

## Lab work 6

pgAdmin 4

File Object Tools Edit View Window Help

Processes X suppliers/postgres@PostgreSQL 17\* X public.booking/su...

Object Explorer

- Servers
  - PostgreSQL 17
    - Databases (2)
      - postgres
        - suppliers
          - Cast
          - 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
              - Functions
              - Materialized Views
              - Operators
              - Procedures
              - Sequences
              - Tables (10)
                - airline
                - airport
                - baggage
                - baggage\_check
                - boarding\_pass
                - booking
                - booking\_flight

Query

```

1 SELECT * FROM flights f JOIN airline a ON f.airline_id = a.airline_id
2 WHERE a.airline_id = 1;
3
4 --2
5 SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
6
7 --3
8 SELECT a.* FROM airline a LEFT JOIN flights f ON a.airline_id = f.airline_id AND f.scheduled_de
9 WHERE f.flight_id IS NULL;
10
11 --4
12 SELECT * FROM passengers p
13 JOIN booking b ON p.passenger_id = b.passenger_id
14 JOIN booking_flight bk ON bk.booking_id = b.booking_id
15 JOIN flights f ON f.flight_id = bk.flight_id
16 WHERE f.flight_id = 1;

```

Execute script (F5)

Data Output Messages Notifications

Showing rows: 1 to 32 Page No: 1 of 1

flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	departing_gate	arriving_gate	airline_id
1	13	BR-PE	2024-01-16	2023-06-02	13	20	1891	5429
2	33	MZ-G	2023-09-21	2023-11-29	4	19	[null]	9380
3	36	AU-NT	2023-03-29	2023-05-06	12	14	[null]	13
4	73	FR-K	2023-12-26	2023-04-30	18	9	144	23
5	78	US-VT	2023-08-28	2023-08-02	20	11	335	515
6	143	PH-BUK	2023-08-20	2023-10-24	12	9	919	1330
7	170	SD-01	2023-12-02	2023-12-17	3	20	897	1147
8	175	PA-8	2023-03-19	2023-08-21	19	19	150	38
9	185	NA-KU	2023-06-26	2023-12-04	6	5	2000	996
10	221	US-CT	2023-11-07	2023-05-03	20			

Total rows: 32 Query complete 00:00:00.077

Successfully run. Total query runtime: 77 msec. 32 rows affected.

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              - Tables (10)
                - airline
                - airport
                - baggage
                - baggage\_check
                - boarding\_pass
                - booking
                - booking\_flight

Query

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1 SELECT * FROM flights f JOIN airline a ON f.airline_id = a.airline_id
2 WHERE a.airline_id = 1;
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4 --2
5 SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
6
7 --3
8 SELECT a.* FROM airline a LEFT JOIN flights f ON a.airline_id = f.airline_id AND f.scheduled_de
9 WHERE f.flight_id IS NULL;
10
11 --4
12 SELECT * FROM passengers p
13 JOIN booking b ON p.passenger_id = b.passenger_id
14 JOIN booking_flight bk ON bk.booking_id = b.booking_id
15 JOIN flights f ON f.flight_id = bk.flight_id
16 WHERE f.flight_id = 1;

```

Execute script (F5)

Data Output Messages Notifications

Showing rows: 1 to 1000 Page No: 1 of 1

flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	departing_gate	arriving_gate	airline_id
1	1	US-CT	2024-01-22	2023-09-08	12	15	9	649
2	2	US-NM	2023-07-21	2023-09-17	13	16	4216	90
3	3	FI-OL	2023-03-29	2023-08-01	18	12	47	9
4	4	RU-KR	2024-01-02	2023-03-18	3	19	151	66
5	5	RO-DJ	2023-07-03	2023-11-28	6	2	626	171
6	6	CA-SK	2023-07-07	2023-09-11	18	1	1576	72
7	7	AU-TAS	2023-10-12	2024-02-24	15	18	867	15
8	8	US-AZ	2023-07-29	2023-04-08	13	6	5045	1985
9	9	IN-OR	2023-05-18	2023-09-19	6	9	659	621
10	10	AU-NT	2023-11-25	2023-07-26	19			

Total rows: 1000 Query complete 00:00:00.158

Successfully run. Total query runtime: 158 msec. 1000 rows affected.







The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' shows a tree structure of a PostgreSQL database named 'public'. The 'Foreign Tables' folder is selected. The main pane shows a SQL query window with the following query:

```

WHERE EXTRACT(YEAR FROM AGE(CURRENT_date, date_of_birth)) < 18;

--8
SELECT p.passenger_id, FORMAT('%s, %s', p.first_name, p.last_name) AS full_name, p.passport_number
FROM passengers p
JOIN booking b ON b.passenger_id = p.passenger_id
JOIN booking_flight bk ON bk.booking_id = b.booking_id
JOIN flights f ON f.flight_id = bk.flight_id;

--9
SELECT a.country, COUNT(f.flight_id) as total_flights FROM flights f
JOIN airline ai ON f.airline_id = ai.airline_id
JOIN airport a ON a.airport_id = f.departure_airport_id
WHERE ai.airline_country = a.country
GROUP BY a.country;

```

Below the query editor, the 'Data Output' tab shows the results of the query. The results are displayed in a table with two columns: 'country' (character varying (50)) and 'total\_flights' (bigint). The table contains 8 rows of data:

country	total_flights
1 Indonesia	6
2 Slovenia	2
3 Greece	1
4 Russia	5
5 China	50
6 Brazil	5
7 Poland	2
8 Philippines	3

At the bottom of the interface, a status bar indicates 'Total rows: 8', 'Query complete 00:00:00.082', and a green message box stating 'Successfully run. Total query runtime: 82 msec. 8 rows affected.' The bottom right corner shows the system clock as 19:49 on 30.10.2025.

```
SELECT * FROM flights f JOIN airline a on f.airline_id = a.airline_id  
WHERE a.airline_id = 1;
```

--2

```
SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
```

--3

```
SELECT a.* FROM airline a LEFT JOIN flights f  
ON a.airline_id = f.airline_id AND f.scheduled_departure BETWEEN '2023-11-01' AND '2023-11-30'  
WHERE f.flight_id IS NULL;
```

--4

```
SELECT * FROM passengers p  
JOIN booking b ON p.passenger_id = b.passenger_id  
JOIN booking_flight bk ON bk.booking_id = b.booking_id  
JOIN flights f ON f.flight_id = bk.flight_id  
WHERE f.flight_id = 1;
```

--5

```
SELECT f.flight_id, AVG(b.price), SUM(b.price), MAX(b.price), MIN(b.price), COUNT(b.booking_id) FROM  
flights f  
JOIN booking_flight bf ON f.flight_id = bf.flight_id  
JOIN booking b ON b.booking_id = bf.booking_id  
GROUP BY f.flight_id;
```

--6

```
SELECT * FROM flights f  
JOIN airline a ON a.airline_id = f.airline_id  
JOIN airport ai ON ai.airport_id = f.arrival_airport_id  
WHERE ai.country LIKE '%a';
```

--7

```
SELECT DISTINCT p.passenger_id, p.first_name, p.last_name, p.date_of_birth, p.gender, FORMAT('%s',  
%,ai.country, ai.city) AS arrival_place FROM passengers p  
  
JOIN booking b ON p.passenger_id = b.passenger_id  
  
JOIN booking_flight bk ON bk.booking_id = b.booking_id  
  
JOIN flights f ON f.flight_id = bk.flight_id  
  
JOIN airport ai ON ai.airport_id = f.arrival_airport_id  
  
WHERE EXTRACT(YEAR FROM AGE(CURRENT_date, date_of_birth)) < 18;
```

--8

```
SELECT p.passenger_id, FORMAT('%s, %s', p.first_name, p.last_name) AS full_name, p.passport_number  
, f.scheduled_arrival as arrival_time  
  
FROM passengers p  
  
JOIN booking b ON b.passenger_id = p.passenger_id  
  
JOIN booking_flight bk ON bk.booking_id = b.booking_id  
  
JOIN flights f ON f.flight_id = bk.flight_id;
```

--9

```
SELECT a.country, COUNT(f.flight_id) as total_flights FROM flights f  
  
JOIN airline ai ON f.airline_id = ai.airline_id  
  
JOIN airport a ON a.airport_id = f.departure_airport_id  
  
WHERE ai.airline_country = a.country  
  
GROUP BY a.country;
```