

The screenshot shows a PostgreSQL database interface with several panes:

- Top Bar:** Shows tabs for "Lab 2 DB" and "Version control".
- Database Explorer:** Shows the schema structure of the database "postgres.lab2".
 - Tables: airline, airport, baggage, baggage_check, boarding_pass, booking, booking_flight, flights, passengers, security_check.
 - Public schema: tables (3), routines (4), sequences (1).
 - Database Objects and Server Objects.
- Console:** Titled "console_5". It contains a transaction log:

```
1 ✓ select * from booking where booking_id = '12345'  
2  
3 ✓ begin;  
4  
5 ✓ delete from booking where booking_id = '12345';  
6  
7 ✓ rollback;  
8  
9 ✓ select * from booking where booking_id = '12345'  
10  
11 |
```
- Services:** Shows the transaction log in the "Output" tab:

```
[2025-11-26 01:36:04] postgres.lab2> select * from booking where booking_id = '12345'  
[2025-11-26 01:36:05] 0 rows retrieved in 365 ms (execution: 4 ms, fetching: 361 ms)  
[2025-11-26 01:36:05] postgres.lab2> begin  
[2025-11-26 01:36:05] completed in 1 ms  
[2025-11-26 01:36:05] postgres.lab2> delete from booking where booking_id = '12345'  
[2025-11-26 01:36:05] completed in 4 ms  
[2025-11-26 01:36:05] postgres.lab2> rollback  
[2025-11-26 01:36:05] completed in 1 ms  
[2025-11-26 01:36:05] postgres.lab2> select * from booking where booking_id = '12345'  
[2025-11-26 01:36:05] 0 rows retrieved in 280 ms (execution: 4 ms, fetching: 276 ms)
```
- Bottom Status Bar:** Shows the current file "console_5", encoding "UTF-8", and other system information.

The screenshot shows a PostgreSQL database management interface with the following components:

- Top Bar:** Includes tabs for "Lab 2 DB" and "Version control", and icons for search, settings, and more.
- Database Explorer:** Shows the schema of the "postgres" database, including tables like "airline", "airport", "baggage", etc., and system catalogs like "public", "tables", "routines", "sequences".
- Console:** A code editor window titled "console_5" under the "flights" schema. It contains the following SQL script:

```
begin;
update flights
set sch_departure_time = '2025-11-25 10:00:00'
where flight_id = '10';
commit;
```
- Services:** A log window showing the execution of the transaction:

```
[2025-11-26 01:39:40] postgres.lab2> begin
[2025-11-26 01:39:40] completed in 2 ms
[2025-11-26 01:39:40] postgres.lab2> update flights
      set sch_departure_time = '2025-11-25 10:00:00'
      where flight_id = '10'
[2025-11-26 01:39:40] 1 row affected in 5 ms
[2025-11-26 01:39:40] postgres.lab2> commit
[2025-11-26 01:39:40] completed in 2 ms
```
- Bottom Status Bar:** Displays "Database Consoles > postgres@localhost > console_5", file information (5:8 LF UTF-8 4 spaces), and status icons.

Lab 2 DB Version control

Database Explorer

flights

WHERE ORDER BY

| flight_id | sch_departure_time | sch_arrival_time | departing_airport_id | arriving_airport_id | depart |
|-----------|----------------------------|----------------------------|----------------------|---------------------|--------|
| 195 | 2025-10-02 00:46:32.067402 | 2025-10-02 02:46:32.067402 | 197 | 197 | DG_196 |
| 196 | 2025-10-02 01:46:32.067402 | 2025-10-02 03:46:32.067402 | 198 | 198 | DG_197 |
| 197 | 2025-10-02 02:46:32.067402 | 2025-10-02 04:46:32.067402 | 199 | 199 | DG_198 |
| 198 | 2025-10-02 03:46:32.067402 | 2025-10-02 05:46:32.067402 | 200 | 200 | DG_199 |
| 199 | 2025-10-02 04:46:32.067402 | 2025-10-02 06:46:32.067402 | 1 | 1 | DG_200 |
| 200 | 2025-10-10 10:00:00.000000 | 2025-10-10 14:00:00.000000 | 1 | 2 | A10 |
| 201 | 2025-11-25 10:00:00.000000 | 2025-09-24 08:46:32.067402 | 11 | 11 | DG_10 |

201 rows

Services

Connected

postgres.public> SELECT t.*
FROM lab2.flights t
LIMIT 501

201 rows retrieved starting from 1 in 409 ms (execution: 5 ms, fetching: 404 ms)

