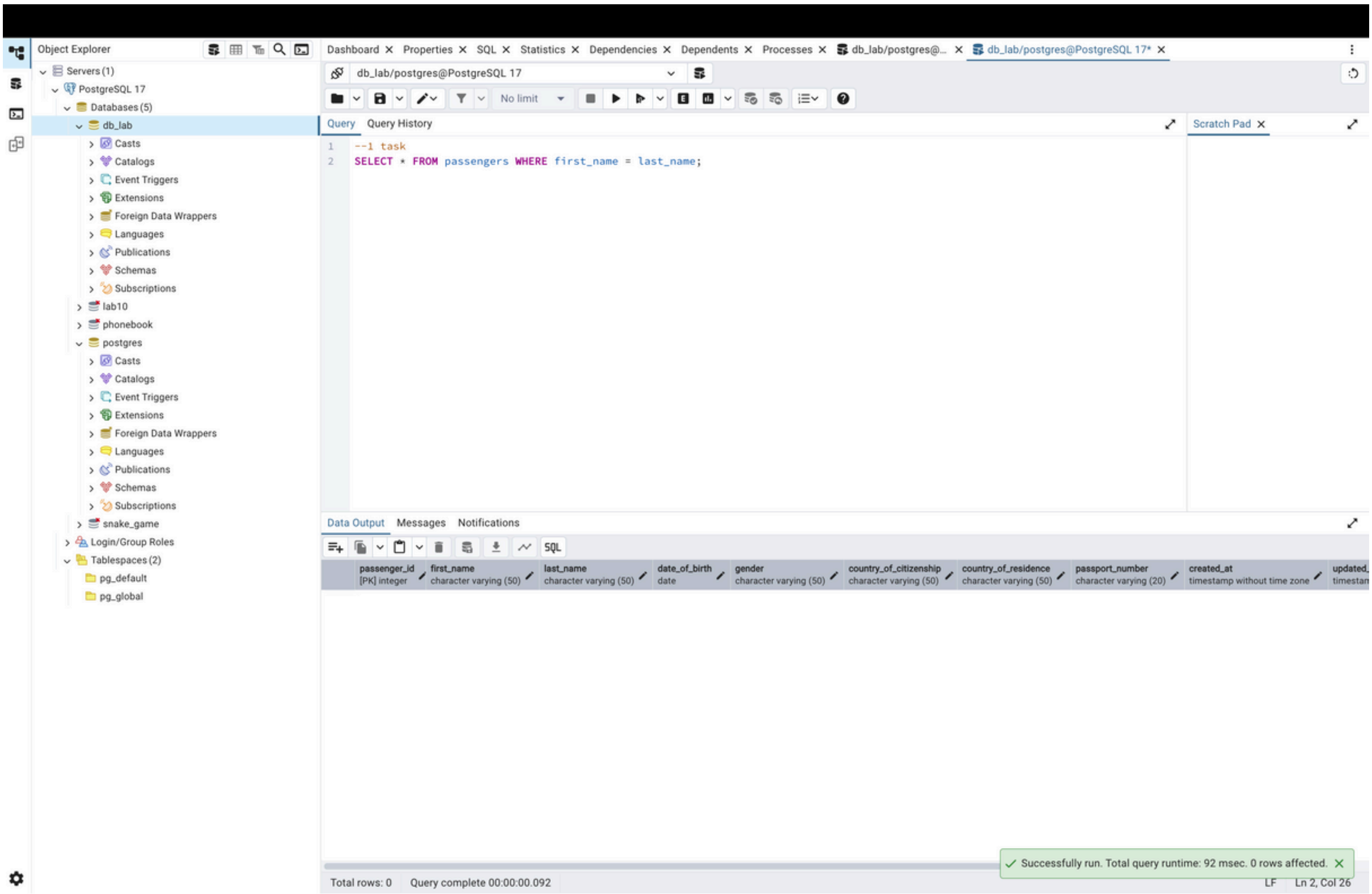
# Laboratory work 3

Tasks:

1. Select all the data of passengers whose last name is same as first name.



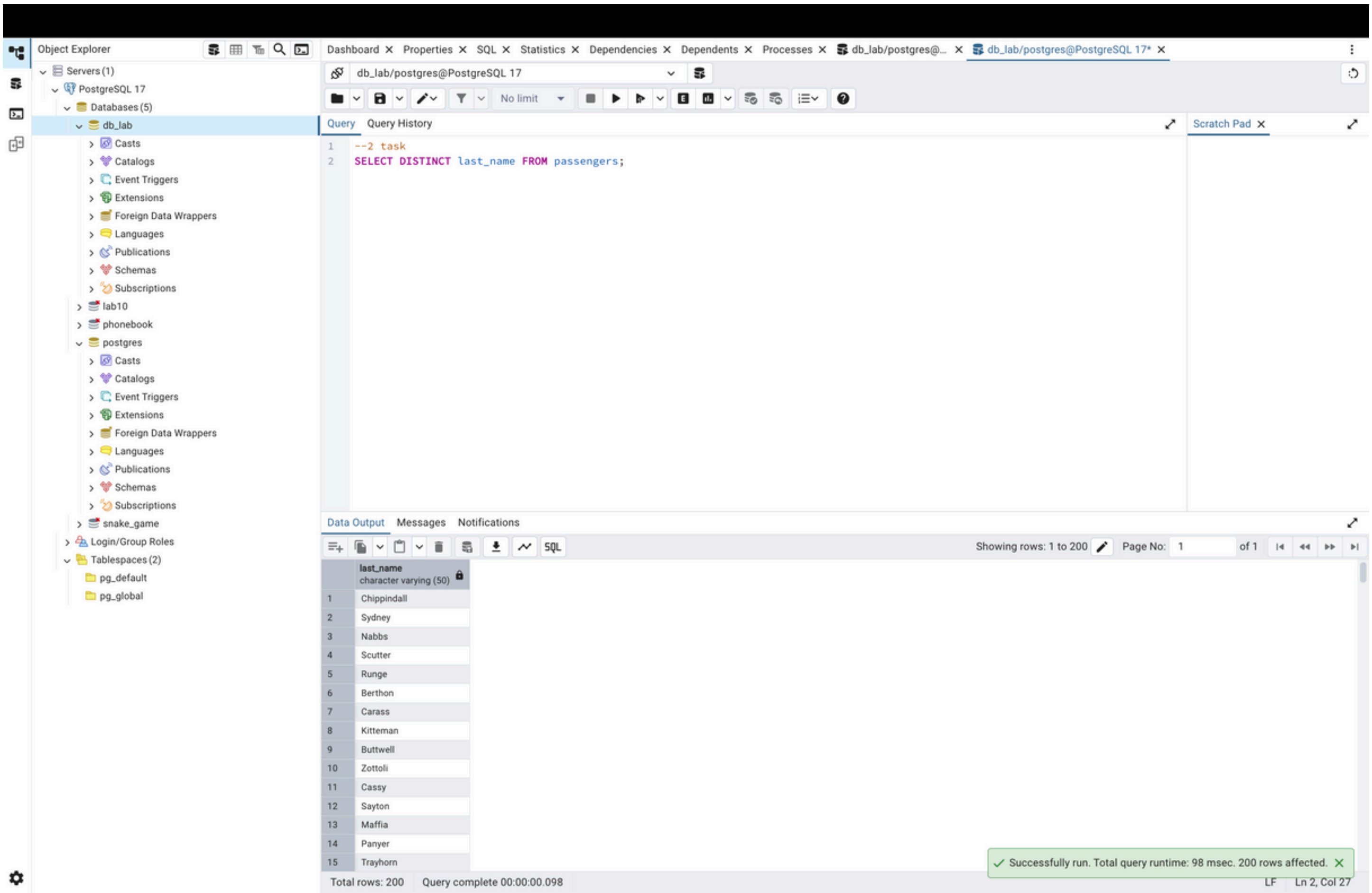
```
--1 task
SELECT * FROM passengers WHERE first_name = last_name;
```

| passenger_id | first_name | last_name | date_of_birth | gender | country_of_citizenship | country_of_residence | passport_number | created_at | updated_ |
|---|---|---|---|---|---|---|---|---|---|
| [PK] integer | character varying (50) | character varying (50) | date | character varying (50) | character varying (50) | character varying (50) | character varying (20) | timestamp without time zone | timestam |

Successfully run. Total query runtime: 92 msec. 0 rows affected.

