

1. Write a query that displays all flights of a specific airline.

The screenshot shows the pgAdmin 4 interface with a SQL query entered in the Query editor. The query is designed to select all flight details for the airline 'KLE'.

```
1 select f.*
2 from flights as f join airline as a
3 on a.airline_id = f.airline_id
4 where a.airline_name = 'KLE';
5
```

The Data Output pane displays the results of the query as a table with 15 rows. The columns include flight details and airline information.

flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	departing_gate	arriving_gate	airline_id	status	actual_departure	act
1	125	2023-10-08	2023-04-10	11	15	20	3133	3	Delayed	2024-01-17	20
2	146	2024-03-16	2023-12-03	20	7	69	10	3	Boarding	2023-10-03	20
3	180	2023-05-21	2023-04-18	11	6	85	72	3	Delayed	2024-01-31	20
4	242	2023-12-13	2023-08-27	15	18	61	46	3	Boarding	2023-04-10	20
5	268	2023-06-26	2023-03-22	6	7	895	62	3	Boarding	2023-06-23	20
6	296	2023-06-19	2023-08-22	2	17	2600	366	3	Delayed	2023-05-20	20
7	325	2023-12-22	2023-04-16	5	2	109	26	3	Boarding	2023-04-20	20
8	375	2024-03-16	2024-02-05	3	19	1071	1500	3	Delayed	2023-11-10	20

Total rows: 15 Query complete 00:00:00.231

2. Compose a query to obtain a list of all flights with the names of departure airports.

The screenshot shows the pgAdmin 4 interface with a SQL query entered in the Query editor. The query joins the flights table with the airport table to retrieve the names of the departure airports.

```
1 select f.flight_no, ap.airport_name
2 from flights as f join airport as ap
3 on f.departure_airport_id = ap.airport_id
```

The Data Output pane displays the results of the query as a table with 1000 rows. The columns are flight_no and airport_name.

flight_no	airport_name
1	US-CT Elorza Airport
2	US-NM Figari Sud-Corse Airport
3	FI-OL Darchula Airport
4	RU-KR Lime Acres Finsch Mine Airport
5	RO-DJ Hana Airport
6	CA-SK Darchula Airport
7	AU-TAS Ocean Falls Seaplane Base
8	US-AZ Figari Sud-Corse Airport

Total rows: 1000 Query complete 00:00:00.105

3. Create a query that finds all airlines that have no flights scheduled for the next month.

The screenshot shows the pgAdmin 4 interface with a SQL query entered in the Query editor. The query is a left join between the 'airline' and 'flights' tables, filtering for flights scheduled between November 1, 2025, and December 1, 2025. Airlines with no flights in this period are returned with null values for flight-related fields.

```
1 select a.*
2 from airline as a
3 left join flights as f
4 on a.airline_id = f.flight_id
5 AND f.scheduled_departure >= '2025-11-01'
6 AND f.scheduled_departure < '2025-12-01'
7 where f.airline_id is null;
```

The Data Output tab shows the results of the query, displaying 50 rows. The columns are: airline_id, airline_code, airline_name, airline_country, created_at, and update_at.

airline_id	airline_code	airline_name	airline_country	created_at	update_at
1	SCIP	IPC	Russia	2023-12-02	2023-09-18
2	YPDA	PDN	Brazil	2024-01-15	2023-11-23
3	FKKH	KLE	Slovenia	2023-12-16	2023-05-23
4	OOKB	KHS	France	2023-11-18	2024-02-18
5	CYLO	YLQ	Kazakhstan	2023-03-23	2023-07-26
6	FANG	NGL	Panama	2023-11-27	2024-02-03
7	SSZS	O	Iran	2023-11-02	2024-01-16
8	SNIG	QIG	Greece	2023-12-07	2023-08-01

Successfully run. Total query runtime: 176 msec. 50 rows affected.

