

Database Explorer

lab2@localhost 1 of 4

lab2 1 of 3

public

tables 10

Database Objects

Server Objects

lab2@localhost [2]

lab2@localhost [3]

console_1 [lab2@localhost] x

ORDER BY

t.table_name, c.ordinal_position;

Files

database C:\Users\tury\Documents\Projects\database

Scratches and Consoles

Database Consoles

lab2@localhost

console [lab2@localhost] [lab2@localhost]

console_1 [lab2@localhost] [lab2@localhost]

lab2@localhost [2]

Extensions

Services

lab2@localhost 457 ms

Output

Result 2

table_name	column_name	data_type	is_nullable	constraint_info
booking	booking_id	integer	NO	booking_pkey
booking	flight_id	integer	NO	
booking	passenger_id	integer	NO	fk_booking__passenger
booking	booking_platform	character varying(50)	NO	
booking	created_at	timestamp without time zone	NO	
booking	updated_at	timestamp without time zone	NO	
booking	status	character varying(50)	NO	
booking	ticket_price	numeric(7,2)	NO	
booking_flight	booking_flight_id	integer	NO	booking_flight_pkey
booking_flight	booking_id	integer	NO	fk_booking_flight__booking
booking_flight	flight_id	integer	NO	fk_booking_flight__flight
booking_flight	created_at	timestamp without time zone	NO	
booking_flight	updated_at	timestamp without time zone	NO	

Database Consoles > lab2@localhost > console_1 [lab2@localhost]

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23:23 22.09.2025

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Output

Result 2

table_name	column_name	data_type	is_nullable	constraint_info
flights	flight_id	integer	NO	flights_pkey
flights	sch_departure_time	timestamp without time zone	NO	
flights	sch_arrival_time	timestamp without time zone	NO	
flights	departing_airport_id	integer	NO	fk_flights__dep_airport
flights	arriving_airport_id	integer	NO	fk_flights__arr_airport
flights	departing_gate	text	NO	
flights	arriving_gate	character varying(50)	NO	
flights	airline_id	integer	NO	fk_flights__airline
flights	act_departure_time	timestamp without time zone	NO	
flights	act_arrival_time	timestamp without time zone	NO	
flights	created_at	timestamp without time zone	NO	
flights	updated_at	timestamp without time zone	NO	
passengers	passenger_id	integer	NO	passengers_pkey

Database Consoles > lab2@localhost > console_1 [lab2@localhost]

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Database Objects

Server Objects

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Scratches and Consoles

Database Consoles

lab2@localhost

console [lab2@localhost] [lab2@localhost]

console_1 [lab2@localhost] [lab2@localhost]

lab2@localhost [2]

Extensions

Services

lab2@localhost

console_1 457 ms

Output Result 2 x

table_name	column_name	data_type	is_nullable	constraint_info
passengers	date_of_birth	date	NO	
passengers	gender	character varying(50)	NO	
passengers	country_of_citizenship	character varying(50)	NO	
passengers	country_of_residence	character varying(50)	NO	
passengers	passport_number	character varying(20)	NO	
passengers	created_at	timestamp without time zone	NO	
passengers	updated_at	timestamp without time zone	NO	
security_check	security_check_id	integer	NO	security_check_pkey
security_check	check_result	character varying(20)	NO	
security_check	created_at	timestamp without time zone	NO	
security_check	updated_at	timestamp without time zone	NO	
security_check	passenger_id	integer	NO	fk_security_check__passenger

Database Consoles > lab2@localhost > console_1 [lab2@localhost]

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Database Explorer

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Database Objects

Server Objects

lab2@localhost [2]

lab2@localhost [3]

console_1 [lab2@localhost] x

ELSE c.data_type

END AS data_type,

CASE

WHEN c.is_nullable = 'YES' THEN 'YES'

ELSE 'NO'

END AS is_nullable,

COALESCE(kcu.constraint_name, '') AS constraint_info

FROM

information_schema.columns c

JOIN information_schema.tables t

ON c.table_name = t.table_name

LEFT JOIN information_schema.key_column_usage kcu

ON c.column_name = kcu.column_name AND c.table_name = kcu.table_name

WHERE

Files

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Scratches and Consoles

Database Consoles

lab2@localhost

console [lab2@localhost] [lab2@localhost]

console_1 [lab2@localhost] [lab2@localhost]

lab2@localhost [2]