Database > postgres@localhost > postgres > lab2 > tables > flights

Lab 2 DB Version control

Database Explorer

postgres@localhost

- > airline
- > airport
- > baggage
- > baggage_check
- > boarding_pass
- > booking
- > booking_flight
- > flights
- > passengers
- > security_check

public

- > tables 3
- > routines 4
- > sequences 1

Database Objects

Server Objects

Services

Output postgres.lab2.booking

| | booking_id | ticket_price |
|---|------------|--------------|
| 1 | 100 | 10453.50 |
| 2 | 451 | 10800.00 |

2 rows

console_5

--task 3
select booking_id, ticket_price from booking where flight_id = 101;
begin;
update booking
set ticket_price = ticket_price * 0.9
where flight_id = 101;
commit;

10 ✓ select booking_id, ticket_price from booking where flight_id = 101;|

postres.lab2

10:68 LF UTF-8 4 spaces

Lab 2 DB Version control

Database Explorer

postgres@localhost

- > airline
- > airport
- > baggage
- > baggage_check
- > boarding_pass
- > booking
- > booking_flight
- > flights
- > passengers
- > security_check

public

- > tables 3
- > routines 4
- > sequences 1

Database Objects

Server Objects

console_5

--task 3

```
1 select booking_id, ticket_price from booking where flight_id = 101;
2
3
4 ✓ begin;
5 ✓ update booking
6 set ticket_price = ticket_price * 0.9
7 where flight_id = 101
8 ✓ commit;
9
10 ✓ select booking_id, ticket_price from booking where flight_id = 101;
```

Services

Tx

+ ⚡ ⌂ ⌂ ✎

Database

postgres@localhost

console_5 489 ms

Output postgres.lab2.booking

```
[2025-11-26 01:39:40] completed in 2 ms
[2025-11-26 01:41:48] postgres.lab2> SELECT booking_id, ticket_price FROM booking WHERE flight_id = 101
[2025-11-26 01:41:48] 2 rows retrieved starting from 1 in 335 ms (execution: 3 ms, fetching: 332 ms)
[2025-11-26 01:49:01] postgres.lab2> begin
[2025-11-26 01:49:01] completed in 2 ms
[2025-11-26 01:49:01] postgres.lab2> update booking
      set ticket_price = ticket_price * 0.9
      where flight_id = 101
[2025-11-26 01:49:01] 2 rows affected in 5 ms
[2025-11-26 01:49:01] postgres.lab2> commit
[2025-11-26 01:49:01] completed in 1 ms
[2025-11-26 01:49:01] postgres.lab2> select booking_id, ticket_price from booking where flight_id = 101
[2025-11-26 01:49:01] 2 rows retrieved starting from 1 in 472 ms (execution: 6 ms, fetching: 466 ms)
```

Database Consoles > postgres@localhost > console_5

10:68 LF UTF

Lab 2 DB Version control

Database Explorer

postgres@localhost

- > `airline`
- > `airport`
- > `baggage`
- > `baggage_check`
- > `boarding_pass`
- > `booking`
- > `booking_flight`
- > `flights`
- > `passengers`
- > `security_check`

public

- > `tables` 3
- > `routines` 4

Database Explorer

console_5

Tx: Auto | Playground

```
--task 4
begin;
update passengers
set first_name = 'Ислам', last_name = 'Махачев'
WHERE passenger_id = '1';

update booking
set passenger_id = '1'
where passenger_id = '1';

commit;
rollback;

select * from passengers where passenger_id = '1'
```

Services

Output postgres.lab2.passengers

```
[2025-11-26 01:53:36] postgres.lab2> begin
[2025-11-26 01:53:36] completed in 1 ms
[2025-11-26 01:53:36] postgres.lab2> update passengers
      set first_name = 'Ислам', last_name = 'Махачев'
      WHERE passenger_id = '1'

[2025-11-26 01:53:36] 1 row affected in 5 ms
[2025-11-26 01:53:36] postgres.lab2> update booking
      set passenger_id = '1'
      where passenger_id = '1'

[2025-11-26 01:53:36] 1 row affected in 2 ms
[2025-11-26 01:53:36] postgres.lab2> commit
[2025-11-26 01:53:36] completed in 2 ms
[2025-11-26 01:53:36] postgres.lab2> rollback
[2025-11-26 01:53:36] [25P01] there is no transaction in progress
[2025-11-26 01:53:36] completed in 7 ms
[2025-11-26 01:53:36] postgres.lab2> select * from passengers where passenger_id = '1'
[2025-11-26 01:53:37] 1 row retrieved starting from 1 in 445 ms (execution: 3 ms, fetching: 442 ms)
```