Total rows: 0 Query complete 00:00:00.092 LF Ln 2, Col 26

2. Select the last name of all passangers without duplicates.



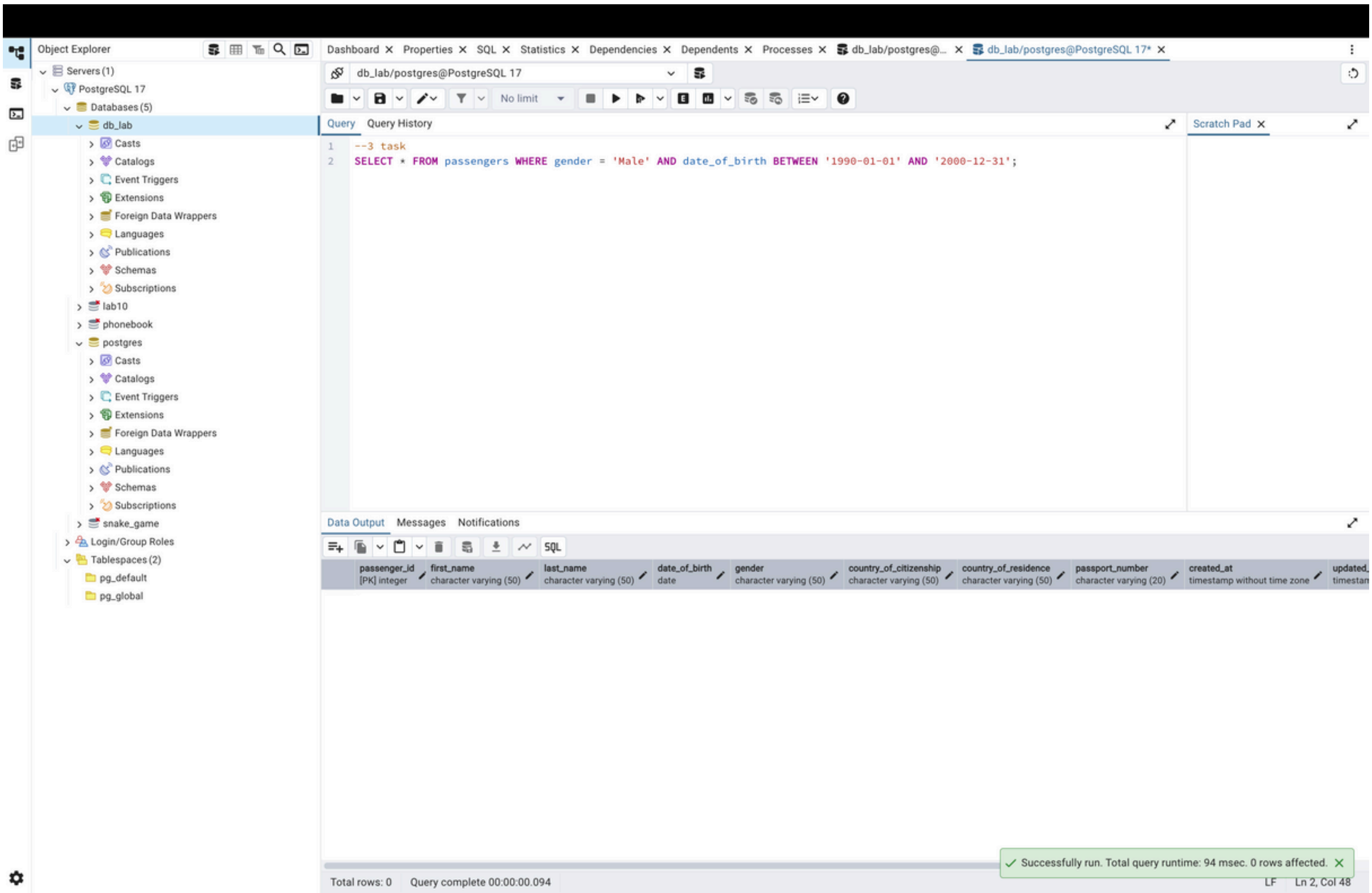
```sql
--2 task
SELECT DISTINCT last_name FROM passengers;
```

| | last_name<br>character varying (50) |
|---|---|
| 1 | Chippindall |
| 2 | Sydney |
| 3 | Nabbs |
| 4 | Scutter |
| 5 | Runge |
| 6 | Berthon |
| 7 | Carass |
| 8 | Kitteman |
| 9 | Buttwell |
| 10 | Zottoli |
| 11 | Cassy |
| 12 | Sayton |
| 13 | Maffia |
| 14 | Panyer |
| 15 | Trayhorn |

✓ Successfully run. Total query runtime: 98 msec. 200 rows affected.

Total rows: 200 Query complete 00:00:00.098 LF Ln 2, Col 27

3. Find all male passengers born between 1990 and 2000.



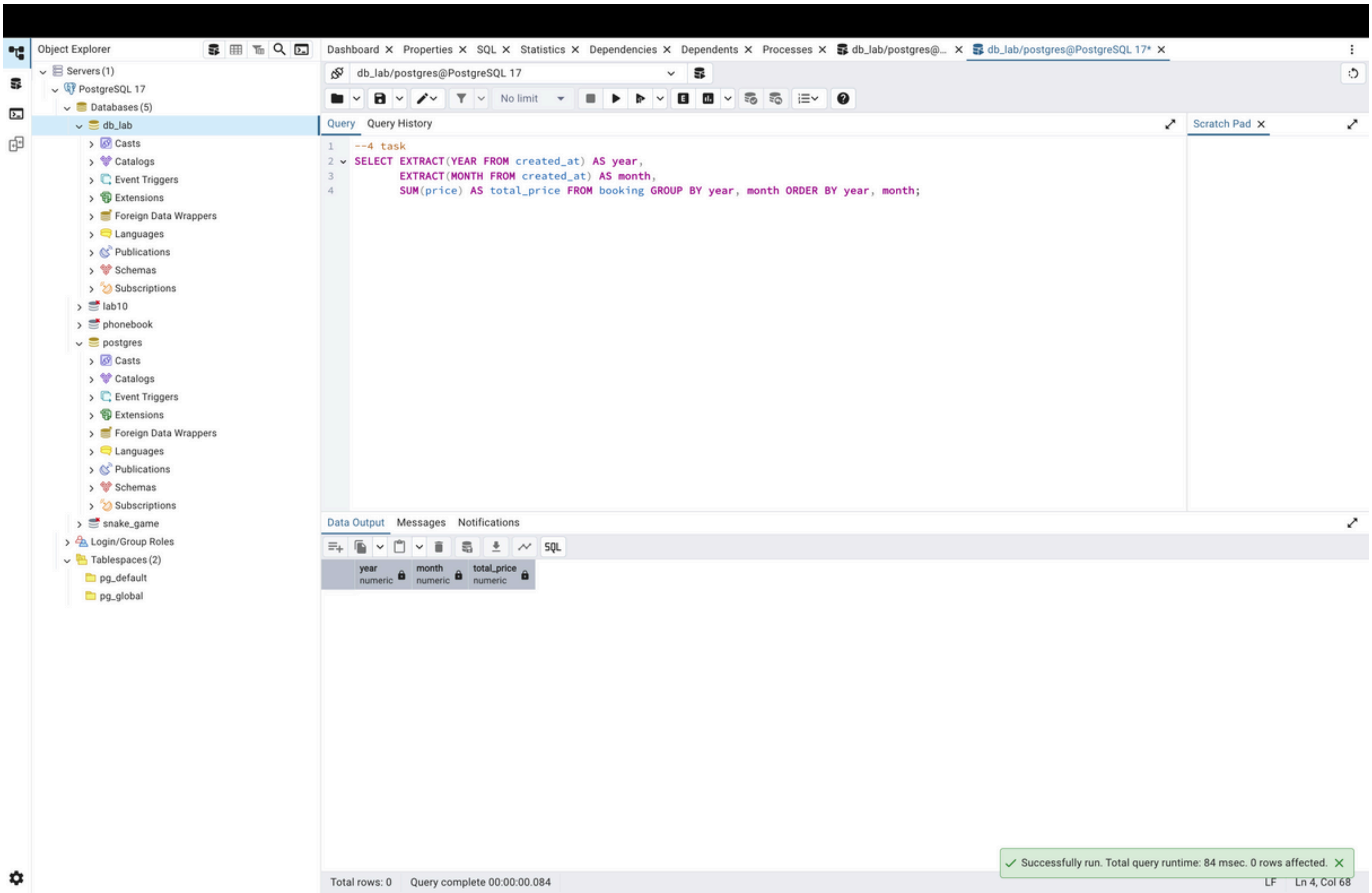
```sql
--3 task
SELECT * FROM passengers WHERE gender = 'Male' AND date_of_birth BETWEEN '1990-01-01' AND '2000-12-31';
```

| passenger_id<br>[PK] integer | first_name<br>character varying (50) | last_name<br>character varying (50) | date_of_birth<br>date | gender<br>character varying (50) | country_of_citizenship<br>character varying (50) | country_of_residence<br>character varying (50) | passport_number<br>character varying (20) | created_at<br>timestamp without time zone | updated_<br>timestan |
|---|---|---|---|---|---|---|---|---|---|

✓ Successfully run. Total query runtime: 94 msec. 0 rows affected.

