

The screenshot shows the Database Explorer interface in a dark-themed environment. The top navigation bar includes tabs for 'DB' (highlighted in green), 'DB_lab2', and 'Version control'. On the far right are icons for profile, search, and settings.

The main area is divided into two panes. The left pane, titled 'Database Explorer', lists database connections under 'postgres@localhost': 'postgres' (3 operations), 'zhanel' (3 operations), and 'Server Objects'. The right pane, titled 'console', displays a transaction log:

```
1 --1
2 ✓ BEGIN;
3 ✓ DELETE FROM booking
4 WHERE booking_id = 11;
5 ✓ COMMIT;
```

The transaction log shows a successful execution of a DELETE query followed by a COMMIT. The 'Tx: Auto' dropdown is set to 'Auto'.

The Services panel at the bottom left shows the transaction history for the 'Database' connection under 'postgres@localhost' in the 'console' tab, which took 48 ms:

```
[2025-11-24 15:40:04] completed in 3 ms
[2025-11-24 15:40:04] zhanel> DELETE FROM booking
          WHERE booking_id = 11
[2025-11-24 15:40:04] 1 row affected in 14 ms
[2025-11-24 15:40:05] zhanel> COMMIT
[2025-11-24 15:40:05] completed in 2 ms
```

The bottom status bar indicates the current file encoding is 'UTF-8'.

The screenshot shows a PostgreSQL database interface with several panes:

- Database Explorer**: Shows connections to `postgres@localhost` (2), `postgres` (3), `zhanel` (3), and `Server Objects`.
- console**: A code editor pane showing a transaction script:

```
1 --2
2 ✓ BEGIN;
3 ✓ UPDATE flights
4 SET actual_departure = '2025-02-10 14:30:00'
5 WHERE flight_id = 11;
6 ✓ COMMIT;
```
- Services**: Shows a transaction log with the following entries:

```
[2025-11-24 15:44:27] zhanel.public> UPDATE flights
[2025-11-24 15:44:27]      SET actual_departure = '2025-02-10 14:30:00'
[2025-11-24 15:44:27]      WHERE flight_id = 11
[2025-11-24 15:44:27] 1 row affected in 7 ms
[2025-11-24 15:44:27] zhanel.public> COMMIT
[2025-11-24 15:44:27] completed in 1 ms
```

The bottom section displays the transaction log from the Services pane:

```
[2025-11-24 15:44:27] zhanel.public> UPDATE flights
[2025-11-24 15:44:27]      SET actual_departure = '2025-02-10 14:30:00'
[2025-11-24 15:44:27]      WHERE flight_id = 11
[2025-11-24 15:44:27] 1 row affected in 7 ms
[2025-11-24 15:44:27] zhanel.public> COMMIT
[2025-11-24 15:44:27] completed in 1 ms
```

The screenshot shows a PostgreSQL database management interface with several panes:

- Database Explorer** (Left): Shows the database schema. The `public` schema is expanded, displaying tables like `airline`, `airport`, `airports`, `baggage`, `baggage_ch`, `boarding_pass`, `booking`, `flight`, `flights`, `passengers`, `security_check`, `ticket`, and materialized views.
- Services** (Bottom Left): Shows the transaction log. A transaction for the `booking` table is listed, starting with an `UPDATE` statement and ending with a `COMMIT`.
- console** (Top Right): Shows the history of SQL commands entered. The commands are:

```
1 --3
2 ✓ BEGIN;
3 ✓ UPDATE booking
4 SET price = price - 5000
5 WHERE flight_id = 10;
6 ✓ COMMIT;
```
- Logs** (Bottom Right): Shows the execution logs for the transaction. It includes the timestamp, command, duration, and a summary message.

Toolbars and status bars are also visible at the top and bottom of the interface.

```
[2025-11-24 15:49:12] zhanel.public> UPDATE booking
      SET price = price - 5000
      WHERE flight_id = 10
[2025-11-24 15:49:12] completed in 5 ms
[2025-11-24 15:49:12] zhanel.public> COMMIT
[2025-11-24 15:49:12] completed in 1 ms
```

Database Consoles > postgres@localhost > **console** 8:1 LF UTF-8 4 spaces

The screenshot shows the Database Explorer interface. On the left, a tree view lists databases: `postgres@localhost` (selected), `postgres`, `zhanel` (highlighted in blue), and `Server Objects`. The main area is a code editor titled "console" with the file name "passengers". The code is a PostgreSQL transaction script:

```
--4
BEGIN;
UPDATE passengers
SET date_of_birth = '2006-01-01',
    first_name = 'Aruzhan',
    last_name = 'Akimova',
    full_name = 'Aruzhan Akimova',
    passport_number = 'N1234567',
    update_at = CURRENT_DATE
WHERE passenger_id = 7;
COMMIT;
```

