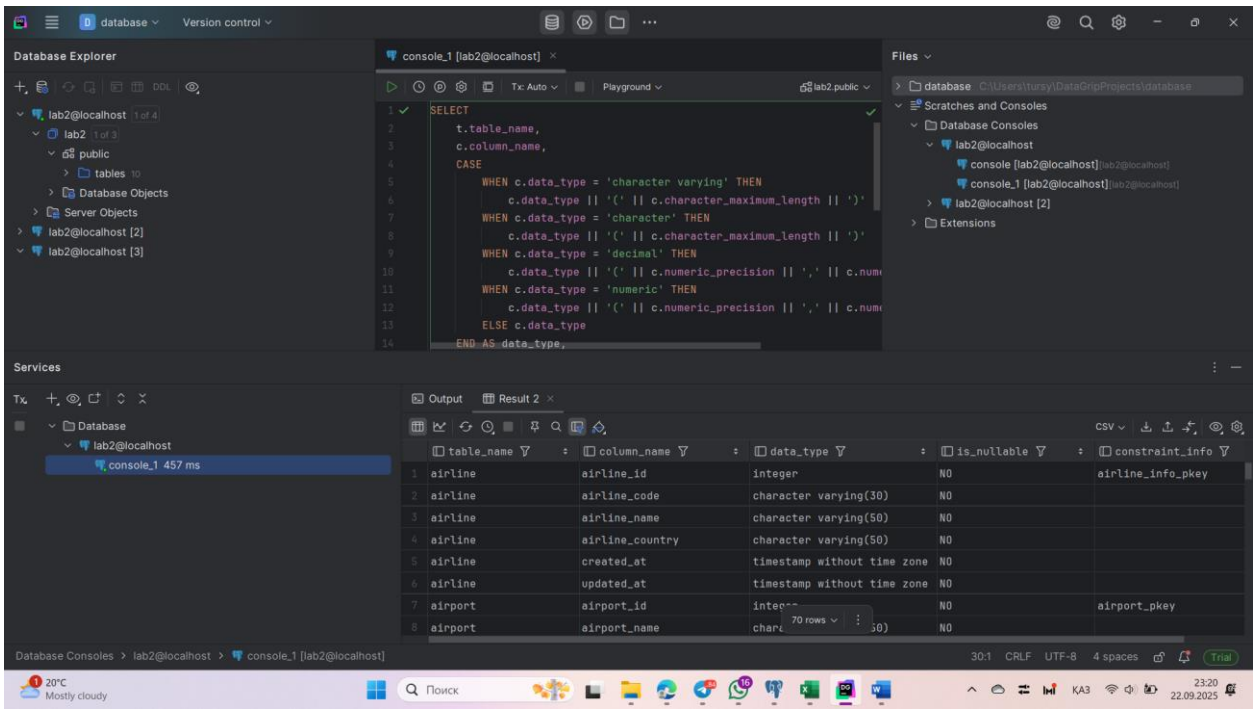
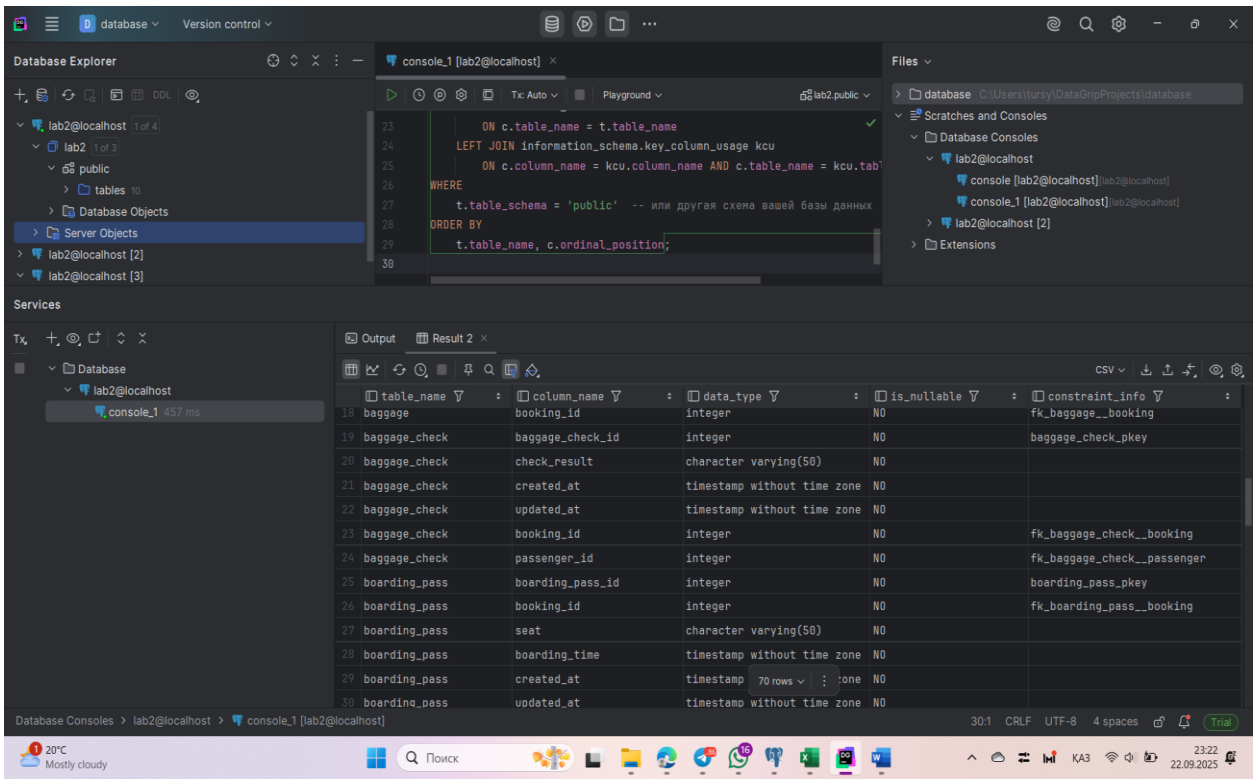