Total rows: 0 Query complete 00:00:00.094 LF Ln 2, Col 48

4. Find price of tickets sold for each month in sorted way.



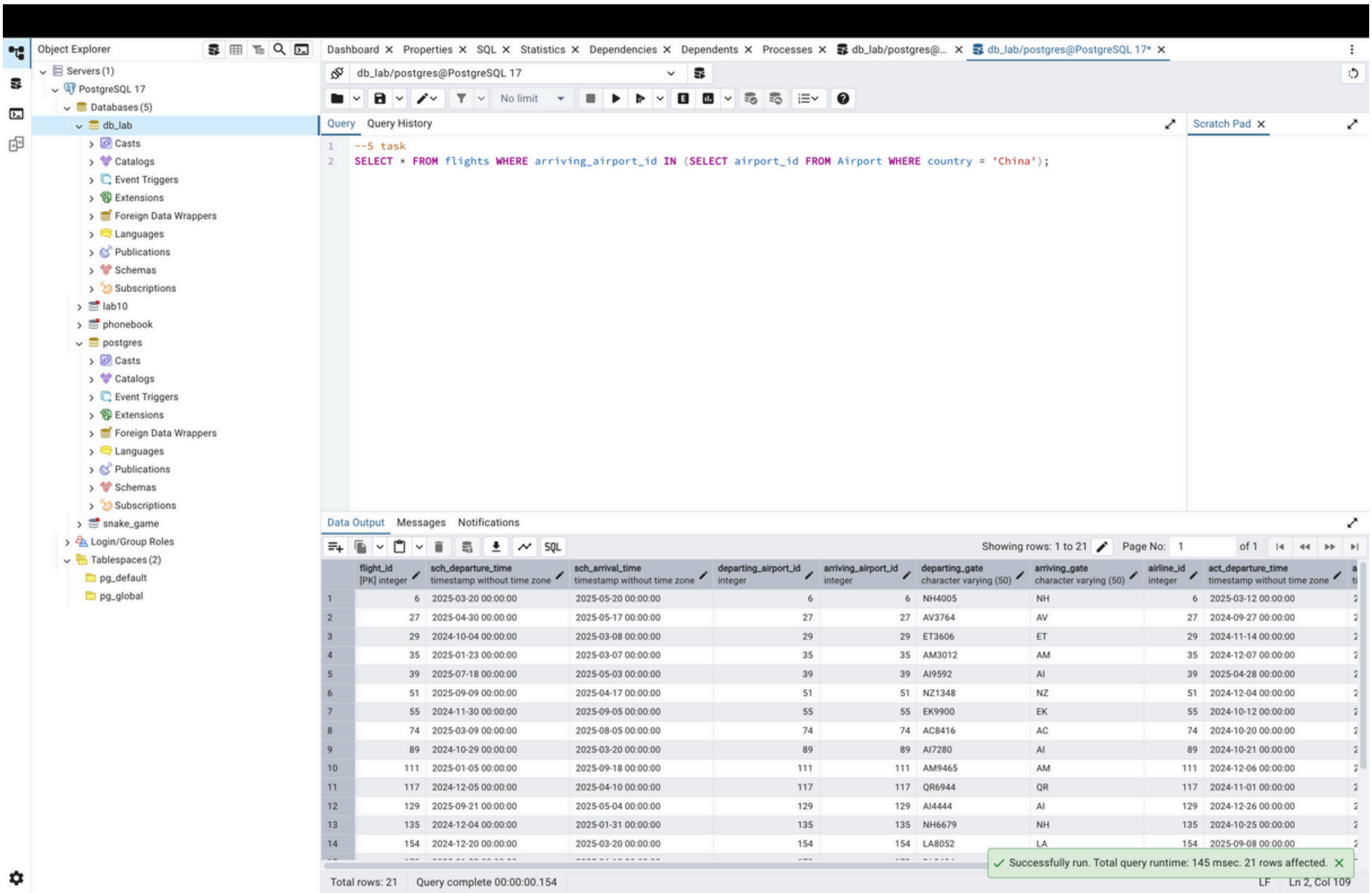
```sql
--4 task
SELECT EXTRACT(YEAR FROM created_at) AS year,
       EXTRACT(MONTH FROM created_at) AS month,
       SUM(price) AS total_price FROM booking GROUP BY year, month ORDER BY year, month;
```

| year<br>numeric | month<br>numeric | total_price<br>numeric |
|---|---|---|

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

Total rows: 0 Query complete 00:00:00.084

5. Create a query that shows all flights flying to ‘China’.



```sql
--5 task
SELECT * FROM flights WHERE arriving_airport_id IN (SELECT airport_id FROM Airport WHERE country = 'China');
```

