

studying main

console console\_4 console\_5 console\_6 console\_7 console\_8 console\_9 console\_10 x airport\_db.sql Files

```
2 create or replace procedure ins_flight (
3     in p_flight_no number
4 )
5
6 language plpgsql
7 as $$
8 begin
9     insert into flights (flight_id, flight_no, scheduled_departure, scheduled_arrival,
10         departure_airport_id, arrival_airport_id, airline_id,
11         actual_arrival, actual_departure)
12     values ( flight_id p_flight_id, flight_no p_flight_no, scheduled_departure p_sched_dep, scheduled_arrival p_sched_arr,
13         departure_airport_id p_dep_id, arrival_airport_id p_arr_id, airline_id p_airline_id, actual_arrival p_act_arr, actual_departure p_act_dep)
14     returning flight_id into p_new_flight_id;
15
16     raise notice 'Inserted flight %', p_flight_no;
17 end;
18 $$;
19
20 call ins_flight(3334, 'Kaz', CURRENT_DATE, CURRENT_DATE, 13, 1, 1, null, CURRENT_DATE, CURRENT_DATE);
```

Services

postgres@localhost

- console\_4
- airport\_db.sql 27 ms
- console\_8
- console\_5
- console
- console\_2
- console\_10 423 ms
- console\_9
- console\_6
- console\_7

Output

p_new_flight_id
3334

Database Consoles > postgres@localhost > console\_10

studying main

console console\_4 console\_5 console\_6 console\_7 console\_8 console\_9 console\_10 x airport\_db.sql Files

```
32 create or replace procedure upd_flight_status (
33     in p_flight_no number,
34     in p_status varchar
35 )
36
37 language plpgsql
38 as $$
39 begin
40     update flights
41     set status = p_status
42     where flight_no = p_flight_no;
43
44     raise notice 'Status updated for flight %', p_flight_no;
45 end;
46 $$;
47
48 call upd_flight_status( p_flight_no 'Kaz', p_status 'DELAYED');
49 --3
```

Services

postgres@localhost

- console\_4
- airport\_db.sql 27 ms
- console\_8
- console\_5
- console
- console\_2
- console\_10 72 ms
- console\_9
- console\_6
- console\_7

Output

p_new_flight_id
3334

Database Consoles > postgres@localhost > console\_10

The screenshot displays the JetBrains DataGrip IDE interface. The main editor window shows a SQL script with the following content:

```

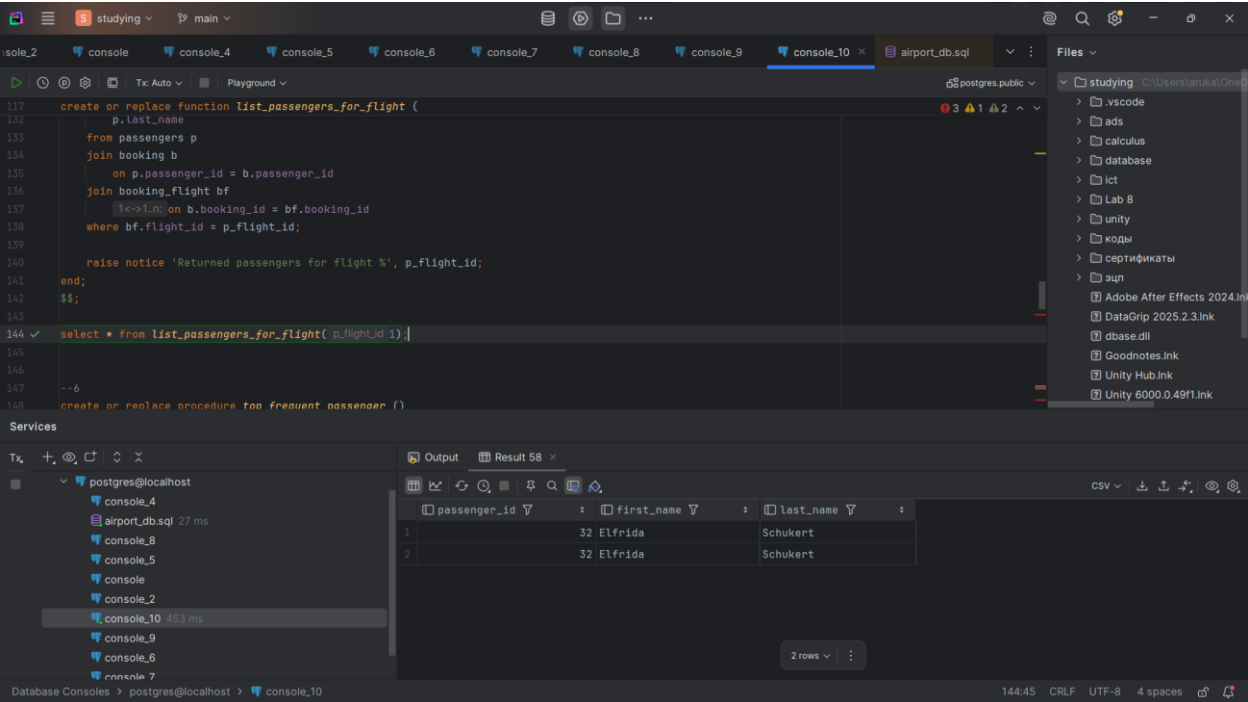
create or replace function get_flights_from_airport (
    p_airport_id int
)
returns table
as
$$
begin
    for f in
        select * from flights
        where f.departure_airport_id = p_airport_id;
    loop
        raise notice 'Returned flights from airport %', p_airport_id;
    end loop;
end;
$$;

