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

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer displays the database structure, with the 'airline' table selected under the 'public' schema. The central pane shows a SQL query: `SELECT * FROM airline WHERE airline_name = 'Qantas'`. The bottom pane displays the query results in a table format, showing 7 rows of data for the airline 'Qantas'.

**Query:**

```
1 SELECT *
2 FROM airline
3 WHERE airline_name = 'Qantas'
```

**Data Output:**

	airline_id [PK] integer	airline_code integer	airline_name character varying (255)	country character varying (255)	created_at timestamp without time zone	updated_at timestamp without time zone
1	3	3	Qantas	Czech Republic	2024-12-28 10:16:14	2024-11-04 15:48:48
2	27	27	Qantas	China	2025-01-05 16:34:38	2025-03-14 11:51:16
3	31	31	Qantas	United States	2024-12-16 11:24:29	2025-04-02 20:21:03
4	84	84	Qantas	China	2025-04-03 22:02:58	2024-11-16 02:02:47
5	120	120	Qantas	Brazil	2025-01-08 21:46:40	2025-03-31 01:41:20
6	158	158	Qantas	Indonesia	2025-04-28 07:57:03	2024-11-08 15:28:54
7	173	173	Qantas	United States	2025-05-08 18:27:33	2025-02-26 11:20:25

Showing rows: 1 to 7 | Page No: 1 of 1

Successfully run. Total query runtime: 179 msec. 7 rows affected.

Total rows: 7 | Query complete 00:00:00.179 | CRLF | Ln 3, Col 29

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

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer displays the database schema, including tables like `updated_at`, `airport`, `baggage`, `boarding_pass`, and `booking`. The `airport` table is selected, showing its columns: `airport_id`, `airport_name`, `state`, `country`, `city`, `created_at`, and `updated_at`.

The main pane displays a SQL query in the Query editor:

```
1 SELECT
2   f.flight_id,
3   a.airport_name AS departure_airport
4 FROM flight f
5 JOIN airport a ON f.departure_airport_id = a.airport_id
```

The Data Output pane shows the results of the query, displaying 200 rows. The columns are `flight_id` (integer) and `a.airport` (character varying (255)). The results list various flights and their corresponding departure airports.

flight_id	a.airport
1	(1,Lufthansa,Brazil,Atins,"2025-03-27 09:04:59","2025-09-16 10:53:54")
2	(2,"LATAM Airlines","Czech Republic,Zlin","2025-09-06 02:15:50","2025-02-22 13:44:48")
3	(3,"South African Airways","Morocco,Kenitra","2025-08-31 23:41:01","2025-07-13 06:07:43")
4	(4,"KLM Royal Dutch Airlines","Czech Republic,Topolná","2025-08-28 07:44:24","2025-04-19 22:23:28")
5	(5,"Air India","Czech Republic,Volary","2025-10-05 15:15:35","2024-12-14 12:09:01")
6	(6,Lufthansa,China,Jun'an,"2024-12-06 23:27:26","2025-10-11 10:41:21")
7	(7,"Air France","Indonesia,Cempaka","2025-01-29 04:56:58","2024-12-04 18:09:40")
8	(8,"All Nippon Airways","Indonesia,Panineungan","2025-09-15 21:52:19","2025-08-10 02:19:48")
9	(9,"Air Canada","Indonesia,Raemude","2025-01-07 14:02:59","2024-12-15 10:35:08")
10	(10,"All Nippon Airways","Kosovo,Lumbardhi","2024-12-14 21:17:20","2025-03-25 03:58:41")
11	(11,"Air India","Greece,Periyiáti","2025-05-22 09:34:12","2025-02-15 10:31:56")
12	(12,"Air France","Indonesia,Paritjunus","2025-08-13 11:14:57","2024-11-21 16:23:36")
13	(13,"Delta Air Lines","Saskatchewan,Canada,Lloydminster","2024-10-28 00:43:22","2025-08-26 20:11:54")
14	(14,"KLM Royal Dutch Airlines","Brazil,Penha","2024-11-13 13:14:39","2025-07-30 17:11:16")
15	(15,"Air Canada","Indonesia,Karangbaya","2025-02-26 09:04:05","2025-05-03 10:11:34")
16	(16,"Delta Air Lines","China,Chuncheng","2025-03-16 19:55:55","2024-10-28 23:48:36")
17	(17,"British Airways","Indonesia,Wadung","2025-03-08 15:24:55","2025-02-02 00:08:56")
18	(18,Qantas,Ethiopia,Gelemso,"2024-12-01 01:12:21","2025-03-27 11:59:18")
19	(19,"Ethiopian Airlines","Czech Republic,Horní Čermná","2025-01-08 07:47:58","2025-04-30 21:20:58")
20	(20,Lufthansa,British Columbia,Canada,New Westminster","2024-11-15 12:56:47","2025-05-20 01:47:18")
21	(21,"Air India","Philippines,San Antonio","2025-08-22 07:36:42","2025-01-12 22:11:47")
22	(22,"Air New Zealand","China,Tangxian","2024-10-23 23:30:14","2025-06-24 20:37:40")
23	(23,"British Airways","Thailand,Hat Yai","2025-02-09 14:25:33","2024-11-18 08:08:29")
24	(24,"Air New Zealand","Nigeria,Kachia","2025-08-03 08:10:50","2025-02-26 16:03:57")
25	(25,"Air India","Georgia,United States,Atlanta","2025-05-27 17:32:59","2025-02-03 06:13:17")
26	(26,Aeroméxico,Russia,Novopokrovskaya","2025-04-08 22:40:36","2025-05-12 22:43:56")
27	(27,"South African Airways","Thailand,Ban Ratsada","2025-07-09 02:30:13","2025-08-29 23:14:13")
28	(28,Alitalia,Tunisia,Dia","2024-12-26 22:14:56","2024-11-07 10:20:30")