Extensions

Services

lab2@localhost

console_1 457 ms

Output Result 2 x

table_name	column_name	data_type	is_nullable	constraint_info
airport	state	character varying(50)	NO	
airport	city	character varying(50)	NO	
airport	created_at	timestamp without time zone	NO	
airport	updated_at	timestamp without time zone	NO	
baggage	baggage_id	integer	NO	baggage_pkey
baggage	weight_in_kg	numeric(4,2)	NO	
baggage	created_at	timestamp without time zone	NO	
baggage	updated_at	timestamp without time zone	NO	

Database Consoles > lab2@localhost > console_1 [lab2@localhost]

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relationships

Database Explorer

lab2@localhost 1 of 4

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tables 10

Database Objects

Server Objects

lab2@localhost [2]

lab2@localhost [3]

console_1 [lab2@localhost] x

```
7 WHEN c.data_type = 'character' THEN
8   c.data_type || '(' || c.character_maximum_length || ')'
9
10 WHEN c.data_type = 'decimal' THEN
11   c.data_type || '(' || c.numeric_precision || ',' || c.nu
12
13 WHEN c.data_type = 'numeric' THEN
14   c.data_type || '(' || c.numeric_precision || ',' || c.nu
15 ELSE c.data_type
16 END AS data_type,
17 CASE
```

Files

database C:\Users\tursy\DataGripProjects\database

Scratches and Consoles

Database Consoles

lab2@localhost

console [lab2@localhost] [lab2@localhost]

console_1 [lab2@localhost] [lab2@localhost]

lab2@localhost [2]

Extensions

Services

lab2@localhost

console_1 456 ms

Output

Result 3 x

	data_type	is_nullable	constraint_info	related_table	related_column
12	timestamp without time zone	NO			
13	timestamp without time zone	NO			
14	integer	NO	baggage_pkey		
15	numeric(4,2)	NO			
16	timestamp without time zone	NO			
17	timestamp without time zone	NO			
18	integer	NO	fk_baggage__booking	booking	booking_id
19	integer	NO	baggage_check_pkey		
20	character varying(50)	NO			
21	timestamp without time zone	NO			
22	timestamp without time zone	NO			
23	integer	NO	fk__booking	booking	booking_id
24	integer	NO	fk__baggage__pkey__baggage_id	baggage	baggage_id

Database Consoles > lab2@localhost > console_1 [lab2@localhost]

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Database Explorer

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tables 10

Database Objects

Server Objects

lab2@localhost [2]

lab2@localhost [3]

console_1 [lab2@localhost] x

```
1 SELECT
2   t.table_name,
3   c.column_name,
4   CASE
5     WHEN c.data_type = 'character varying' THEN
6       c.data_type || '(' || c.character_maximum_length || ')'
7     WHEN c.data_type = 'character' THEN
8       c.data_type || '(' || c.character_maximum_length || ')'
9     WHEN c.data_type = 'decimal' THEN
```

Files

database C:\Users\tursy\DataGripProjects\database

Scratches and Consoles

Database Consoles

lab2@localhost

console [lab2@localhost] [lab2@localhost]

console_1 [lab2@localhost] [lab2@localhost]

lab2@localhost [2]

Extensions

Services

lab2@localhost

console_1 456 ms

Output

Result 3 x

	data_type	is_nullable	constraint_info	related_table	related_column
1	integer	NO	airline_info_pkey		
2	character varying(30)	NO			
3	character varying(50)	NO			
4	character varying(50)	NO			
5	timestamp without time zone	NO			
6	timestamp without time zone	NO			
7	integer	NO	airport_pkey		
8	character varying(50)	NO			
9	character varying(50)	NO			
10	character varying(50)	NO			
11	character varying(50)	NO			
12	timestamp without time zone	NO			

Database Consoles > lab2@localhost > console_1 [lab2@localhost]

