

Laboratory work 6

1.

The screenshot shows the pgAdmin 4 interface. In the Object Explorer on the left, the 'airline' table is selected under 'Tables (11)'. The 'Columns (6)' list shows: airline_id, airline_code, airline_name, airline_country, created_at, and updated_at. The main query editor displays the following SQL query:

```
1 SELECT *
2 FROM flights f
3 JOIN airline a ON f.airline_id = a.airline_id;
```

The 'Data Output' tab shows the results of the query. The table has 5 rows and 12 columns. The columns are: flight_id, sch_departure_time, sch_arrival_time, departing_airport_id, arriving_airport_id, departing_gate, arriving_gate, airline_id, and act_d times. The data is as follows:

flight_id	sch_departure_time	sch_arrival_time	departing_airport_id	arriving_airport_id	departing_gate	arriving_gate	airline_id	act_d times
1	2025-10-15 08:00:00	2025-10-15 08:00:00	2	4	2025-10-15	A1	1	2025
2	2025-10-15 08:00:00	2025-10-15 08:00:00	6	23	2025-10-15	A1	2	2025
3	2025-10-15 08:00:00	2025-10-15 08:00:00	2	1	2025-10-15	B2	1	2025
4	2025-10-15 08:00:00	2025-10-15 08:00:00	16	27	2025-10-15	C3	2	2025
5	2025-10-15 08:00:00	2025-10-15 08:00:00	107	100	2025-10-15	D4	3	2025

Total rows: 5 Query complete 00:00:00.192 CRLF Ln 3, Col 47

2.

The screenshot shows the pgAdmin 4 interface. In the Object Explorer on the left, the 'airport' table is selected under 'Tables (11)'. The 'Columns (7)' list shows: airport_id, airport_name, country, state, city, created_at, and updated_at. The main query editor displays the following SQL query:

```
1 SELECT *
2 FROM flights f
3 JOIN airport a ON f.departing_airport_id = airport_id;
```

The 'Data Output' tab shows the results of the query. The table has 5 rows and 9 columns. The columns are: out time zone, created_at, updated_at, airport_id, airport_name, country, state, city, and city character varying. The data is as follows:

out time zone	created_at	updated_at	airport_id	airport_name	country	state	city	city character varying
00:00	2025-10-14 23:15:26.459764	2025-10-14 23:15:26.459764	16	Airport_16	Country_17	State_17	City_16	
00:00	2025-10-14 23:15:26.459764	2025-10-14 23:15:26.459764	107	Airport_107	Country_8	State_8	City_107	
00:00	2025-10-14 23:15:26.459764	2025-10-14 23:15:26.459764	2	airport - 1	Country_3	State_3	City_2	
00:00	2025-10-14 23:15:26.459764	2025-10-14 23:15:26.459764	2	airport - 1	Country_3	State_3	City_2	

Total rows: 5 Query complete 00:00:00.066 CRLF Ln 3, Col 55

3.

pgAdmin 4

lab2/postgres@PostgreSQL 17*

lab2/postgres@PostgreSQL 17

```

1 SELECT a.airline_id, a.airline_name
2 FROM airline a
3 LEFT JOIN flights f
4 ON a.airline_id = f.airline_id
5 AND f.sch_departure_time >= CURRENT_DATE
6 AND f.sch_departure_time < CURRENT_DATE + INTERVAL '1 month'
7 WHERE f.flight_id IS NULL;

```

Data Output Messages Notifications

Showing rows: 1 to 4 Page No: 1 of 1

airline_id [PK] integer	airline_name character varying (50)
1	2 AirEasy
2	4 FlyFly
3	1 KazAir
4	3 FlyHigh

Total rows: 4 Query complete 00:00:00.109 CRLF Ln 1, Col 32

4.

pgAdmin 4

lab2/postgres@PostgreSQL 17*

lab2/postgres@PostgreSQL 17

```

1 SELECT first_name, last_name
2 FROM passengers p
3 JOIN booking b ON p.passenger_id = b.passenger_id
4 WHERE b.flight_id = 102;

```

Data Output Messages Notifications

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

first_name character varying (50)	last_name character varying (50)
1 Dias	Bek

Total rows: 1 Query complete 00:00:00.068 CRLF Ln 4, Col 8

5.

pgAdmin 4

lab2/postgres@PostgreSQL 17*

lab2/postgres@PostgreSQL 17

```

1 SELECT
2     flight_id,
3     AVG(ticket_price) AS average_price,
4     SUM(ticket_price) AS total_price,
5     MAX(ticket_price) AS max_price,
6     MIN(ticket_price) AS min_price
7 FROM booking
8 GROUP BY(flight_id);