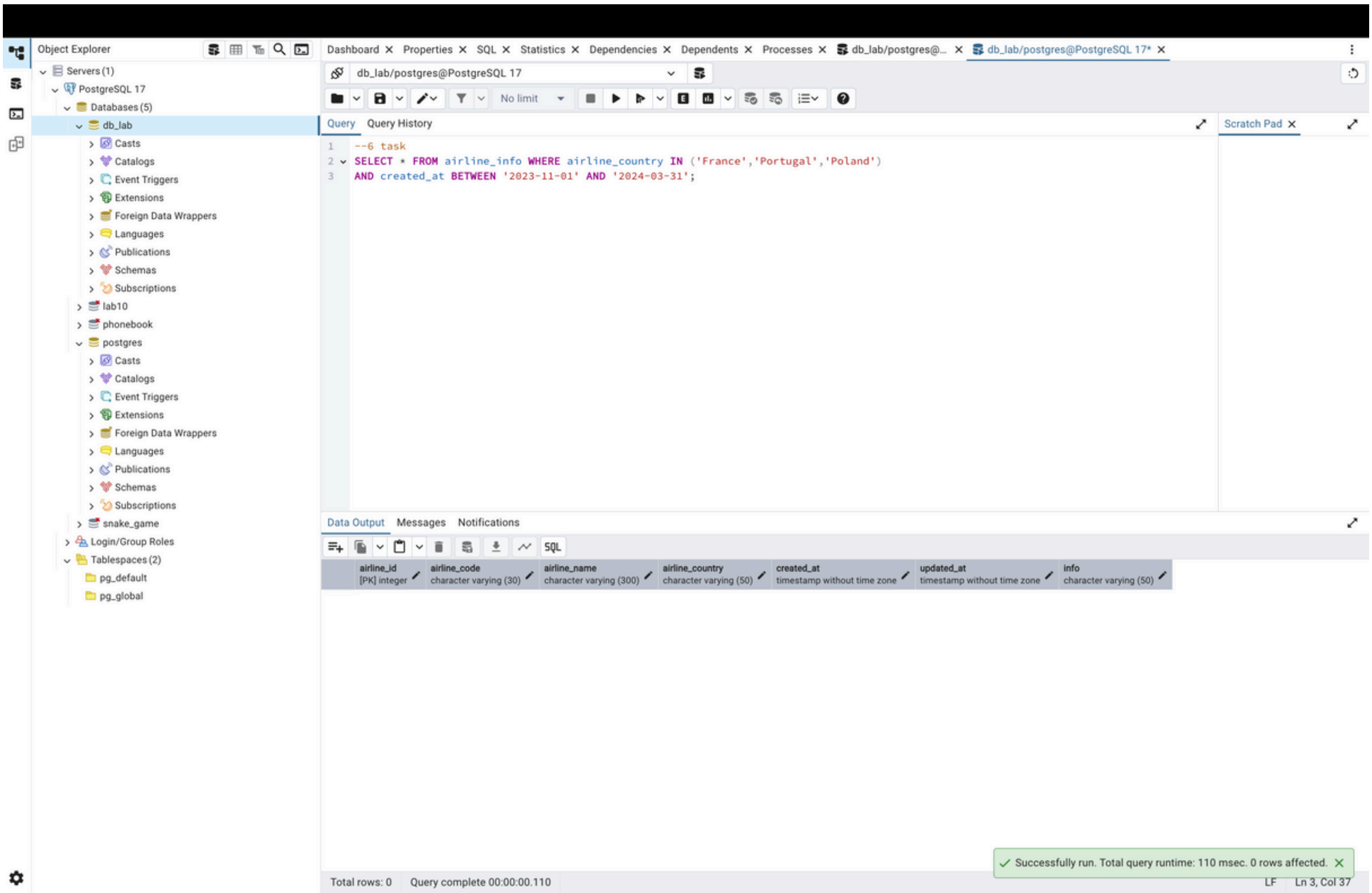
Showing rows: 1 to 21 Page No: 1 of 1

| | flight_id<br>[PK] integer | sch_departure_time<br>timestamp without time zone | sch_arrival_time<br>timestamp without time zone | departing_airport_id<br>integer | arriving_airport_id<br>integer | departing_gate<br>character varying (50) | arriving_gate<br>character varying (50) | airline_id<br>integer | act_departure_time<br>timestamp without time zone |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6 | 2025-03-20 00:00:00 | 2025-05-20 00:00:00 | 6 | 6 | NH4005 | NH | 6 | 2025-03-12 00:00:00 |
| 2 | 27 | 2025-04-30 00:00:00 | 2025-05-17 00:00:00 | 27 | 27 | AV3764 | AV | 27 | 2024-09-27 00:00:00 |
| 3 | 29 | 2024-10-04 00:00:00 | 2025-03-08 00:00:00 | 29 | 29 | ET3606 | ET | 29 | 2024-11-14 00:00:00 |
| 4 | 35 | 2025-01-23 00:00:00 | 2025-03-07 00:00:00 | 35 | 35 | AM3012 | AM | 35 | 2024-12-07 00:00:00 |
| 5 | 39 | 2025-07-18 00:00:00 | 2025-05-03 00:00:00 | 39 | 39 | AI9592 | AI | 39 | 2025-04-28 00:00:00 |
| 6 | 51 | 2025-09-09 00:00:00 | 2025-04-17 00:00:00 | 51 | 51 | NZ1348 | NZ | 51 | 2024-12-04 00:00:00 |
| 7 | 55 | 2024-11-30 00:00:00 | 2025-09-05 00:00:00 | 55 | 55 | EK9900 | EK | 55 | 2024-10-12 00:00:00 |
| 8 | 74 | 2025-03-09 00:00:00 | 2025-08-05 00:00:00 | 74 | 74 | AC8416 | AC | 74 | 2024-10-20 00:00:00 |
| 9 | 89 | 2024-10-29 00:00:00 | 2025-03-20 00:00:00 | 89 | 89 | AI7280 | AI | 89 | 2024-10-21 00:00:00 |
| 10 | 111 | 2025-01-05 00:00:00 | 2025-09-18 00:00:00 | 111 | 111 | AM9465 | AM | 111 | 2024-12-06 00:00:00 |
| 11 | 117 | 2024-12-05 00:00:00 | 2025-04-10 00:00:00 | 117 | 117 | QR6944 | QR | 117 | 2024-11-01 00:00:00 |
| 12 | 129 | 2025-09-21 00:00:00 | 2025-05-04 00:00:00 | 129 | 129 | AI4444 | AI | 129 | 2024-12-26 00:00:00 |
| 13 | 135 | 2024-12-04 00:00:00 | 2025-01-31 00:00:00 | 135 | 135 | NH6679 | NH | 135 | 2024-10-25 00:00:00 |
| 14 | 154 | 2024-12-20 00:00:00 | 2025-03-20 00:00:00 | 154 | 154 | LA8052 | LA | 154 | 2025-09-08 00:00:00 |

✓ Successfully run. Total query runtime: 145 msec. 21 rows affected.

Total rows: 21 Query complete 00:00:00.154

6. Show airlines from any of: ('France','Portugal','Poland') created between '2023-11-01' and '2024-03-31'.



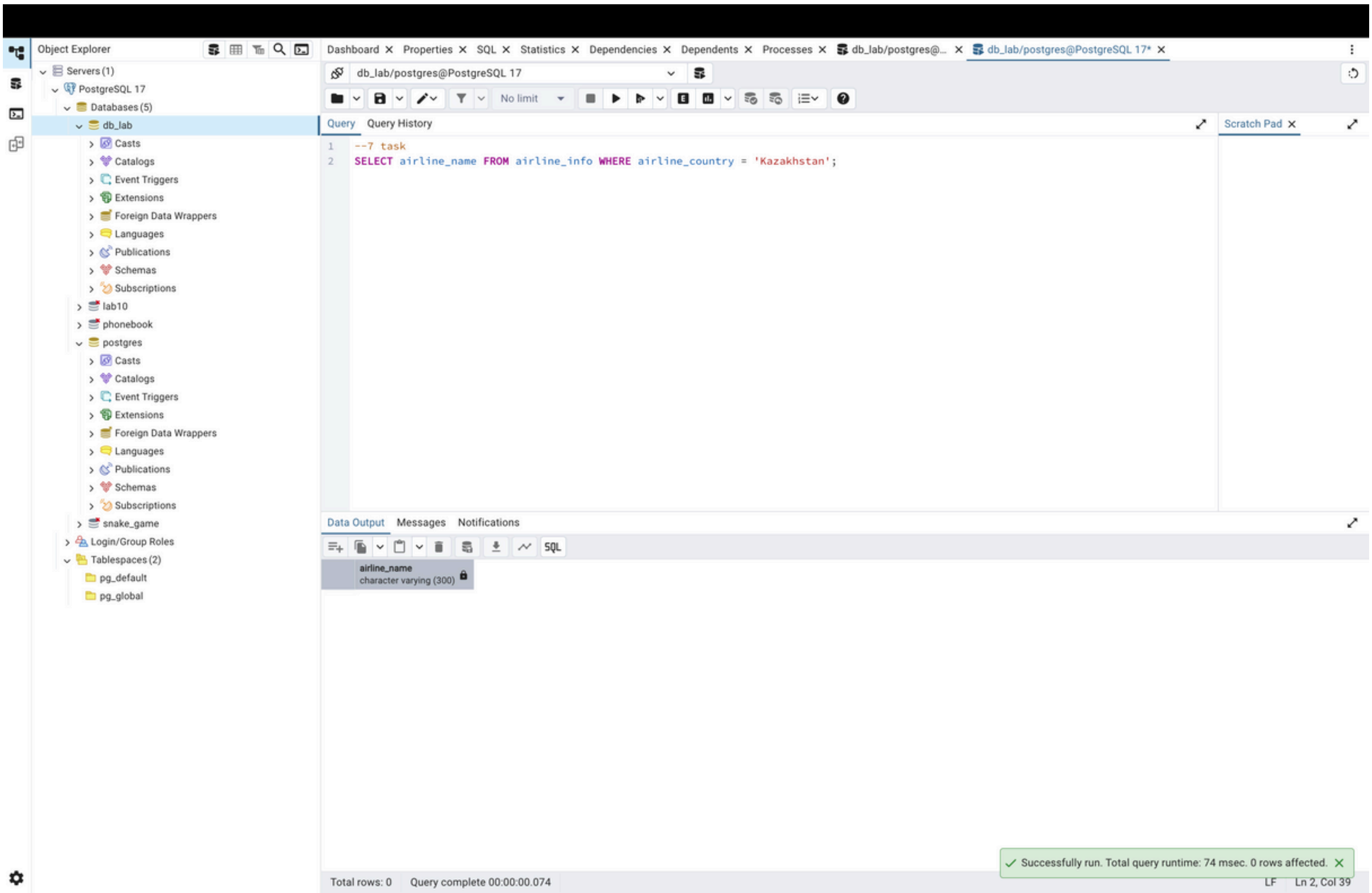
```
--6 task
SELECT * FROM airline_info WHERE airline_country IN ('France','Portugal','Poland')
AND created_at BETWEEN '2023-11-01' AND '2024-03-31';
```

| airline_id | airline_code | airline_name | airline_country | created_at | updated_at | info |
|---|---|---|---|---|---|---|
| [PK] integer | character varying (30) | character varying (300) | character varying (50) | timestamp without time zone | timestamp without time zone | character varying (50) |

✓ Successfully run. Total query runtime: 110 msec. 0 rows affected.

Total rows: 0 Query complete 00:00:00.110 LF Ln 3, Col 37

7. Find all airline names based in Kazakhstan.



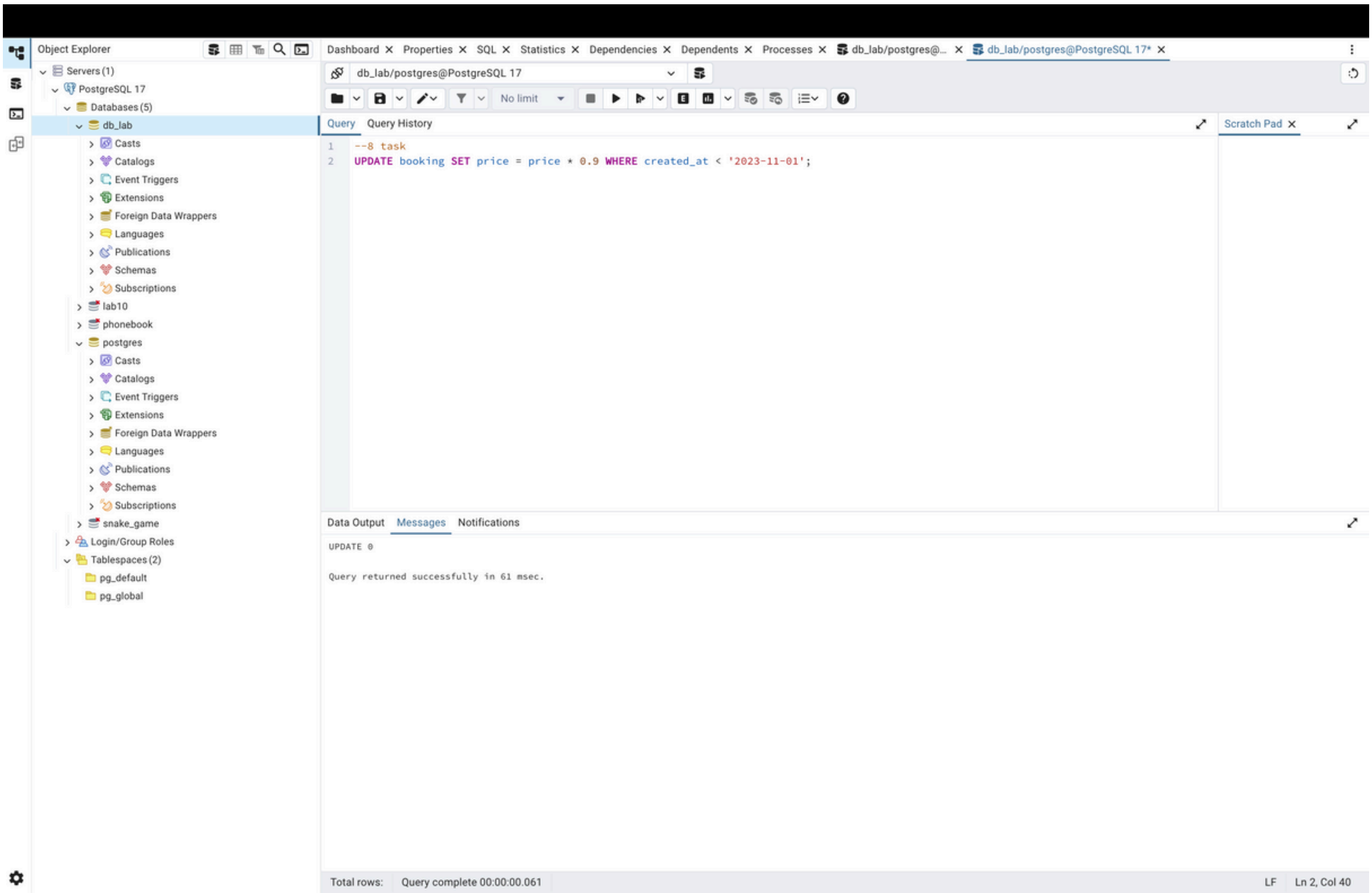
```
--7 task
SELECT airline_name FROM airline_info WHERE airline_country = 'Kazakhstan';
```