The bottom of the Data Output pane shows "Total rows: 200" and "Query complete 00:00:00.071". The status bar at the bottom right indicates "CRLF" and "Ln 5, Col 56".

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

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer displays the database structure, including the 'airline' table with columns: airline\_id, airline\_code, airline\_name, country, created\_at, and updated\_at. The 'airport' table has columns: airport\_id, airport\_name, state, country, city, created\_at, and updated\_at. The 'baggage' table has columns: baggage\_id, baggage\_name, state, country, city, created\_at, and updated\_at.

The central pane shows a SQL query:

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

The bottom pane displays the query results in a table with 12 rows. The columns are 'airline\_id' and 'airline\_name'.

airline_id	airline_name
106	Aeroméxico
191	Avianca
135	KLM Royal Dutch Airlin...
71	Delta Air Lines
181	Korean Air
107	Thai Airways
110	American Airlines
41	Air New Zealand
115	Air France
199	Cathay Pacific
154	British Airways
9	KLM Royal Dutch Airlin...

A status bar at the bottom indicates: "Successfully run. Total query runtime: 77 msec. 12 rows affected." The bottom right corner shows "CRLF Ln 2, Col 13".

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

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer displays the database schema, with the 'airline' table selected under the 'public' schema. The main query editor displays the following SQL query:

```
1 SELECT p.passenger_id, p.first_name, p.last_name
2 FROM passenger p
3 JOIN booking b ON p.passenger_id = b.passenger_id
4 WHERE b.flight_id = 15;
```

The query results are displayed in the Data Output tab, showing a single row of data:

passenger_id	first_name	last_name
15	Fidelia	Burgh

The status bar at the bottom indicates 'Total rows: 1' and 'Query complete 00:00:00.050'.

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. On the left, the Object Explorer displays the database structure, including the 'booking' table with columns like 'flight\_id', 'status', 'booking\_platform', 'created\_at', 'updated\_at', 'ticket\_price', 'passenger\_id', and 'ticket\_discount'. The 'flight' table is also visible with columns like 'flight\_id', 'departing\_gate', 'arriving\_gate', 'created\_at', 'updated\_at', 'airline\_id', 'departure\_airport\_id', 'arrival\_airport\_id', 'scheduled\_departure\_time', 'scheduled\_arrival\_time', 'actual\_departure\_time', and 'actual\_arrival\_time'.

The central pane shows a SQL query in the 'Query' tab:

```
1 SELECT
2     f.flight_id,
3     AVG(t.ticket_price) AS avg_price,
4     SUM(t.ticket_price) AS sum_price,
5     MAX(t.ticket_price) AS max_price,
6     MIN(t.ticket_price) AS min_price
7 FROM flight f
8 JOIN booking t ON f.flight_id = t.flight_id
9 GROUP BY f.flight_id;
```

The 'Data Output' tab shows the results of the query, displaying a table with columns: flight\_id [PK] integer, avg\_price numeric, sum\_price bigint, max\_price integer, and min\_price integer. The table contains 21 rows of data, showing the average, total, maximum, and minimum ticket prices for each flight.