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DML

The screenshot shows a database management tool interface. The top panel displays a SQL query: `SELECT * FROM airport WHERE country = 'Kazakhstan';`. The bottom panel shows the results of this query, which are 12 rows of data. The columns are: `airport_id`, `airport_name`, `country`, `state`, `city`, `created_at`, and `updated_at`. The data is as follows:

airport_id	airport_name	country	state	city	created_at	updated_at
5	Airport 5	Kazakhstan	State 26	City 184	2024-10-16 18:39:51.003874	2025-09-22 18:39:51.003874
11	Airport 11	Kazakhstan	State 25	City 39	2024-09-27 18:39:51.003874	2025-09-22 18:39:51.003874
18	Airport 18	Kazakhstan	State 14	City 49	2024-10-26 18:39:51.003874	2025-09-22 18:39:51.003874
26	Airport 26	Kazakhstan	State 17	City 70	2025-02-10 18:39:51.003874	2025-09-22 18:39:51.003874
38	Airport 38	Kazakhstan	State 6	City 84	2025-01-31 18:39:51.003874	2025-09-22 18:39:51.003874
47	Airport 47	Kazakhstan	State 33	City 102	2025-01-14 18:39:51.003874	2025-09-22 18:39:51.003874
68	Airport 68	Kazakhstan	State 8	City 75	2024-12-13 18:39:51.003874	2025-09-22 18:39:51.003874
87	Airport 87	Kazakhstan	State 6	City 52	2025-05-24 18:39:51.003874	2025-09-22 18:39:51.003874
97	Airport 97	Kazakhstan	State 3	City 101	2025-07-28 18:39:51.003874	2025-09-22 18:39:51.003874
99	Airport 99	Kazakhstan	State 12	City 156	2025-02-01 18:39:51.003874	2025-09-22 18:39:51.003874
101	Airport 101	Kazakhstan	State 36	City 49	2024-12-03 18:39:51.003874	2025-09-22 18:39:51.003874
111	Airport 111	Kazakhstan	State 5	City 49	2025-06-23 18:39:51.003874	2025-09-22 18:39:51.003874

INSERT INTO airport(airport_id, airport_name, country, state, city, created_at, updated_at)

SELECT gs,

'Airport '||gs,

(ARRAY['Kazakhstan','USA','France','Turkey','Brazil','Poland'])[1 + (random()*5)::int],