4. Create a query to display a list of passengers on a specific flight

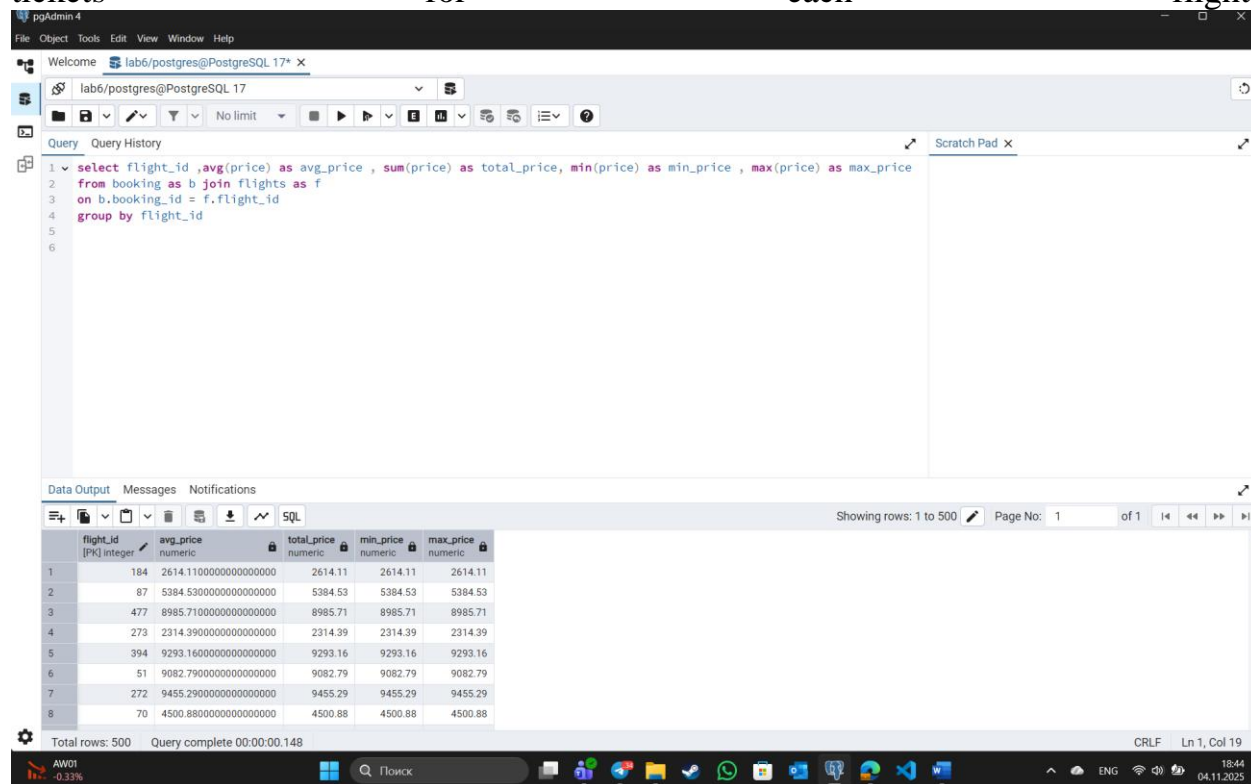
The screenshot shows the pgAdmin 4 interface with a SQL query entered in the Query editor. The query joins the 'passengers' and 'flights' tables, filtering for passengers on flight 'SL-N'.

```
1 select p.last_name , p.first_name
2 from passengers as p
3 join flights as f
4 on p.passenger_id = f.flight_id
5 where flight_no = 'SL-N';
```

The Data Output tab shows the results of the query, displaying 1 row. The columns are: last_name and first_name.