The screenshot shows the Services tab. On the left, a tree view lists `Database`, `postgres@localhost`, and `passengers` (highlighted in grey). The main area displays the execution history of the transaction from the previous screenshot:

| Time | Query | Duration |
|-----------------------|--|----------|
| [2025-11-25 09:52:19] | <code>zhanel.public> UPDATE passengers</code> | |
| | <code>SET date_of_birth = '2006-01-01',</code> | |
| | <code>first_name = 'Aruzhan',</code> | |
| | <code>last_name = 'Akimova',</code> | |
| | <code>full_name = 'Aruzhan Akimova',</code> | |
| | <code>passport_number = 'N1234567',</code> | |
| | <code>update_at = CURRENT_DATE</code> | |
| | <code>WHERE passenger_id = 7;</code> | |
| [2025-11-25 09:52:19] | <code>1 row affected in 5 ms</code> | |
| [2025-11-25 09:52:19] | <code>zhanel.public> COMMIT</code> | |
| [2025-11-25 09:52:19] | <code>completed in 1 ms</code> | |

DB DB_lab2 Version control

Database Explorer

console passengers

postgres@localhost 2

postgres 3

zhanel 3

Server Objects

zhanelpublic

```
5      SET date_of_birth = '2006-01-01',
6          first_name = 'Aruzhan',
7          last_name = 'Akimova',
8          full_name = 'Aruzhan Akimova',
9          passport_number = 'N1234567',
10         update_at = CURRENT_DATE
11
12         WHERE passenger_id = 7;
13
14
15
16     ✓ BEGIN;
17
18     ✓ UPDATE booking
19         SET update_at = CURRENT_DATE
20         WHERE passenger_id = 7;
21
22     ✓ UPDATE baggage_ch
23         SET update_at = CURRENT_DATE
24         WHERE passenger_id = 7;
25
26     ✓ COMMIT;
```

Services

Tx + ⌂ ⌂ ×

Database postgres@localhost

console 8 ms

passengers 352 ms

Output Result 6 zhanelpublic.passenger --4

2025-11-25 09:52:57 zhanelpublic> UPDATE booking

SET update_at = CURRENT_DATE

WHERE passenger_id = 7

[2025-11-25 09:52:57] 2 rows affected in 5 ms

2025-11-25 09:52:57 zhanelpublic> UPDATE baggage_ch

SET update_at = CURRENT_DATE

WHERE passenger_id = 7

[2025-11-25 09:52:57] 3 rows affected in 3 ms

2025-11-25 09:52:57 zhanelpublic> COMMIT

[2025-11-25 09:52:57] completed in 3 ms

Database Consoles > postgres@localhost > console

26:8 LF UTF-8 4 spaces ⌂ ⌂

DB DB_lab2 Version control

Database Explorer

console passengers

zhanel.public

```
1      --5
2      ✓ BEGIN;
3
4      ✓ INSERT INTO passengers (
5          first_name,
6          last_name,
7          full_name,
8          gender,
9          date_of_birth,
10         country_of_citizenship,
11         country_of_residence,
12         passport_number,
13         created_at
14     )
15     VALUES (
16         first_name 'Dana',
17         last_name 'Kaliyeva',
18         full_name 'Dana Kaliyeva',
19         gender 'Female',
20         date_of_birth '2006-05-11',    -- возраст = 19
21         country_of_citizenship 'Germany',    -- HE France!
22         country_of_residence 'Germany',
23         passport_number 'N9999999'
```

Services

Output now():timestamp Result 35-2

```
'Germany',      -- HE France!
'Germany',
'N9999999',
CURRENT_DATE
)
RETURNING passenger_id
```

[2025-11-25 10:14:53] 1 row retrieved starting from 1 in 344 ms (execution: 5 ms, fetching: 339 ms)

[2025-11-25 10:14:53] zhanel.public> COMMIT

[2025-11-25 10:14:53] completed in 2 ms

DB DB_lab2 Version control

Database Explorer

console passengers

postgres@localhost 2

postgres 3

zhanel 3

Server Objects

--6

BEGIN;

UPDATE booking

SET price = price + 3000

WHERE flight_id = 10;

COMMIT;