flight_id [PK] integer	avg_price numeric	sum_price bigint	max_price integer	min_price integer
58	50000.0000000000000000	50000	50000	50000
8	50000.0000000000000000	50000	50000	50000
184	50000.0000000000000000	50000	50000	50000
116	50000.0000000000000000	50000	50000	50000
87	50000.0000000000000000	50000	50000	50000
71	50000.0000000000000000	50000	50000	50000
68	50000.0000000000000000	50000	50000	50000
51	50000.0000000000000000	50000	50000	50000
146	50000.0000000000000000	50000	50000	50000
80	50000.0000000000000000	50000	50000	50000
70	50000.0000000000000000	50000	50000	50000
52	50000.0000000000000000	50000	50000	50000
190	50000.0000000000000000	50000	50000	50000
162	50000.0000000000000000	50000	50000	50000
132	50000.0000000000000000	50000	50000	50000
84	50000.0000000000000000	50000	50000	50000
170	50000.0000000000000000	50000	50000	50000
192	50000.0000000000000000	50000	50000	50000
176	50000.0000000000000000	50000	50000	50000
169	50000.0000000000000000	50000	50000	50000
92	50000.0000000000000000	50000	50000	50000
101	50000.0000000000000000	50000	50000	50000

The bottom status bar shows the current location: Servers > International\_Airport > Databases > postgres > Schemas > public > Tables > booking > Columns > status, and the execution time: complete 00:00:00.090.

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. On the left, the Object Explorer displays the database structure, including tables like 'booking', 'booking\_change', and 'flight'. The 'flight' table is expanded, showing its columns: flight\_id, departing\_gate, arriving\_gate, created\_at, updated\_at, airline\_id, departure\_airport\_id, arrival\_airport\_id, scheduled\_departure\_time, scheduled\_arrival\_time, actual\_departure\_time, and actual\_arrival\_time.

The central pane shows a SQL query being executed:

```
SELECT
  f.flight_id,
  a.airline_name,
  ap.airport_name AS arrival_airport_id,
  ap.country
FROM flight f
JOIN airline a ON f.airline_id = a.airline_id
JOIN airport ap ON f.arrival_airport_id = ap.airport_id
WHERE ap.country = 'Portugal';
```

The bottom pane displays the query results in a table with 9 rows and 5 columns: flight\_id, airline\_name, arrival\_airport\_id, and country. The results show flights to Portugal from various airlines and airports.

flight_id	airline_name	arrival_airport_id	country
55	Cathay Pacific	Delta Air Lines	Portugal
71	Delta Air Lines	Air New Zealand	Portugal
82	South African Airways	Cathay Pacific	Portugal
91	Lufthansa	SAS Scandinavian	Portugal
95	Southwest Airlines	All Nippon Airways	Portugal
118	Emirates	Air France	Portugal
125	Air Canada	Avianca	Portugal
127	Lufthansa	All Nippon Airways	Portugal
189	United Airlines	Iberia	Portugal

The bottom status bar indicates the query was successfully run, with a total query runtime of 00:00:00.043. The total number of rows returned is 9.

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

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer displays the database structure, including the 'booking' table and its columns. The main pane shows a SQL query that selects passenger details and their arrival destination from the 'passenger', 'booking', 'flight', and 'airport' tables. The query filters for passengers born more than 18 years ago. The bottom pane displays the results of the query, showing 24 rows of data. A green status bar at the bottom indicates the query was successfully run.

**Query:**

```
SELECT
  p.passenger_id,
  p.first_name,
  p.last_name,
  ap.airport_name AS arrival_destination
FROM passenger p
JOIN booking b ON p.passenger_id = b.passenger_id
JOIN flight f ON b.flight_id = f.flight_id
JOIN airport ap ON f.arrival_airport_id = ap.airport_id
WHERE p.date_of_birth > CURRENT_DATE - INTERVAL '18 years'
```

**Data Output:**

	passenger_id integer	first_name character varying (50)	last_name character varying (50)	arrival_destination character varying (255)
1	41	Carlye	Duke	Thai Airways
2	189	Gleda	Spedding	Iberia
3	15	Fidelia	Burgh	Air Canada
4	25	Brew	Bryer	Air India
5	32	Ryan	Joannet	Qantas
6	49	Paten	Sentinella	Thai Airways
7	76	Bobby	Folli	Lufthansa
8	79	Wyn	Winsley	SAS Scandinavian
9	92	Loria	Managh	Qantas
10	93	Kaia	Obey	LATAM Airlines
11	100	Eustace	Sedgmond	Qatar Airways
12	112	Jock	Reckless	LATAM Airlines
13	120	Yevette	Hargate	Thai Airways
14	124	Minetta	Crowther	Emirates
15	126	Pearla	Santacrole	Ethiopian Airlines
16	130	Kyrstin	Steinor	KLM Royal Dutch Airlin...
17	136	Emmet	Sedgwick	Delta Air Lines
18	138	Lindsay	Laurenson	Emirates
19	139	Ikey	McCorkell	Aeromexico
20	141	Rodolfo	Ickovicz	South African Airways
21	152	Kattie	Bust	Delta Air Lines
22	155	Allison	Harsh	Lufthansa

Successfully run. Total query runtime: 53 msec. 24 rows affected.