```

The script is executed, and the results are displayed in the "Output" tab at the bottom. The results show 49 rows of data, with the first three rows being:

flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id
49	994 US-IN	2023-05-06	2024-03-11	
50	2001 AB-123	2024-05-01	2024-05-02	
51	2002 AB-123	2024-05-01	2024-05-02	

The interface also shows a file explorer on the right side, listing various files and folders, and a "Database Consoles" panel at the bottom left showing the connection to the database.



studying main

console console\_4 console\_5 console\_6 console\_7 console\_8 console\_9 console\_10 airport\_db.sql

```
149 create or replace function passenger_with_most_flights()
150 from passengers p
151 join booking b
152 on p.passenger_id = b.passenger_id
153 join booking_flight bf
154 on b.booking_id = bf.booking_id
155 group by p.passenger_id, p.first_name, p.last_name
156 order by flights_count desc
157 limit 1;
158 end;
159 $$;
160 select * from passenger_with_most_flights();
161 --7
162 create or replace procedure flights_delayed_24h ()
```

Services

postgres@localhost

console\_4 27 ms

airport\_db.sql

console\_5

console

console\_2

console\_10 482 ms

console\_9

console\_6

console\_7

Database Consoles > postgres@localhost > console\_10

Output Result 62

passenger_id	first_name	last_name	flights_count	
1	21	Marillin	Jewess	34

1 row

176:45 CRLF UTF-8 4 spaces

studying main

console console\_4 console\_5 console\_6 console\_7 console\_8 console\_9 console\_10 airport\_db.sql

```
181 create or replace function flights_delayed_24h()
182 return query
183 select
184 f.flight_id,
185 f.flight_no,
186 f.scheduled_departure::timestamp,
187 f.actual_departure::timestamp,
188 (f.actual_departure::timestamp - f.scheduled_departure::timestamp) as delay
189 from flights f
190 where f.actual_departure is not null
191 and (f.actual_departure::timestamp - f.scheduled_departure::timestamp) > interval '24 hours';
192 end;
193 $$;
194 select * from flights_delayed_24h();
195
```