10

Services

Tx + ⏪ ⏴ ×

Database

postgres@localhost

console 8 ms

passengers 352 ms

Output now():timestamp Result 35-2

```
[2025-11-25 10:22:36] zhanel.public> BEGIN
[2025-11-25 10:22:36] completed in 2 ms
[2025-11-25 10:22:36] zhanel.public> UPDATE booking
[2025-11-25 10:22:36] completed in 3 ms
[2025-11-25 10:22:36] zhanel.public> COMMIT
[2025-11-25 10:22:36] completed in 0 ms
```

The screenshot shows the Database Explorer panel on the left with a tree view of database connections and objects. The 'zhanel' connection is selected. The main area is a code editor titled 'console' showing a transaction script:

```
1      --7
2      ✓ BEGIN;
3
4      ✓ UPDATE baggage
5          SET weight_in_kg = 23,
6              update_date = CURRENT_DATE
7          WHERE baggage_id = 5;
8
9      ✓ COMMIT;
10
11
```

The 'Output' tab at the bottom shows the execution results:

```
[2025-11-25 10:32:51] zhanel.public> UPDATE baggage
SET weight_in_kg = 23,
    update_date = CURRENT_DATE
WHERE baggage_id = 5
[2025-11-25 10:32:51] 1 row affected in 4 ms
[2025-11-25 10:32:51] zhanel.public> COMMIT
[2025-11-25 10:32:51] completed in 1 ms
```

The Services panel at the bottom shows the transaction history:

| TX | Duration |
|--------------------|----------|
| Database | 9 ms |
| postgres@localhost | 416 ms |
| console | 352 ms |

The 'Output' tab shows the same execution results as the Database Explorer:

```
[2025-11-25 10:32:51] zhanel.public> UPDATE baggage
SET weight_in_kg = 23,
    update_date = CURRENT_DATE
WHERE baggage_id = 5
[2025-11-25 10:32:51] 1 row affected in 4 ms
[2025-11-25 10:32:51] zhanel.public> COMMIT
[2025-11-25 10:32:51] completed in 1 ms
```

DB DB_lab2 Version control

Database Explorer

console baggage passengers

postgres@localhost 2

postgres 3

zhanel 3

Server Objects

zhanel.public ✓

```
1      --8
2      ✓ BEGIN;
3
4      ✓ UPDATE booking
5          SET price = price * 0.85
6          WHERE booking_id = 12
7              AND passenger_id = 7;
8
9
10     ✓ COMMIT;
11
12
13
14
15
16
17
18
19
20
21
22
23
```

Services

Tx + ⚡ ×

Database postgres@localhost

console 10 ms

baggage 416 ms

passengers 352 ms

Output Result 35-2

```
[2025-11-25 10:39:32] zhanel.public> BEGIN
[2025-11-25 10:39:32] completed in 2 ms
[2025-11-25 10:39:32] zhanel.public> UPDATE booking
[2025-11-25 10:39:32]          SET price = price * 0.85
[2025-11-25 10:39:32]          WHERE booking_id = 12
[2025-11-25 10:39:32]              AND passenger_id = 7
[2025-11-25 10:39:32] completed in 3 ms
[2025-11-25 10:39:32] zhanel.public> COMMIT
[2025-11-25 10:39:32] completed in 1 ms
```

DB DB_lab2 Version control

Database Explorer

console booking baggage passengers

postgres@localhost 2

postgres 3

zhanel 3

Server Objects

1 --9

2 ✓ BEGIN;

3

4 ✓ UPDATE booking

5 SET flight_id = 500

6 WHERE flight_id = 10;

7

8 ✓ COMMIT;| A

zhanel.public ✓

```
--9
BEGIN;
UPDATE booking
SET flight_id = 500
WHERE flight_id = 10;
COMMIT;| A
```

Services

Tx + ⌂ ×

Database postgres@localhost

console 10 ms

baggage 416 ms

passengers 352 ms

booking 437 ms

Output Result 35-2

[2025-11-25 10:48:07] zhanel.public> BEGIN

[2025-11-25 10:48:07] completed in 2 ms

[2025-11-25 10:48:07] zhanel.public> UPDATE booking

SET flight_id = 500

WHERE flight_id = 10

[2025-11-25 10:48:07] completed in 7 ms

[2025-11-25 10:48:07] zhanel.public> COMMIT

[2025-11-25 10:48:07] completed in 1 ms

```
[2025-11-25 10:48:07] zhanel.public> BEGIN
[2025-11-25 10:48:07] completed in 2 ms
[2025-11-25 10:48:07] zhanel.public> UPDATE booking
SET flight_id = 500
WHERE flight_id = 10
[2025-11-25 10:48:07] completed in 7 ms
[2025-11-25 10:48:07] zhanel.public> COMMIT
[2025-11-25 10:48:07] completed in 1 ms
```