last_name	first_name
Toffel	Archie

5. Write a query that calculates the average, total, maximum and minimum price of tickets for each flight.



The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query calculates the average, total, maximum, and minimum price for each flight. The results are displayed in a table with 5 columns: flight_id, avg_price, total_price, min_price, and max_price. There are 8 rows of data.

```

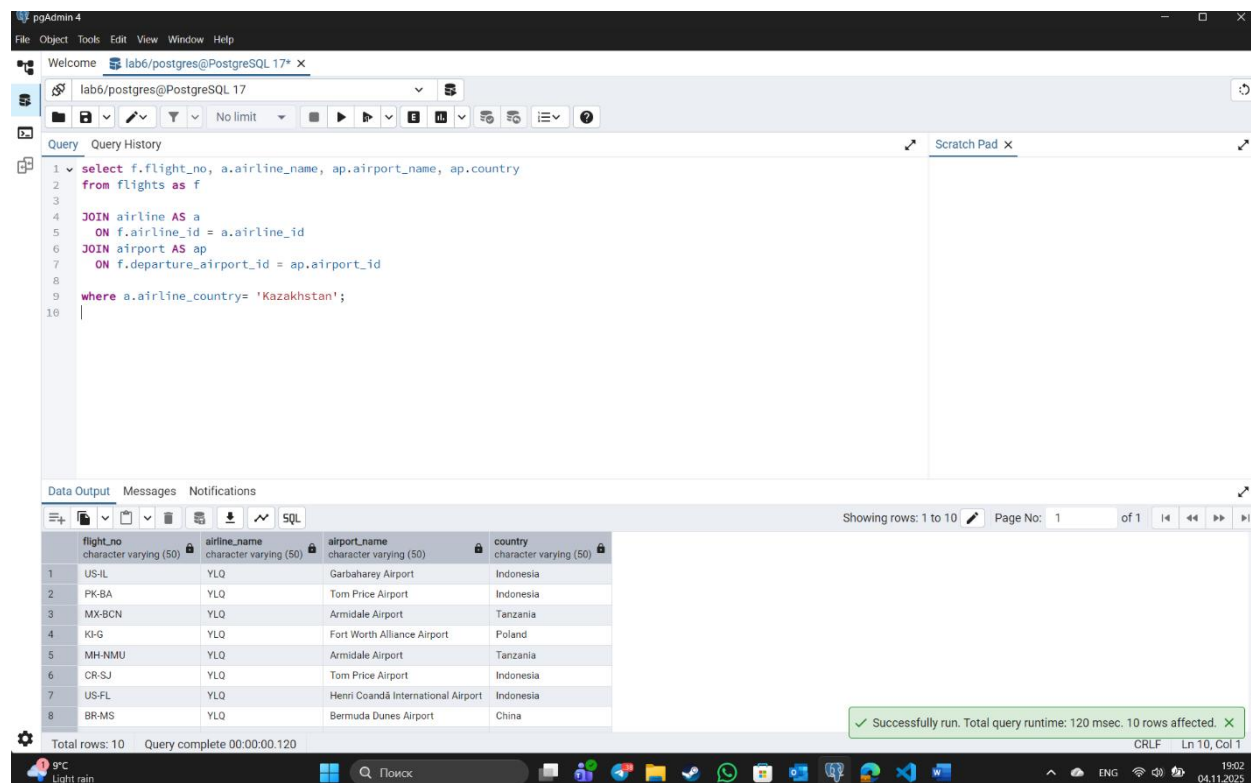
1 select flight_id, avg(price) as avg_price, sum(price) as total_price, min(price) as min_price, max(price) as max_price
2 from booking as b join flights as f
3 on b.booking_id = f.flight_id
4 group by flight_id
5
6

```

flight_id	avg_price	total_price	min_price	max_price
184	2614.11	2614.11	2614.11	2614.11
87	5384.53	5384.53	5384.53	5384.53
477	8985.71	8985.71	8985.71	8985.71
273	2314.39	2314.39	2314.39	2314.39
394	9293.16	9293.16	9293.16	9293.16
51	9082.79	9082.79	9082.79	9082.79
272	9455.29	9455.29	9455.29	9455.29
70	4500.88	4500.88	4500.88	4500.88

Total rows: 500 Query complete 00:00:00.148

6. Create a query that shows all flights flying to a specific country by combining flights, airports and airline, and using the condition on the country name



The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query joins flights, airlines, and airports to show flights flying to a specific country (Kazakhstan). The results are displayed in a table with 4 columns: flight_no, airline_name, airport_name, and country. There are 8 rows of data.

```

1 select f.flight_no, a.airline_name, ap.airport_name, ap.country
2 from flights as f
3
4 JOIN airline AS a
5 ON f.airline_id = a.airline_id
6 JOIN airport AS ap
7 ON f.departure_airport_id = ap.airport_id
8
9 where a.airline_country= 'Kazakhstan';
10

```

flight_no	airline_name	airport_name	country
US-IL	YLO	Garbaharey Airport	Indonesia
PK-BA	YLO	Tom Price Airport	Indonesia
MX-BCN	YLO	Armidale Airport	Tanzania
KI-G	YLO	Fort Worth Alliance Airport	Poland
MH-NMU	YLO	Armidale Airport	Tanzania
CR-SJ	YLO	Tom Price Airport	Indonesia
US-FL	YLO	Henri Coandă International Airport	Indonesia
BR-MS	YLO	Bermuda Dunes Airport	China

Total rows: 10 Query complete 00:00:00.120

Successfully run. Total query runtime: 120 msec. 10 rows affected.