Services

postgres@localhost

console\_4 27 ms

airport\_db.sql

console\_5

console

console\_2

console\_10 507 ms

console\_9

console\_6

console\_7

Database Consoles > postgres@localhost > console\_10

Output Result 64

flight_id	flight_no	scheduled_departure	actual_departure	delay
1	2 US-NM	2023-07-21 00:00:00.000000	2024-02-09 00:00:00.000000	0 years 0 mons 203 days 0 h
2	3 FI-OL	2023-03-29 00:00:00.000000	2024-02-21 00:00:00.000000	0 years 0 mons 329 days 0 h
3	5 RO-DJ	2023-07-03 00:00:00.000000	2023-11-18 00:00:00.000000	0 years 0 mons 138 days 0 h
4	6 CA-SK	2023-07-07 00:00:00.000000	2024-02-19 00:00:00.000000	0 years 0 mons 227 days 0 h
5	7 AU-TAS	2023-10-12 00:00:00.000000	2023-12-04 00:00:00.000000	0 years 0 mons 53 days 0 h
6	9 IN-OR	2023-05-18 00:00:00.000000	2023-06-17 00:00:00.000000	0 years 0 mons 30 days 0 h
7	11 TH-57	2023-03-28 00:00:00.000000	2024-02-06 00:00:00.000000	0 years 0 mons 315 days 0 h

494 rows

205:37 CRLF UTF-8 4 spaces

studying main

console console\_4 console\_5 console\_6 console\_7 console\_8 console\_9 console\_10 airport\_db.sql

```
210 create or replace function flights_per_airline()
211 as $$
212 begin
213     return query
214         select f.airline_id, count(*)
215         from flights f
216         group by f.airline_id;
217 end;
218 $$;
219
220 select * from flights_per_airline();
221
222 --9
223 create or replace procedure avg_ticket_price (
224     in p_flight_no varchar
225 )
```

Services

postgres@localhost

- console\_4
- airport\_db.sql 27 ms
- console\_8
- console\_5
- console
- console\_2
- console\_10 392 ms
- console\_9
- console\_6
- console\_7

Output Result 68

airline_id	flights_count
1	42
2	29
3	4
4	34
5	41
6	40
7	46

50 rows

Database Consoles > postgres@localhost > console\_10

225:37 CRLF UTF-8 4 spaces

studying main

console console\_4 console\_5 console\_6 console\_7 console\_8 console\_9 console\_10 airport\_db.sql

```
229 create or replace function avg_price(
230     in p_flight_id varchar
231 )
232 begin
233     select avg(price)
234     into v_avg
235     from booking b
236     join booking_flight bf on b.booking_id=bf.booking_id
237     where bf.flight_id=p_flight_id;
238
239     return v_avg;
240 end;
241 $$;
242
243 select avg_price(p_flight_id 3334);
244
245 --10
246 create or replace procedure most_expensive_f_
247
```

Services

postgres@localhost

- console\_4
- airport\_db.sql 27 ms
- console\_8
- console\_5
- console
- console\_2
- console\_10 395 ms
- console\_9
- console\_6
- console\_7

Output avg\_price(3334):numeric

avg_price
<null>

1 row

Database Consoles > postgres@localhost > console\_10

248:24 CRLF UTF-8 4 spaces

studying main

console console\_4 console\_5 console\_6 console\_7 console\_8 console\_9 console\_10 x airport\_db.sql

```
251 create or replace function most_expensive_flight()
252   $$
253   begin
254     with bf as (
255       select f.flight_id, b.booking_id, b.price
256       from flights f
257       join booking b
258       on f.flight_id = bf.flight_id
259       order by b.price desc
260       limit 1;
261     end;
262     $$;
```

279 ✓ select \* from most\_expensive\_flight();

Services

postgres@localhost

- console\_4
- airport\_db.sql 27 ms
- console\_8
- console\_5
- console
- console\_2
- console\_10 439 ms
- console\_9
- console\_6
- console\_7

Output Result 75

flight_id	flight_no	departure_airport_id	arrival_airport_id	price
1	915 NP-SA	10	7	9977.57

1 row

Database Consoles > postgres@localhost > console\_10

279:39 CRLF UTF-8 4 spaces