msec.
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas (1)
public
Aggregates
Collations
Domains
FTS Configurations
FTS Dictionaries
FTS Parsers
FTS Templates
Foreign Tables
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Materialized Views
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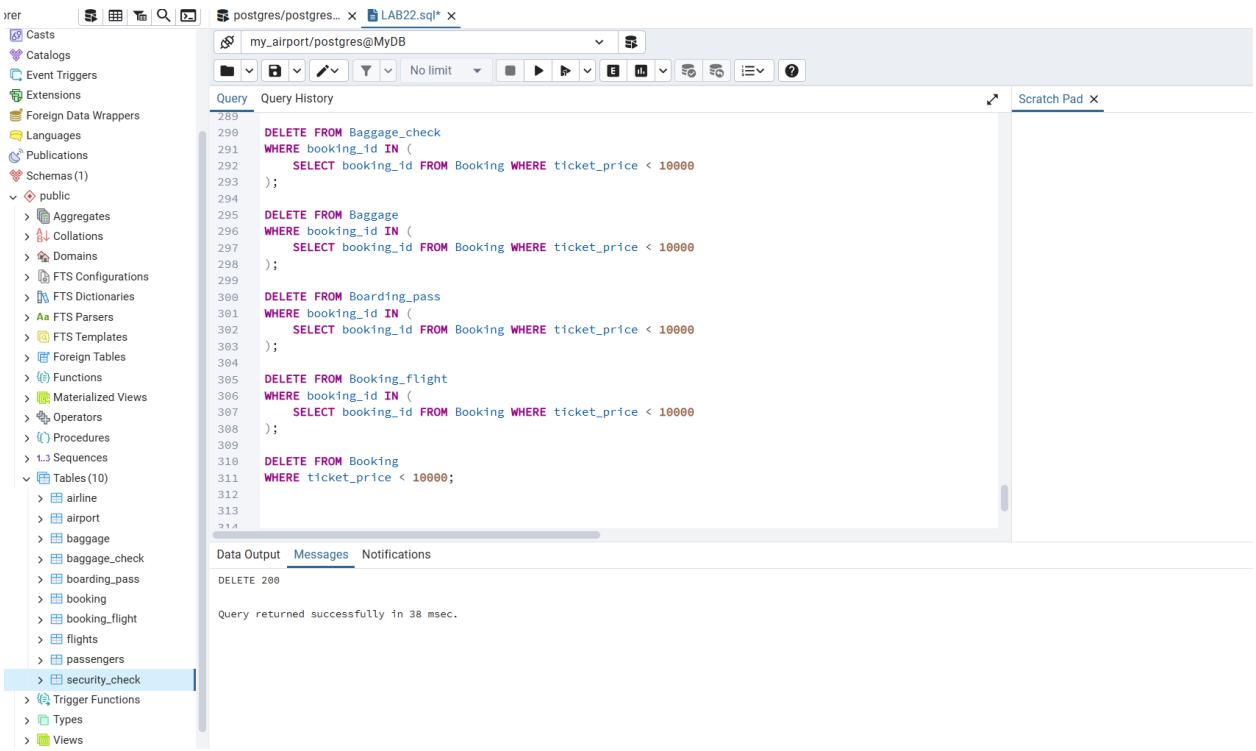
Procedures
Sequences
Tables (10)
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Views
Subscriptions

7.


postgres/postgres...
LAB22.sql*
my_airport/postgres@MyDB
No limit
Query
Query History
Scratch Pad
DELETE FROM Baggage_check
WHERE booking_id IN (
SELECT booking_id FROM Booking WHERE ticket_price < 10000
);
DELETE FROM Baggage
WHERE booking_id IN (
SELECT booking_id FROM Booking WHERE ticket_price < 10000
);
DELETE FROM Boarding_pass
WHERE booking_id IN (
SELECT booking_id FROM Booking WHERE ticket_price < 10000
);
DELETE FROM Booking_flight
WHERE booking_id IN (
SELECT booking_id FROM Booking WHERE ticket_price < 10000
);
DELETE FROM Booking
WHERE ticket_price < 10000;
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DELETE 200
Query returned successfully in 38 msec.
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