| airline_name |
|---|
| character varying (300) |

✓ Successfully run. Total query runtime: 74 msec. 0 rows affected.

Total rows: 0 Query complete 00:00:00.074 LF Ln 2, Col 39

8. Reduce the cost of booking price by 10% created before ’11-01-2023’.



db_lab/postgres@PostgreSQL 17

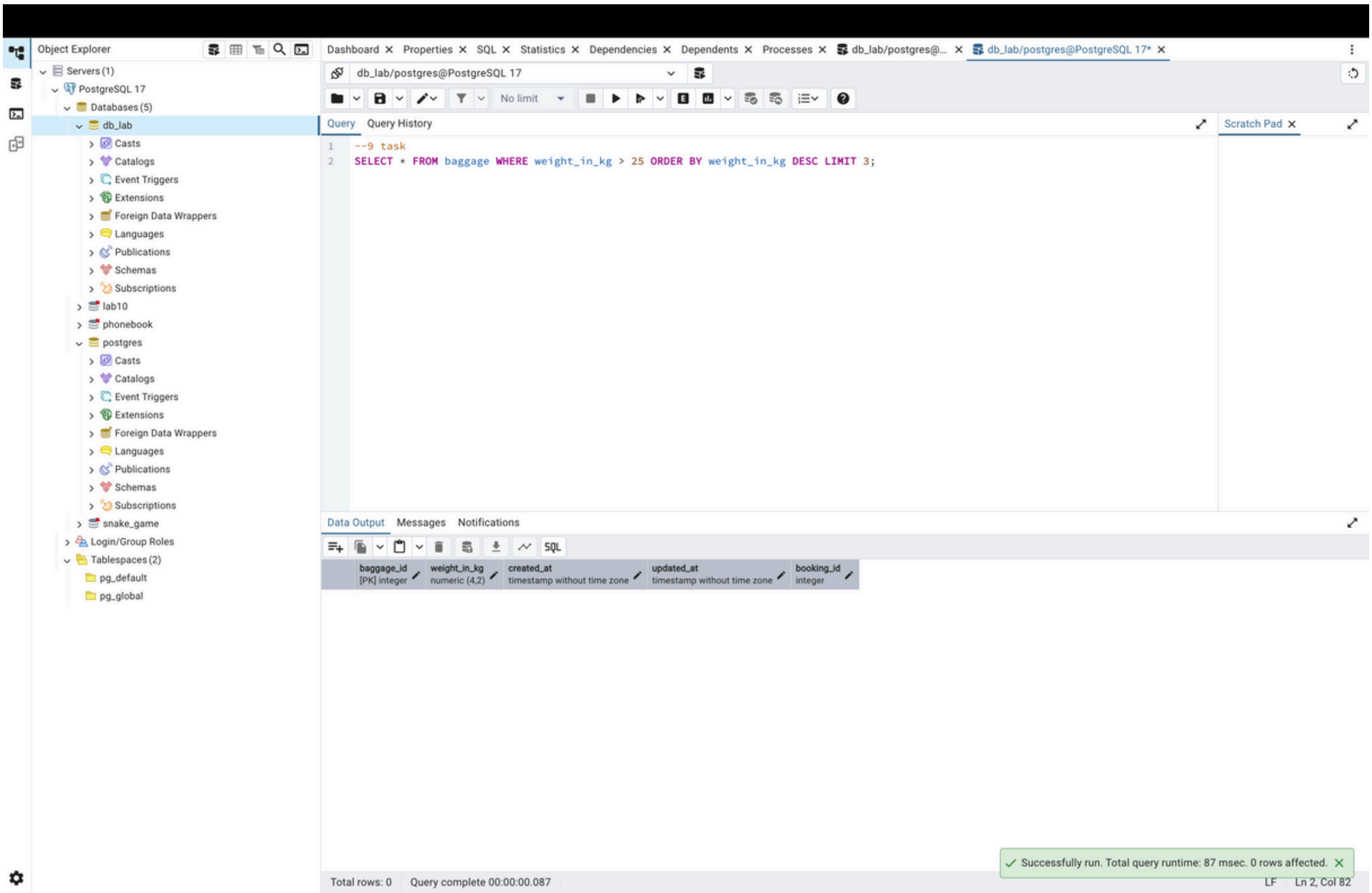
```
--8 task
UPDATE booking SET price = price * 0.9 WHERE created_at < '2023-11-01';
```

```
UPDATE 0

Query returned successfully in 61 msec.
```

Total rows:  Query complete 00:00:00.061  LF  Ln 2, Col 40

9. Find top3 overweighted baggage with more than 25kg.



db_lab/postgres@PostgreSQL 17

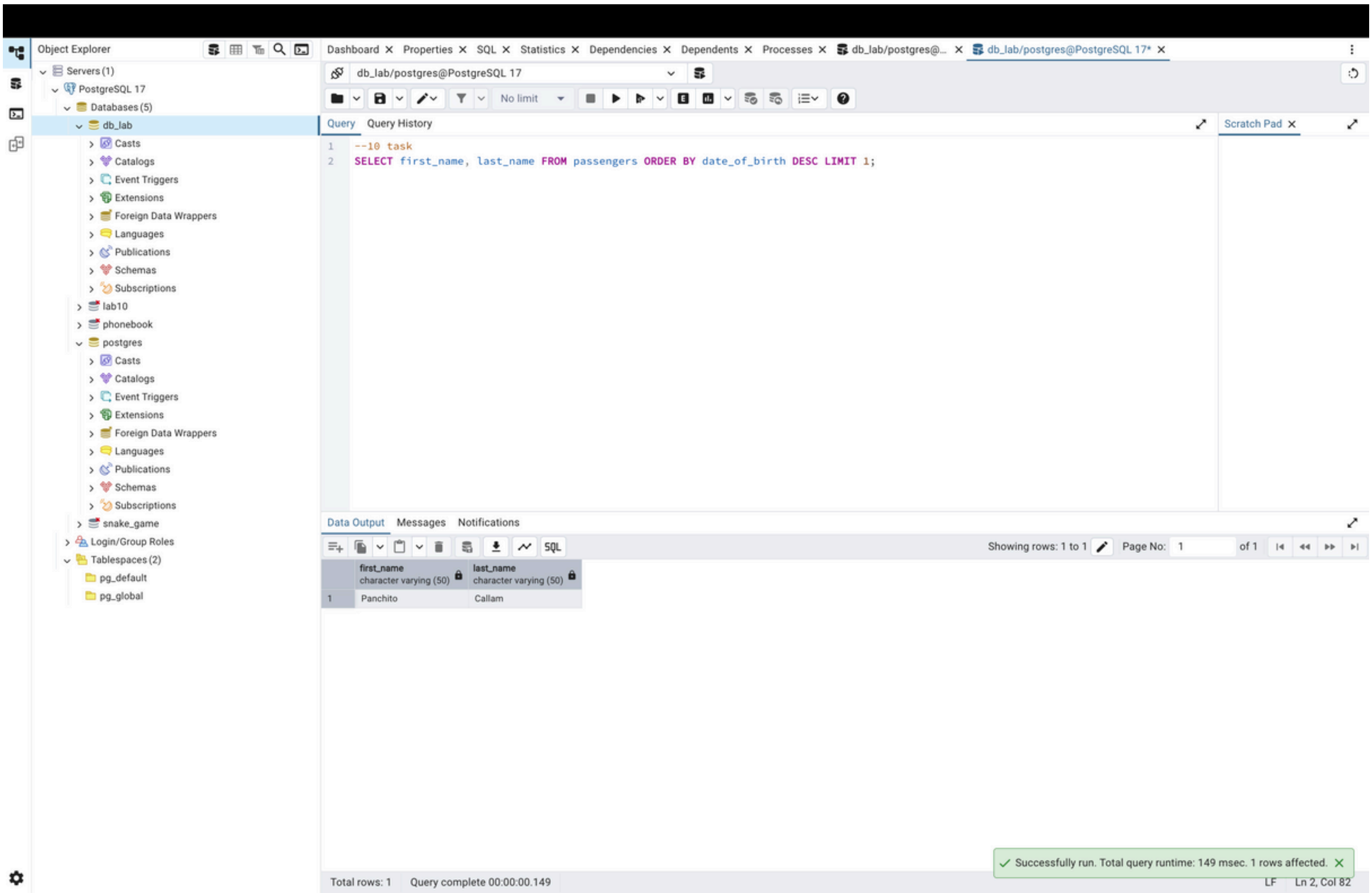
```
--9 task
SELECT * FROM baggage WHERE weight_in_kg > 25 ORDER BY weight_in_kg DESC LIMIT 3;
```