'State '||((random()*50)::int),

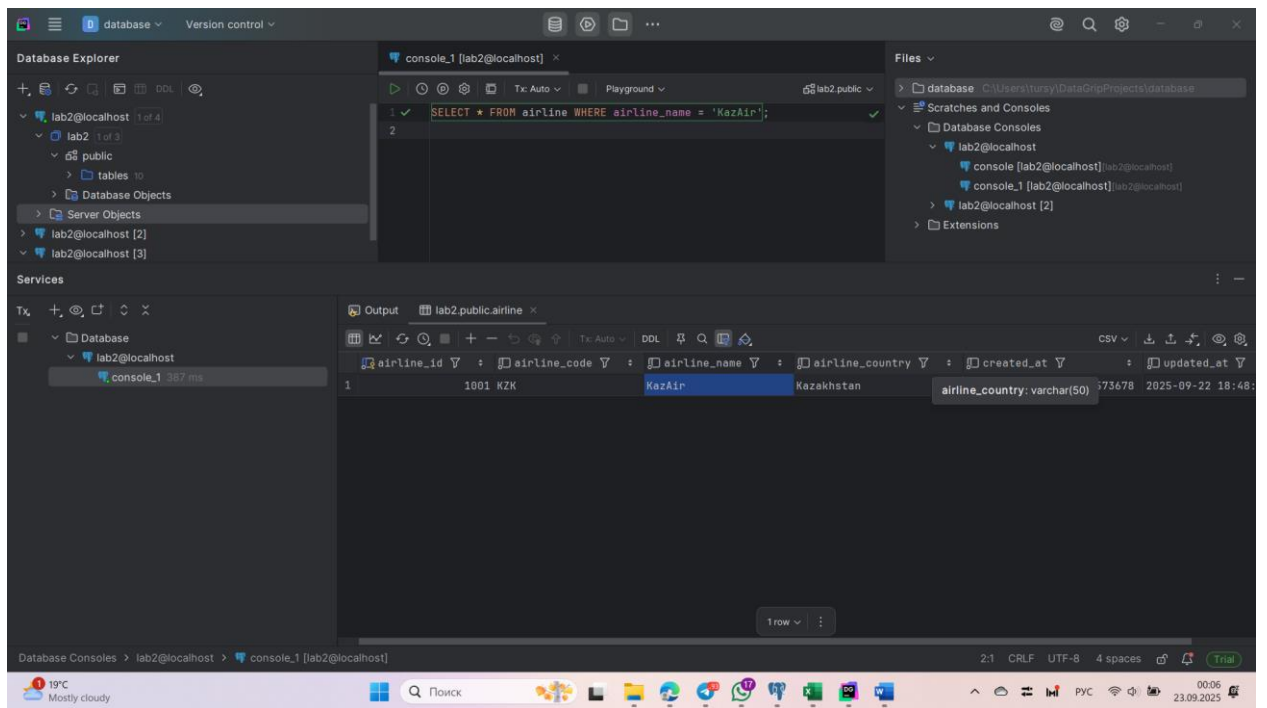
'City '||((random()*200)::int),

now() - ((random()*365)::int || ' days')::interval,

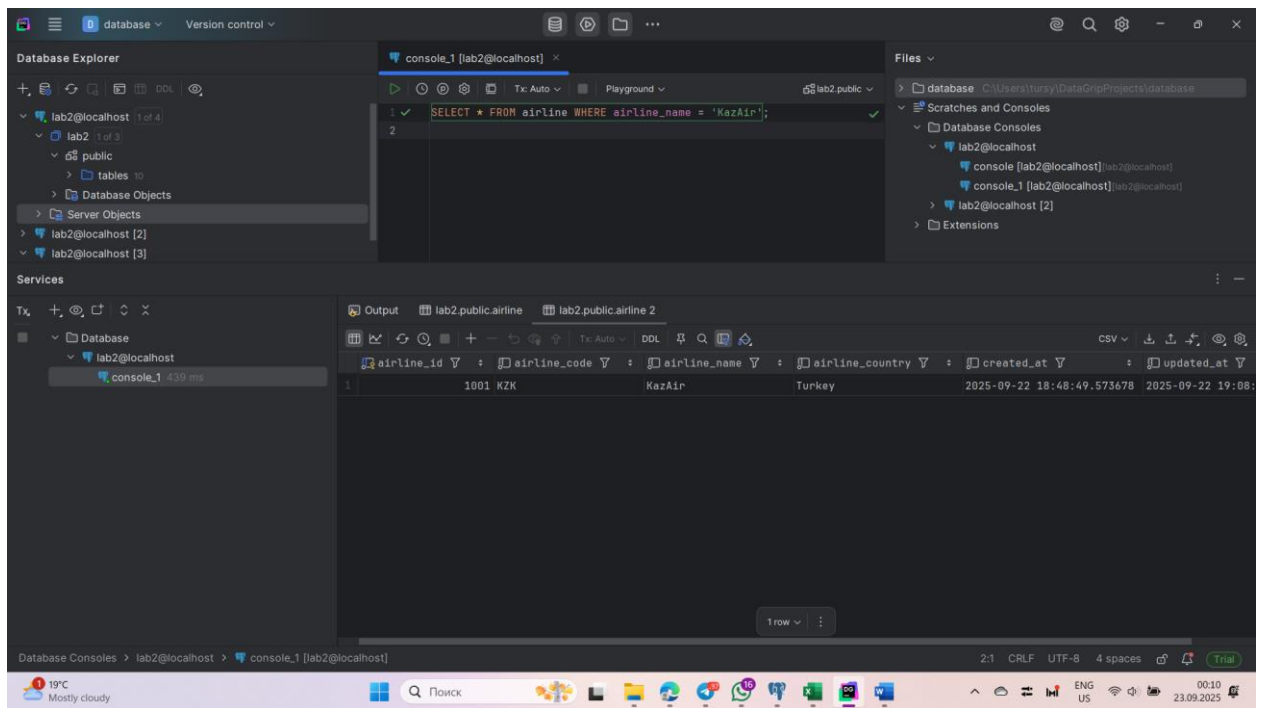
now()