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

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- public.airline/postgres/postgres@International\_Airport\*
- public.booking/postgres/postgres@International\_Airport\*
- public.booking/postgres/postgres@International\_Airport\*
- postgres/postgres...

Query

```
SELECT
  p.first_name || ' ' || p.last_name AS full_name,
  p.passport_number,
  f.actual_arrival_time AS arrival_time
FROM passenger p
JOIN booking b ON p.passenger_id = b.passenger_id
JOIN flight f ON b.flight_id = f.flight_id;
```

Data Output

Showing rows: 1 to 200 | Page No: 1 of 1

	full_name text	passport_number character varying (50)	arrival_time timestamp without time zone
1	Amerigo Masterton	57005065uGems	2025-10-15 00:00:00
2	Yolanthe Cain	796844622wFWKE	2025-10-15 00:00:00
3	Fowler Conneely	88460752sqBTW	2025-10-15 00:00:00
4	Carlye Duke	42344083prVd6	2025-10-15 00:00:00
5	Maxine Woodrooffe	60890272oytL	2025-10-15 00:00:00
6	Kahili Fingleton	91532780DPH8JUlC	2025-10-15 00:00:00
7	Lorens Vynoll	187529887Djlm3	2025-10-15 00:00:00
8	Franciskus Thomts...	900499447/8MOEC	2025-10-15 00:00:00
9	Leese Birnie	74000785gnCmY	2025-10-15 00:00:00
10	Prinz Leither	29558904l	2025-10-15 00:00:00
11	Kriste Casaro	79736773(vv>9&P/	2025-10-15 00:00:00
12	Bambi Snowden	089963666v	2025-10-15 00:00:00
13	Jule Shorter	32881470.HlM&B	2025-10-15 00:00:00
14	Joellyn Houtby	84992392y5/1	2025-10-15 00:00:00
15	Mortie Crownshaw	84140736M,tI	2025-10-15 00:00:00
16	Gleda Spedding	22613124+3c\$%-<Q	2025-10-15 00:00:00
17	Rex Peirazzi	21768602x<*hf@	2025-10-15 00:00:00
18	Howey Trenam	88098817N&m.<)	2025-10-15 00:00:00
19	Kristos Mellmoth	47734863l<0ERjm	2025-10-15 00:00:00
20	Lynnette Aubin	29498048	2025-10-15 00:00:00
21	Elbert Sewter	98306228o	2025-10-15 00:00:00
22	Don Cadden	856666074	2025-10-15 00:00:00

Successfully run. Total query runtime: 55 msec. 200 rows affected. ✕

Total rows: 200 | Query complete 00:00:00.055 | CRLF | Ln 8, Col 1

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

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- public.airline/postgres/postgres@International\_airport
  - Columns (9)
    - booking\_id
    - flight\_id
    - status
    - booking\_platform
    - created\_at
    - updated\_at
    - ticket\_price
    - passenger\_id
    - ticket\_discount
  - booking
    - Columns (9)
    - Constraints
    - Indexes
    - RLS Policies
    - Rules
    - Triggers
  - flight
    - Columns (12)
      - flight\_id
      - departing\_gate
      - arriving\_gate
      - created\_at
      - updated\_at
      - airline\_id
      - departure\_airport\_id
      - arrival\_airport\_id
      - scheduled\_departure\_time
      - scheduled\_arrival\_time
      - actual\_departure\_time
      - actual\_arrival\_time
    - Constraints
    - Indexes
    - RLS Policies

Query

```
SELECT
  ap.country AS airport_country,
  f.flight_id,
  a.airline_name
FROM flight f
JOIN airline a ON f.airline_id = a.airline_id
JOIN airport ap ON f.departure_airport_id = ap.airport_id
WHERE a.country = ap.country
GROUP BY ap.country, f.flight_id, a.airline_name;
```

Data Output

	airport_country character varying (255)	flight_id integer	airline_name character varying (255)
1	Brazil	74	Air Canada
2	China	6	Avianca
3	China	84	Qantas
4	China	93	Emirates
5	China	96	All Nippon Airways
6	China	112	Korean Air
7	Czech Republic	52	Air France
8	Philippines	108	Iberia

Showing rows: 1 to 8 Page No: 1 of 1

Total rows: 8 Query complete 00:00:00.082

Successfully run. Total query runtime: 82 msec. 8 rows affected.

CRLF Ln 10, Col 1