| baggage_id<br>[PK] integer | weight_in_kg<br>numeric (4,2) | created_at<br>timestamp without time zone | updated_at<br>timestamp without time zone | booking_id<br>integer |
|---|---|---|---|---|

✓ Successfully run. Total query runtime: 87 msec. 0 rows affected.

Total rows: 0  Query complete 00:00:00.087  LF  Ln 2, Col 82

10. Find the youngest passengers' full name.



```
--10 task
SELECT first_name, last_name FROM passengers ORDER BY date_of_birth DESC LIMIT 1;
```

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

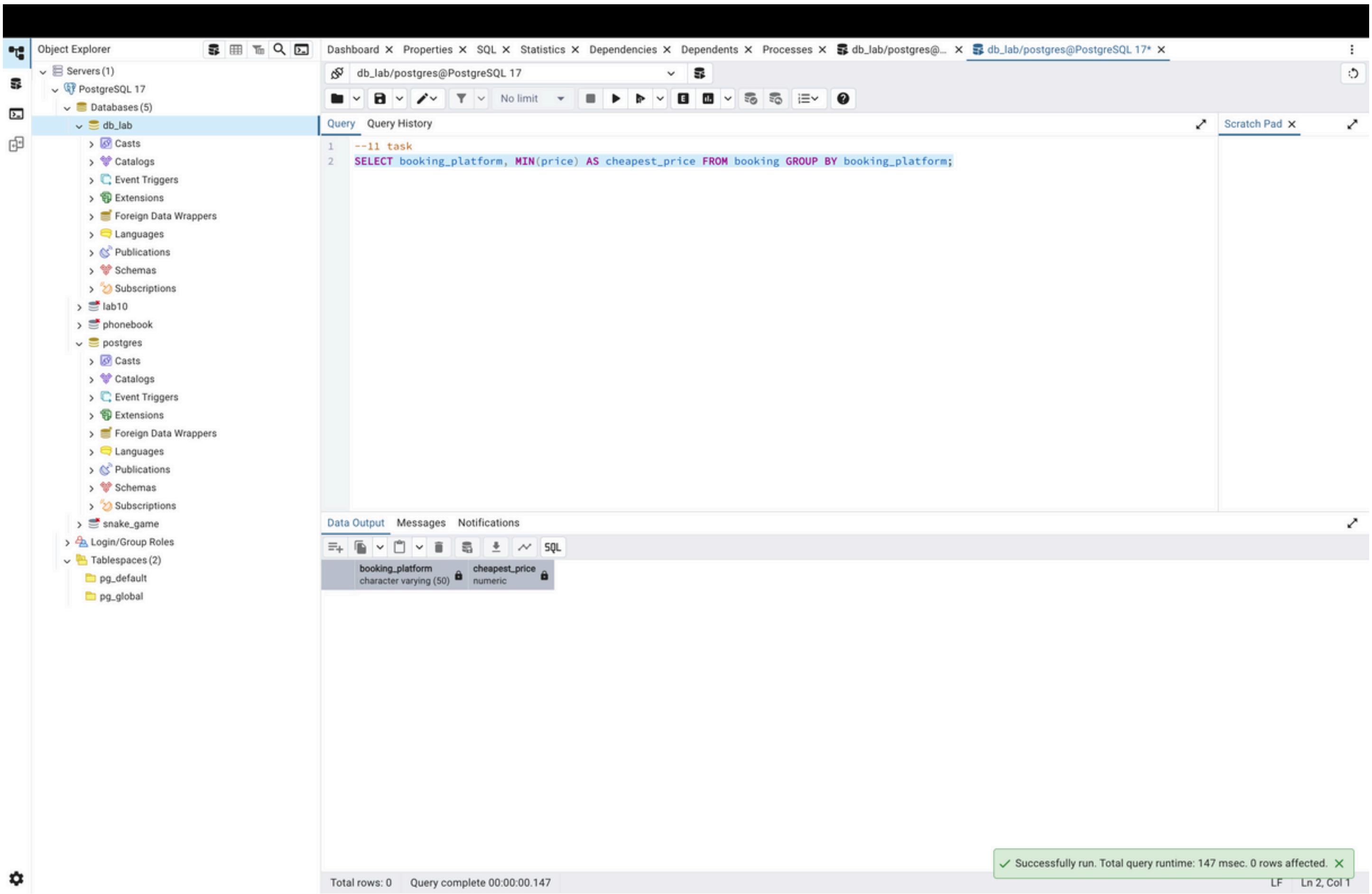
| | first_name<br>character varying (50) | last_name<br>character varying (50) |
|---|---|---|
| 1 | Panchito | Callam |

✓ Successfully run. Total query runtime: 149 msec. 1 rows affected.

Total rows: 1 Query complete 00:00:00.149

Ln 2, Col 82

11. Find the cheapest booking price on each booking platform.



```
--11 task
SELECT booking_platform, MIN(price) AS cheapest_price FROM booking GROUP BY booking_platform;
```

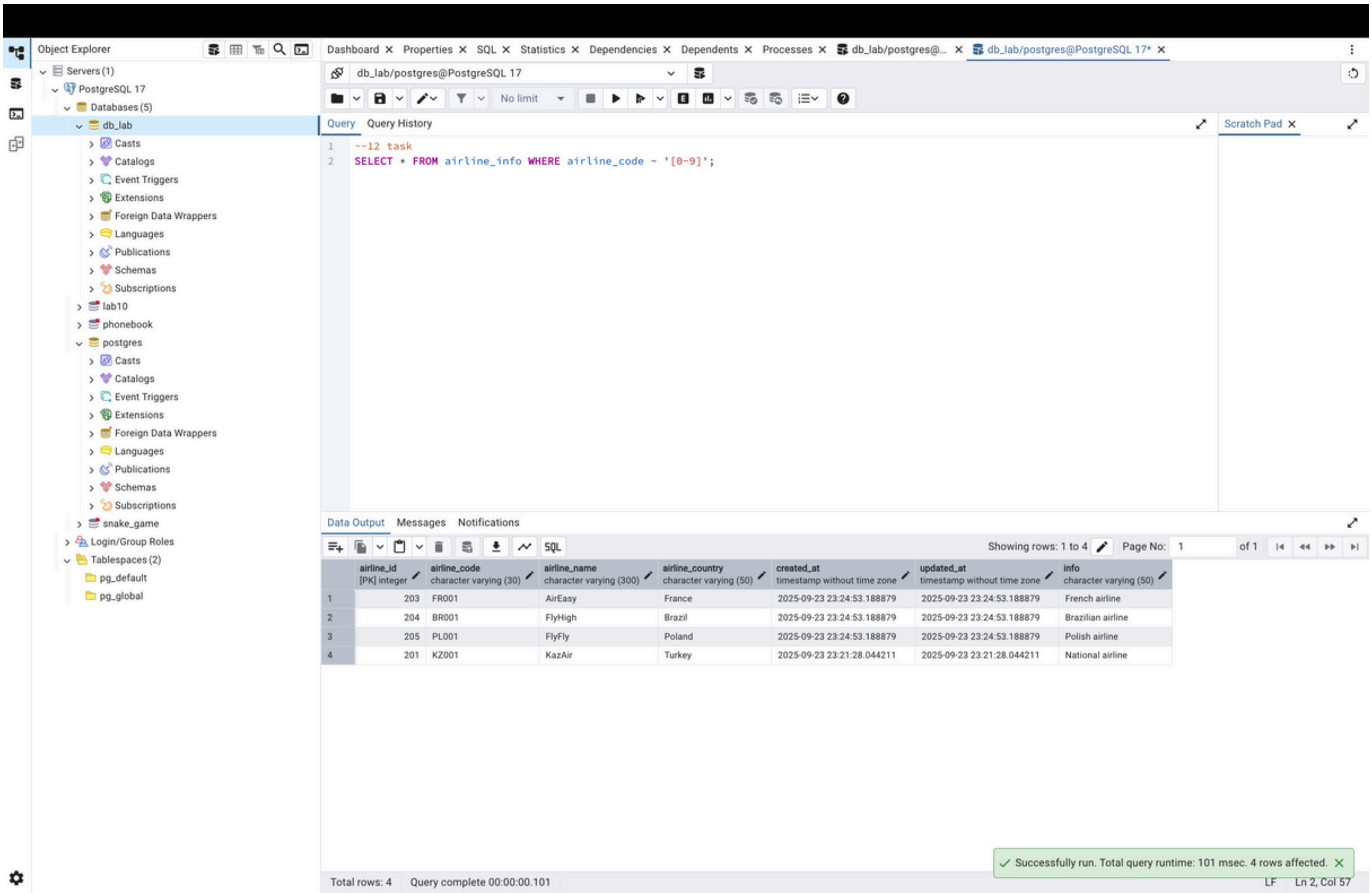
| | booking_platform<br>character varying (50) | cheapest_price<br>numeric |
|---|---|---|

✓ Successfully run. Total query runtime: 147 msec. 0 rows affected.