7. Display a list of minor passengers and their arrival destination.

The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query selects the first and last names of passengers, the actual arrival date, and the year of arrival for passengers under 18 years old. The results are displayed in a table with 9 rows.

```
1 select p.first_name, p.last_name, f.actual_arrival, date_part('year', age(current_date, p.date_of_birth)) as year
2 from passengers as p join flights as f
3 on p.passenger_id = f.flight_id
4 where date_part('year', age(current_date, p.date_of_birth)) < 18;
5
```

	first_name	last_name	actual_arrival	year
1	Artur	Leap	2023-03-24	17
2	Gwennie	Chinnery	2024-02-21	17
3	Cleve	Edgeler	2023-10-05	16
4	Bernie	Michal	2023-12-01	16
5	Lester	Blades	2023-11-10	17
6	Bradley	Grolle	2023-12-09	17
7	Vivyan	Mallabone	2023-07-08	16
8	Ynez	Bortoloni	2023-04-21	16
9				

Total rows: 9 Query complete 00:00:00.103

8. Display the passenger's full name, passport number, and the passenger's current time of arrival at the destination.

The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query selects the first and last names of passengers, their passport numbers, and the actual arrival date for passengers under 18 years old. The results are displayed in a table with 1000 rows.

```
1 SELECT
2   p.first_name,
3   p.last_name,
4   p.passport_number,
5   f.actual_arrival
6 FROM passengers AS p
7 JOIN booking AS b
8   ON p.passenger_id = b.passenger_id
9 JOIN booking_flight AS bf
10  ON b.booking_id = bf.booking_id
11 JOIN flights AS f
12   ON bf.flight_id = f.flight_id;
13
```

	first_name	last_name	passport_number	actual_arrival
1	Muhammad	Fass	109932770-9	2023-07-18
2	Trevor	Broun	788025864-7	2024-02-11
3	Auria	Breffit	570537341-4	2023-07-11
4	Archie	Toffel	677556708-1	2023-06-17
5	Sanders	Biddles	514546405-3	2023-09-05
6	Sanders	Biddles	514546405-3	2024-03-01
7	Remington	Piggot	470074456-1	2023-05-31
8	Glynis	Marle	209933120-0	2024-02-02

Total rows: 1000 Query complete 00:00:00.162

9. Print a list of flights where the airline's home country and origin country are the same. Group them by the airport country

The screenshot shows the pgAdmin 4 interface. The top menu bar includes File, Object, Tools, Edit, View, Window, and Help. The main window is titled 'lab6/postgres@PostgreSQL 17*'. Below the title bar is a toolbar with various icons for query execution and management. The 'Query' tab is active, displaying the following SQL query:

```
1 SELECT
2   ap.country AS airport_country,
3   COUNT(*) AS flights_cnt
4 FROM flights AS f
5 JOIN airline AS a
6   ON f.airline_id = a.airline_id
7 JOIN airport AS ap
8   ON f.departure_airport_id = ap.airport_id
9 WHERE a.airline_country = ap.country
10 GROUP BY ap.country;
```

The 'Data Output' tab is also active, showing the results of the query. The results are displayed in a table with two columns: 'airport_country' (character varying (50)) and 'flights_cnt' (bigint). The table contains 8 rows of data:

airport_country	flights_cnt
Indonesia	6
Slovenia	2
Greece	1
Russia	5
China	50
Brazil	5
Poland	2
Philippines	3

At the bottom of the interface, a status bar indicates 'Total rows: 8' and 'Query complete 00:00:00.113'. A green notification box at the bottom right states 'Successfully run. Total query runtime: 113 msec. 8 rows affected.'