```

Data Output Messages Notifications

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

	flight_id integer	average_price numeric	total_price numeric	max_price numeric	min_price numeric
1	103	10000.0000000000000000	10000.00	10000.00	10000.00
2	105	10000.0000000000000000	10000.00	10000.00	10000.00
3	101	50000.0000000000000000	50000.00	50000.00	50000.00
4	106	10000.0000000000000000	10000.00	10000.00	10000.00
5	104	28000.0000000000000000	28000.00	28000.00	28000.00
6	110	10000.0000000000000000	10000.00	10000.00	10000.00
7	107	10000.0000000000000000	10000.00	10000.00	10000.00
8	102	10000.0000000000000000	10000.00	10000.00	10000.00
9	109	10000.0000000000000000	10000.00	10000.00	10000.00
10	108	30000.0000000000000000	30000.00	30000.00	30000.00

Total rows: 10 Query complete 00:00:00.125 CRLF Ln 7, Col 13

6.

pgAdmin 4

lab2/postgres@PostgreSQL 17*

lab2/postgres@PostgreSQL 17

```

1 SELECT
2     flights.flight_id,
3     airport.country
4 FROM flights
5 JOIN airport ON flights.arriving_airport_id = airport.airport_id
6 JOIN airline ON airline.airline_id = flights.airline_id
7 WHERE airport.country = 'Country_24';

```

Data Output Messages Notifications

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

flight_id integer	country character varying (50)
2	Country_24

Total rows: 1 Query complete 00:00:00.073 CRLF Ln 5, Col 1

7.

pgAdmin 4

lab2/postgres@PostgreSQL 17*

lab2/postgres@PostgreSQL 17

```

1 SELECT
2     first_name || ' ' || last_name AS passenger,
3     airport.country AS arriving_country
4 FROM passengers
5 JOIN booking ON passengers.passenger_id = booking.passenger_id
6 JOIN flights ON flights.flight_id = booking.flight_id
7 JOIN airport ON airport.airport_id = flights.arriving_airport_id
8 WHERE AGE(CURRENT_DATE, passengers.date_of_birth) < INTERVAL '18 years';

```

Data Output Messages Notifications

passenger	arriving_country
text	character varying (50)

Total rows: 0 Query complete 00:00:00.089 CRLF Ln 8, Col 73

8.

pgAdmin 4

lab2/postgres@PostgreSQL 17*

lab2/postgres@PostgreSQL 17

```

1 SELECT
2     passengers.first_name || ' ' || passengers.last_name AS passenger,
3     passengers.passport_number,
4     flights.sch_arrival_time
5 FROM passengers
6 JOIN booking ON passengers.passenger_id = booking.passenger_id
7 JOIN flights ON booking.flight_id = flights.flight_id;

```

Data Output Messages Notifications

passenger	passport_number	sch_arrival_time
text	character varying (20)	timestamp without time zone

Successfully run. Total query runtime: 84 msec. 0 rows affected.

Total rows: 0 Query complete 00:00:00.084 CRLF Ln 7, Col 55

9.

pgAdmin 4

File Object Tools Edit View Window Help

lab2/postgres@PostgreSQL 17*

Object Explorer

- Operators
- Procedures
- Sequences
- Tables (11)
 - airline
 - Columns (6)
 - airline_id
 - airline_code
 - airline_name
 - airline_country
 - created_at
 - updated_at
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers
 - airport
 - baggage
 - baggage_check
 - boarding_pass
 - booking
 - booking_flight
 - employee
 - flights
 - Columns (12)
 - flight_id
 - sch_departure_time
 - sch_arrival_time
 - departing_airport_id
 - arriving_airport_id
 - departing_gate
 - arriving_gate

Query

```
1 SELECT
2   flights.flight_id,
3   airline.airline_name,
4   airport.country
5 FROM flights
6 JOIN airport ON airport.airport_id = flights.departing_airport_id
7 JOIN airline ON flights.airline_id = airline.airline_id
8 GROUP BY airport.country, flights.flight_id, airline.airline_name;
```

Scratch Pad

Data Output Messages Notifications

Showing rows: 1 to 5 Page No: 1 of 1

	flight_id integer	airline_name character varying (50)	country character varying (50)
1	4	AirEasy	Country_17
2	1	KazAir	Country_3
3	3	KazAir	Country_3
4	2	AirEasy	Country_7
5	5	FlyHigh	Country_8

Total rows: 5 Query complete 00:00:00.138

Successfully run. Total query runtime: 138 msec. 5 rows affected.

CRLF Ln 8, Col 67