Lab 2 DB Version control

Database Explorer

postgres@localhost

- > **airline**
- > **airport**
- > **baggage**
- > **baggage_check**
- > **boarding_pass**
- > **booking**
- > **booking_flight**
- > **flights**
- > **passengers**
- > **security_check**

public

- > **tables** 3
- > **routines** 4

~

console_5

Tx: Auto | Playground

```
--task 4
begin;
update passengers
set first_name = 'Ислам', last_name = 'Махачев'
WHERE passenger_id = '1';

update booking
set passenger_id = '1'
where passenger_id = '1';

commit;
rollback;

select * from passengers where passenger_id = '1'
```

Services

Output postgres.lab2.passengers

Database

postgres@localhost

console_5 456 ms

| | passenger_id | first_name | last_name | date_of_birth | gender | country_of_citizenship | country_2 |
|---|--------------|------------|-----------|---------------|--------|------------------------|-----------|
| 1 | 1 | Ислам | Махачев | 1980-01-02 | female | Country_2 | Country_2 |

1 row

Database Consoles > postgres@localhost > console_5

SUM: 1 1:1 8:15 LF UTF-8 4 spaces

Lab 2 DB Version control

Database Explorer

postgres@localhost

- > `airline`
- > `airport`
- > `baggage`
- > `baggage_check`
- > `boarding_pass`
- > `booking` (selected)
- > `booking_flight`
- > `flights`
- > `passengers`
- > `security_check`

public

- > `tables` 3
- > `routines` 4

console_5 × booking

Tx: Auto | Playground

postres.lab2

```
--task 5
begin;
insert into passengers (passenger_id, first_name, last_name, date_of_birth, gender, country_of_citizenship, country_of_residence, passport_number)
values ( passenger_id 314, first_name 'Хабиб', last_name 'Нургамедов', date_of_birth '1990-02-15', gender 'Male', country_of_citizenship 'Dagestan', country_of_residence 'Russia', passport_number 'P-12345' );
insert into booking (booking_id, flight_id, passenger_id, booking_platform, created_at, updated_at, status, ticket_price)
values ( booking_id 314, flight_id 101, passenger_id 314, booking_platform 'Online', created_at now(), updated_at now(), status 'Confirmed', ticket_price 12000 );
commit;
rollback;
```

Services

Tx + ⌂ ⌂ ×

Database

postgres@localhost

console_5 11 ms (selected)

booking 407 ms

```
[2025-11-26 02:03:34] postgres.lab2> rollback
[2025-11-26 02:03:34] completed in 1 ms
[2025-11-26 02:03:39] postgres.lab2> begin
[2025-11-26 02:03:39] completed in 2 ms
[2025-11-26 02:03:39] postgres.lab2> insert into passengers (passenger_id, first_name, last_name, date_of_birth, gender, country_of_citizenship, country_of_residence, passport_number, created_at, updated_at)
values (314, 'Хабиб', 'Нургамедов', '1990-02-15', 'Male', 'Dagestan', 'Russia', 'P-12345', now(), now())
[2025-11-26 02:03:39] 1 row affected in 2 ms
[2025-11-26 02:03:39] postgres.lab2> insert into booking (booking_id, flight_id, passenger_id, booking_platform, created_at, updated_at, status, ticket_price)
values (314, 101, 314, 'Online', now(), now(), 'Confirmed', 12000)
[2025-11-26 02:03:39] 1 row affected in 3 ms
[2025-11-26 02:03:39] postgres.lab2> commit
[2025-11-26 02:03:39] completed in 1 ms
[2025-11-26 02:03:39] postgres.lab2> rollback
[2025-11-26 02:03:39] [25P01] there is no transaction in progress
[2025-11-26 02:03:39] completed in 2 ms
```

The screenshot shows a PostgreSQL database interface with the following components:

- Top Bar:** Includes tabs for "Lab 2 DB" and "Version control", and icons for search, settings, and more.
- Database Explorer:** Shows the schema of the "postgres" database, including tables like airline, airport, baggage, baggage_check, boarding_pass, booking, booking_flight, flights, passengers, security_check, and public.
- Console:** A code editor window titled "console_5" under the "booking" schema. It contains the following SQL code:

```
--task 6
begin;
update booking
set ticket_price = ticket_price + 500
where flight_id = '101';
commit;
rollback;
```
- Services:** A log window showing the execution of the transaction:

```
[2025-11-26 02:05:28] postgres.lab2> begin
[2025-11-26 02:05:28] completed in 1 ms
[2025-11-26 02:05:28] postgres.lab2> update booking
      set ticket_price = ticket_price + 500
      where flight_id = '101'
[2025-11-26 02:05:28] 3 rows affected in 2 ms
[2025-11-26 02:05:28] postgres.lab2> commit
[2025-11-26 02:05:28] completed in 1 ms
[2025-11-26 02:05:28] postgres.lab2> rollback
[2025-11-26 02:05:28] [25P01] there is no transaction in progress
[2025-11-26 02:05:28] completed in 1 ms
```
- Bottom Status Bar:** Displays "Database Consoles > postgres@localhost > console_5", the date and time "9:10", file encoding "LF", character set "UTF-8", and code style settings "4 spaces".

Lab 2 DB Version control

Database Explorer

postgres@localhost

- > baggage
- > airline
- > airport
- > baggage
- > baggage_check
- > boarding_pass
- > booking
- > booking_flight
- > flights
- > passengers
- > security_check

public

tables 3

routines 4

console_5 × baggage booking

Tx: Auto Playground postgres.lab2

```
--task 7
begin;
update baggage
set weight_in_kg = 67
where baggage_id = 67;
commit;
rollback;
```

Services

Tx + ⚡ | ⚡ ×

Database

postgres@localhost

console_5 8 ms

booking 407 ms

baggage 375 ms

```
[2025-11-26 02:13:58] postgres.lab2> begin
[2025-11-26 02:13:58] completed in 1 ms
[2025-11-26 02:13:58] postgres.lab2> update baggage
[2025-11-26 02:13:58] set weight_in_kg = 67
[2025-11-26 02:13:58] where baggage_id = 67
[2025-11-26 02:13:58] 1 row affected in 3 ms
[2025-11-26 02:13:58] postgres.lab2> commit
[2025-11-26 02:13:58] completed in 1 ms
[2025-11-26 02:13:58] postgres.lab2> rollback
[2025-11-26 02:13:58] [25P01] there is no transaction in progress
[2025-11-26 02:13:58] completed in 1 ms
```

The screenshot shows a PostgreSQL database interface with several panes:

- Top Bar:** Shows tabs for "Lab 2 DB" and "Version control".
- Database Explorer:** Lists databases and schemas:
 - postgres@localhost: airline, airport, baggage (selected), baggage_check, boarding_pass, booking, booking_flight, flights, passengers, security_check.
 - public: tables (3), routines (4).
- Console:** Shows a transaction script in "console_5":

```
--task 8
begin;
update booking
set ticket_price = ticket_price * 0.9
where passenger_id = 12345;
commit;
rollback;
```
- Services:** Shows transaction logs:

| TX | Duration | Event |
|----|----------|---|
| + | 7 ms | begin |
| | | completed in 1 ms |
| | | update booking |
| | | set ticket_price = ticket_price * 0.9 |
| | | where passenger_id = 12345 |
| | 407 ms | completed in 1 ms |
| | | commit |
| | | completed in 1 ms |
| | | rollback |
| | | [25P01] there is no transaction in progress |
| | 375 ms | completed in 1 ms |
- Bottom Status Bar:** Shows "Database Consoles > postgres@localhost > console_5", status icons (10:1, LF, UTF-8, 4 spaces), and a file icon.

The screenshot shows a PostgreSQL database interface with several panes:

- Top Bar:** Shows tabs for "Lab 2 DB" and "Version control".
- Database Explorer:** Lists databases and schemas. The "baggage" schema is selected.
- Console:** A code editor window titled "console_5" showing a transaction script:

```
--task 9
begin;
update booking
set flight_id = 101
where flight_id = 102;
commit;
rollback;
```
- Services:** A log pane showing transaction history:

```
[2025-11-26 02:21:01] postgres.lab2> begin
[2025-11-26 02:21:01] completed in 2 ms
[2025-11-26 02:21:01] postgres.lab2> update booking
      set flight_id = 101
      where flight_id = 102
[2025-11-26 02:21:01] 2 rows affected in 1 ms
[2025-11-26 02:21:01] postgres.lab2> commit
[2025-11-26 02:21:01] completed in 1 ms
[2025-11-26 02:21:01] postgres.lab2> rollback
[2025-11-26 02:21:01] [25P01] there is no transaction in progress
[2025-11-26 02:21:01] completed in 1 ms
```
- Bottom Status:** Shows "Database Consoles > postgres@localhost > console_5" and system status (10:1 LF UTF-8 4 spaces).