Total rows: 0 Query complete 00:00:00.147

Ln 2, Col 1

12. Return airlines whose airline_code contains a digit.



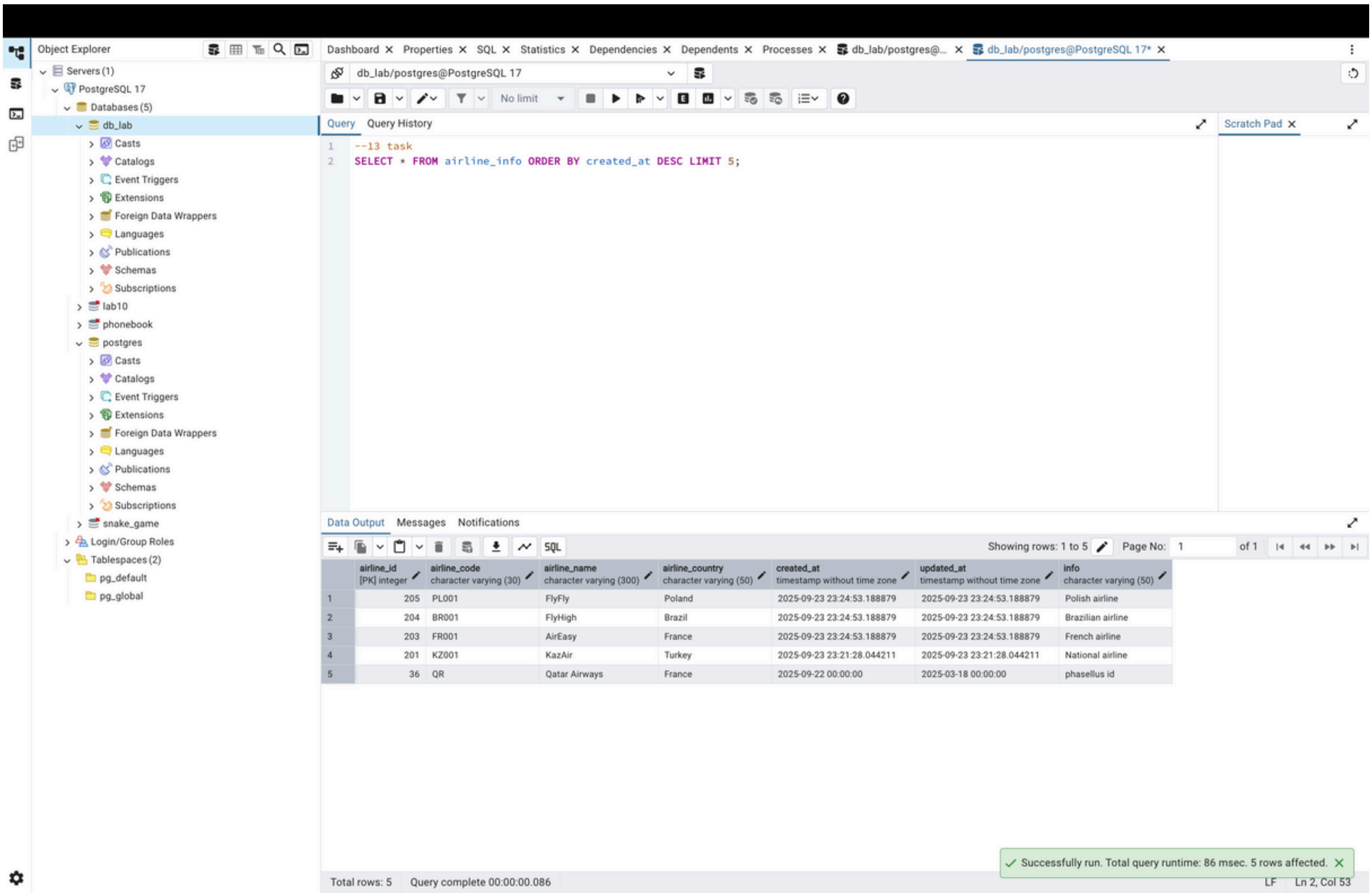
```sql
--12 task
SELECT * FROM airline_info WHERE airline_code ~ '[0-9]';
```

|  | airline_id<br>[PK] integer | airline_code<br>character varying (30) | airline_name<br>character varying (300) | airline_country<br>character varying (50) | created_at<br>timestamp without time zone | updated_at<br>timestamp without time zone | info<br>character varying (50) |
|---|---|---|---|---|---|---|---|
| 1 | 203 | FR001 | AirEasy | France | 2025-09-23 23:24:53.188879 | 2025-09-23 23:24:53.188879 | French airline |
| 2 | 204 | BR001 | FlyHigh | Brazil | 2025-09-23 23:24:53.188879 | 2025-09-23 23:24:53.188879 | Brazilian airline |
| 3 | 205 | PL001 | FlyFly | Poland | 2025-09-23 23:24:53.188879 | 2025-09-23 23:24:53.188879 | Polish airline |
| 4 | 201 | KZ001 | KazAir | Turkey | 2025-09-23 23:21:28.044211 | 2025-09-23 23:21:28.044211 | National airline |

✓ Successfully run. Total query runtime: 101 msec. 4 rows affected.

Total rows: 4 Query complete 00:00:00.101

13. List the top5 most recently created airlines.



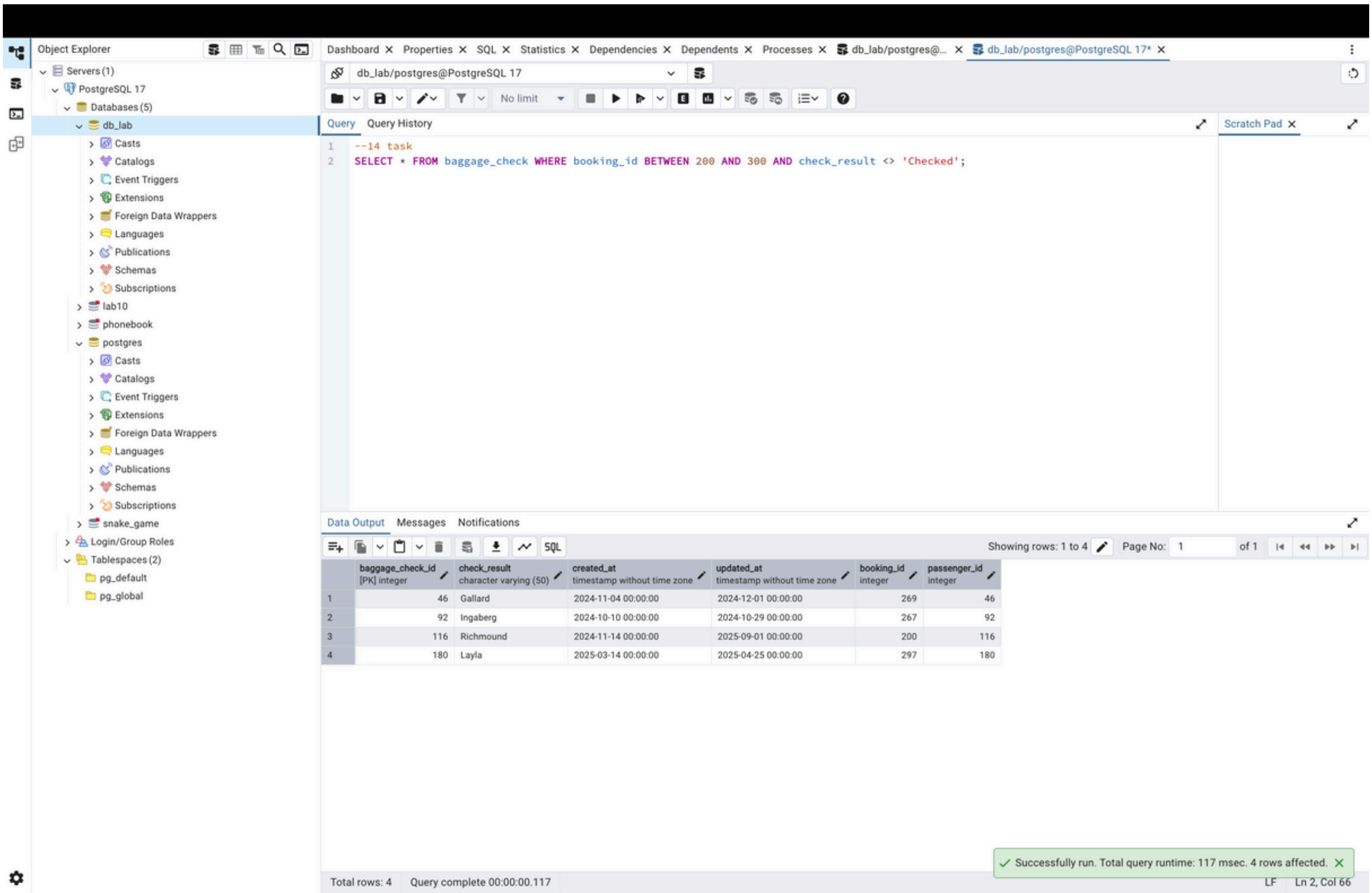
```sql
--13 task
SELECT * FROM airline_info ORDER BY created_at DESC LIMIT 5;
```