FROM generate_series(1,200) AS gs

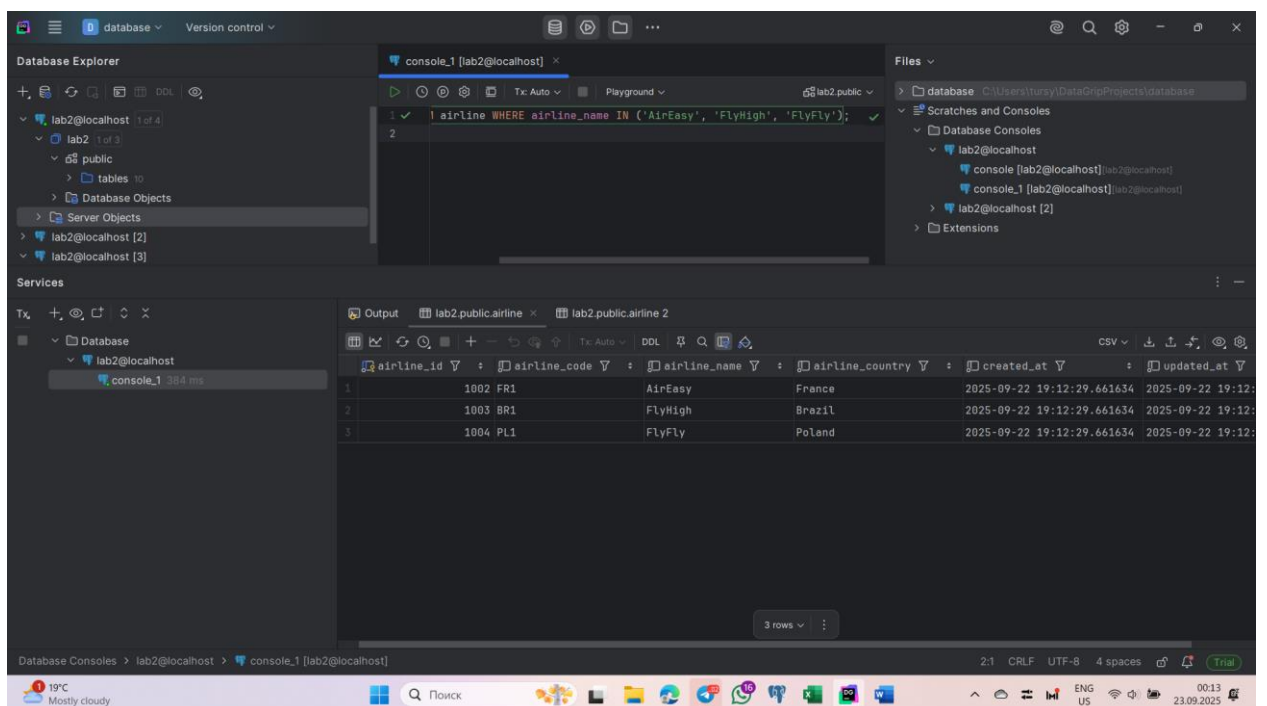
ON CONFLICT (airport_id) DO NOTHING;



```
INSERT INTO airline(airline_id, airline_code, airline_name, airline_country, created_at,
updated_at)
VALUES (1001, 'KZK', 'KazAir', 'Kazakhstan', now(), now())
ON CONFLICT (airline_id) DO NOTHING;
UPDATE airline SET airline_country = 'Turkey', updated_at = now()
WHERE airline_name = 'KazAir';
```