|  | airline_id<br>[PK] integer | airline_code<br>character varying (30) | airline_name<br>character varying (300) | airline_country<br>character varying (50) | created_at<br>timestamp without time zone | updated_at<br>timestamp without time zone | info<br>character varying (50) |
|---|---|---|---|---|---|---|---|
| 1 | 205 | PL001 | FlyFly | Poland | 2025-09-23 23:24:53.188879 | 2025-09-23 23:24:53.188879 | Polish airline |
| 2 | 204 | BR001 | FlyHigh | Brazil | 2025-09-23 23:24:53.188879 | 2025-09-23 23:24:53.188879 | Brazilian airline |
| 3 | 203 | FR001 | AirEasy | France | 2025-09-23 23:24:53.188879 | 2025-09-23 23:24:53.188879 | French airline |
| 4 | 201 | KZ001 | KazAir | Turkey | 2025-09-23 23:21:28.044211 | 2025-09-23 23:21:28.044211 | National airline |
| 5 | 36 | QR | Qatar Airways | France | 2025-09-22 00:00:00 | 2025-03-18 00:00:00 | phasellus id |

✓ Successfully run. Total query runtime: 86 msec. 5 rows affected.

Total rows: 5 Query complete 00:00:00.086

14. Return all rows where booking_id is between 200 and 300 inclusive and check_result <> 'Checked'.



```
--14 task
SELECT * FROM baggage_check WHERE booking_id BETWEEN 200 AND 300 AND check_result <> 'Checked';
```

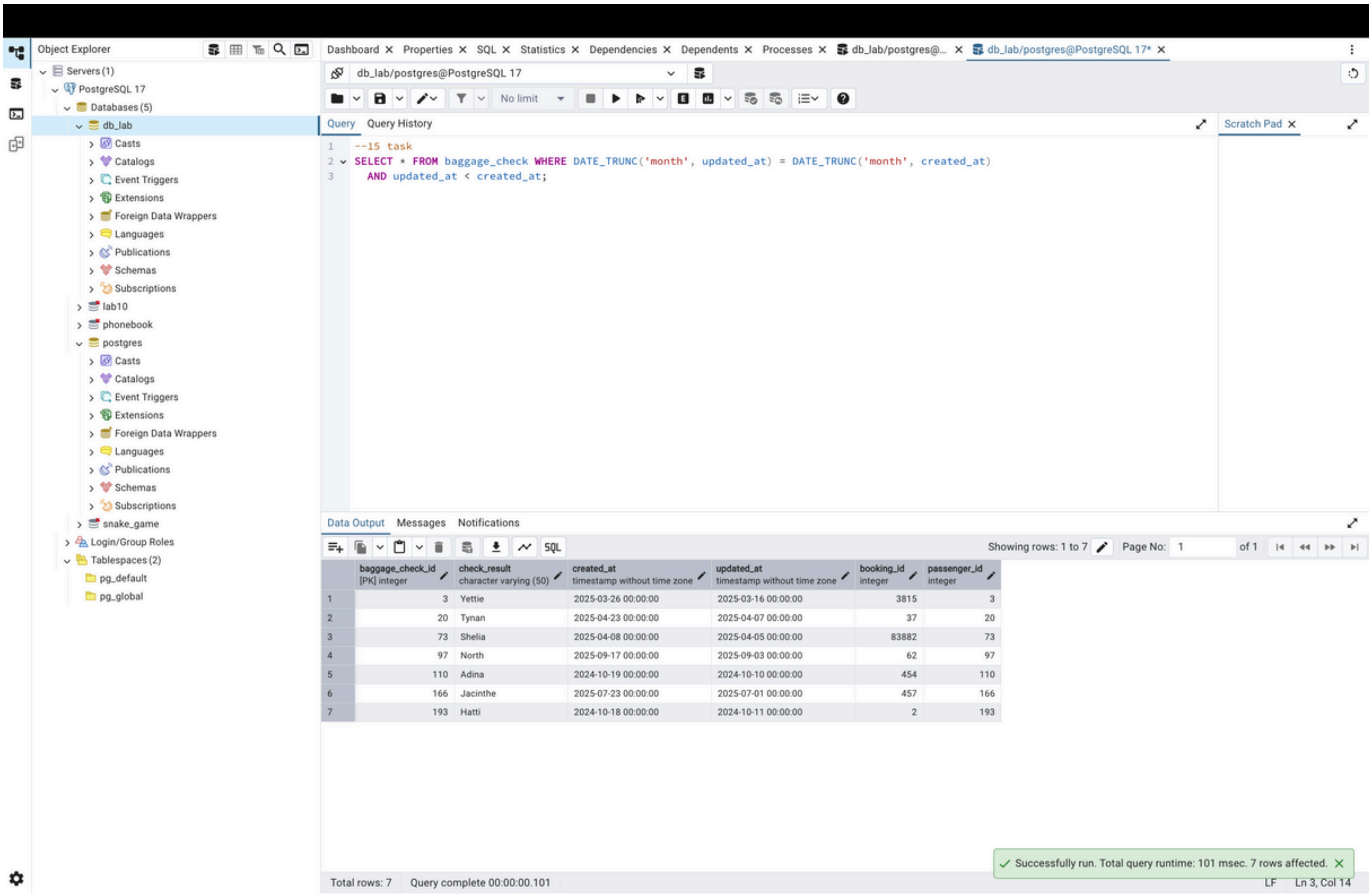
| | baggage_check_id<br>[PK] integer | check_result<br>character varying (50) | created_at<br>timestamp without time zone | updated_at<br>timestamp without time zone | booking_id<br>integer | passenger_id<br>integer |
|---|---|---|---|---|---|---|
| 1 | 46 | Gallard | 2024-11-04 00:00:00 | 2024-12-01 00:00:00 | 269 | 46 |
| 2 | 92 | Ingaberg | 2024-10-10 00:00:00 | 2024-10-29 00:00:00 | 267 | 92 |
| 3 | 116 | Richmound | 2024-11-14 00:00:00 | 2025-09-01 00:00:00 | 200 | 116 |
| 4 | 180 | Layla | 2025-03-14 00:00:00 | 2025-04-25 00:00:00 | 297 | 180 |

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

Successfully run. Total query runtime: 117 msec. 4 rows affected.

Total rows: 4 Query complete 00:00:00.117

15. Baggage checks where update_at is in the same month as created_at but occurs earlier than created_at.



```
--15 task
SELECT * FROM baggage_check WHERE DATE_TRUNC('month', updated_at) = DATE_TRUNC('month', created_at)
  AND updated_at < created_at;
```

| | baggage_check_id<br>[PK] integer | check_result<br>character varying (50) | created_at<br>timestamp without time zone | updated_at<br>timestamp without time zone | booking_id<br>integer | passenger_id<br>integer |
|---|---|---|---|---|---|---|
| 1 | 3 | Yettie | 2025-03-26 00:00:00 | 2025-03-16 00:00:00 | 3815 | 3 |
| 2 | 20 | Tynan | 2025-04-23 00:00:00 | 2025-04-07 00:00:00 | 37 | 20 |
| 3 | 73 | Shelia | 2025-04-08 00:00:00 | 2025-04-05 00:00:00 | 83882 | 73 |
| 4 | 97 | North | 2025-09-17 00:00:00 | 2025-09-03 00:00:00 | 62 | 97 |
| 5 | 110 | Adina | 2024-10-19 00:00:00 | 2024-10-10 00:00:00 | 454 | 110 |
| 6 | 166 | Jacinthe | 2025-07-23 00:00:00 | 2025-07-01 00:00:00 | 457 | 166 |
| 7 | 193 | Hatti | 2024-10-18 00:00:00 | 2024-10-11 00:00:00 | 2 | 193 |

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

Successfully run. Total query runtime: 101 msec. 7 rows affected.

Total rows: 7 Query complete 00:00:00.101