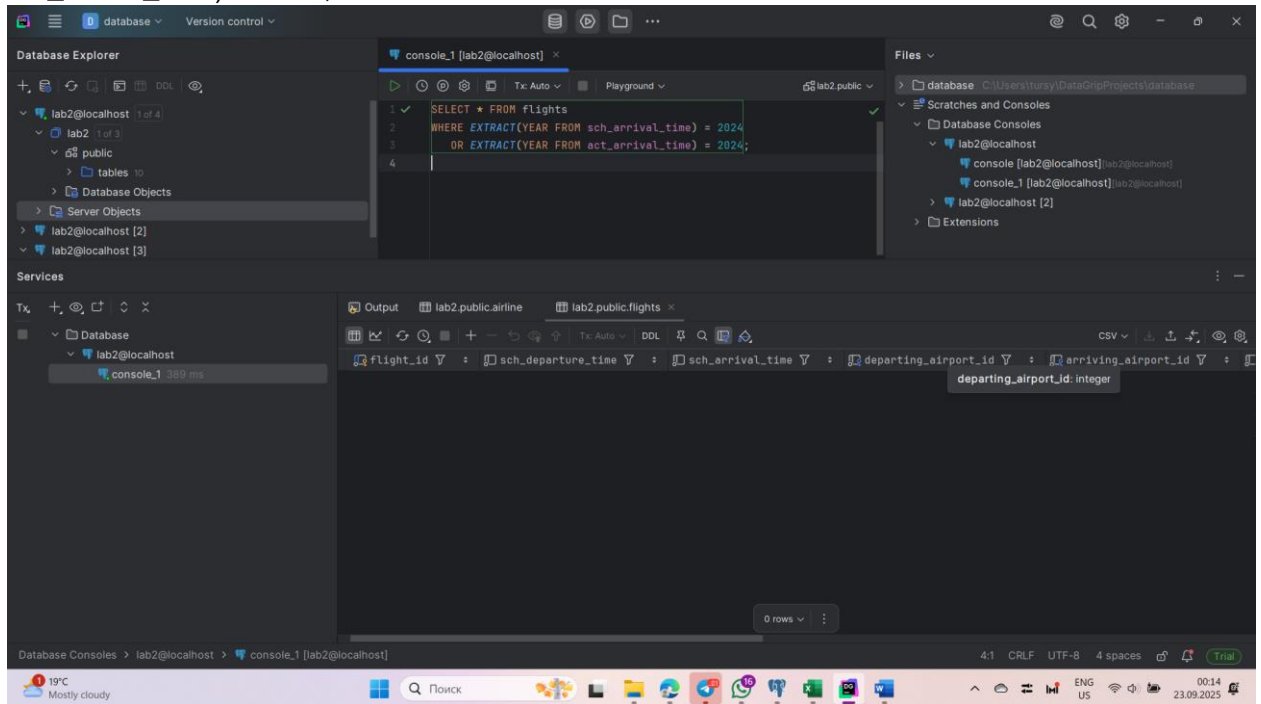



```
INSERT INTO airline(airline_id, airline_code, airline_name, airline_country, created_at,
updated_at)
VALUES
(1002,'FR1','AirEasy','France', now(), now()),
(1003,'BR1','FlyHigh','Brazil', now(), now()),
(1004,'PL1','FlyFly','Poland', now(), now())
ON CONFLICT (airline_id) DO NOTHING;
```



DELETE FROM flights

WHERE EXTRACT(YEAR FROM sch_arrival_time) = 2024 OR EXTRACT(YEAR FROM
act_arrival_time) = 2024;



UPDATE booking

ticket_price = ticket_price * 1.15,

updated_at = now();

database Version control

Database Explorer

- lab2@localhost 1 of 4
 - lab2 1 of 3
 - public
 - tables 10
 - Database Objects
 - Server Objects
 - lab2@localhost [2]
 - lab2@localhost [3]

console_1 [lab2@localhost]

```
1 SELECT booking_id, flight_id, passenger_id, ticket_price, status, updated_at;
2 FROM booking;
3
```

Files

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 - Scratches and Consoles
 - Database Consoles
 - lab2@localhost
 - console [lab2@localhost] [lab2@localhost]
 - console_1 [lab2@localhost] [lab2@localhost]
 - lab2@localhost [2]

Services

Output lab2.public.booking lab2.public.booking 2

	booking_id	flight_id	passenger_id	ticket_price	status	updated_at
1	1	101	201	575.00	Confirmed	2025-09-22 19:32:08.105251
2	2	102	202	805.00	Pending	2025-09-22 19:32:08.105251
3	3	103	203	690.00	Confirmed	2025-09-22 19:32:08.105251

3 rows

Database Consoles > lab2@localhost > console_1 [lab2@localhost]

3:1 CRLF UTF-8 4 spaces

Rain coming In about 1 hour

Понедельник 23.09.2025 00:32

DELETE FROM booking

WHERE ticket_price < 10000;

The screenshot displays a database IDE interface with the following components:

- Database Explorer:** Shows a tree view of the database structure, including 'lab2@localhost' and 'public' schema.
- Console:** Contains a SQL query: `SELECT * FROM booking WHERE ticket_price < 10000;`. The query is executed, and the results are displayed in a table.
- Files:** Shows the file system structure, including 'database' and 'Scratches and Consoles'.
- Services:** Shows the 'lab2@localhost' service.
- Output:** Displays the results of the query in a table with columns: booking_id, flight_id, passenger_id, booking_platform, created_at, and updated_at.

The results table is currently empty, showing 0 rows.