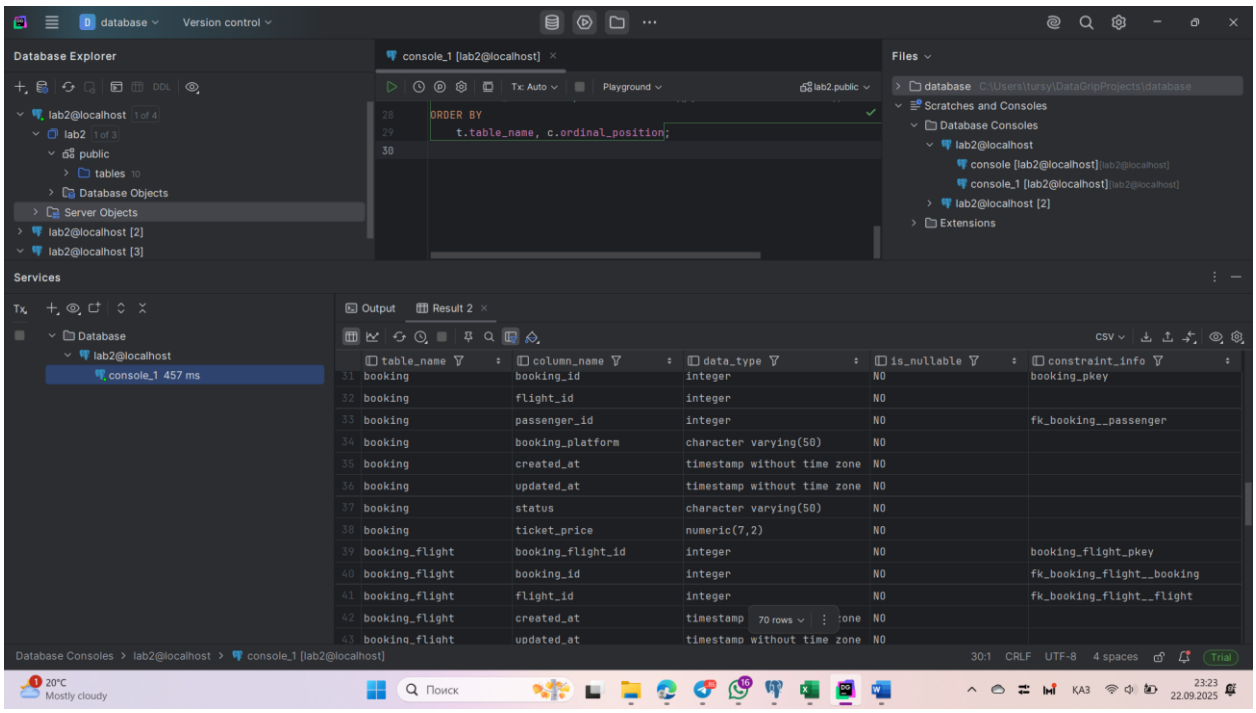
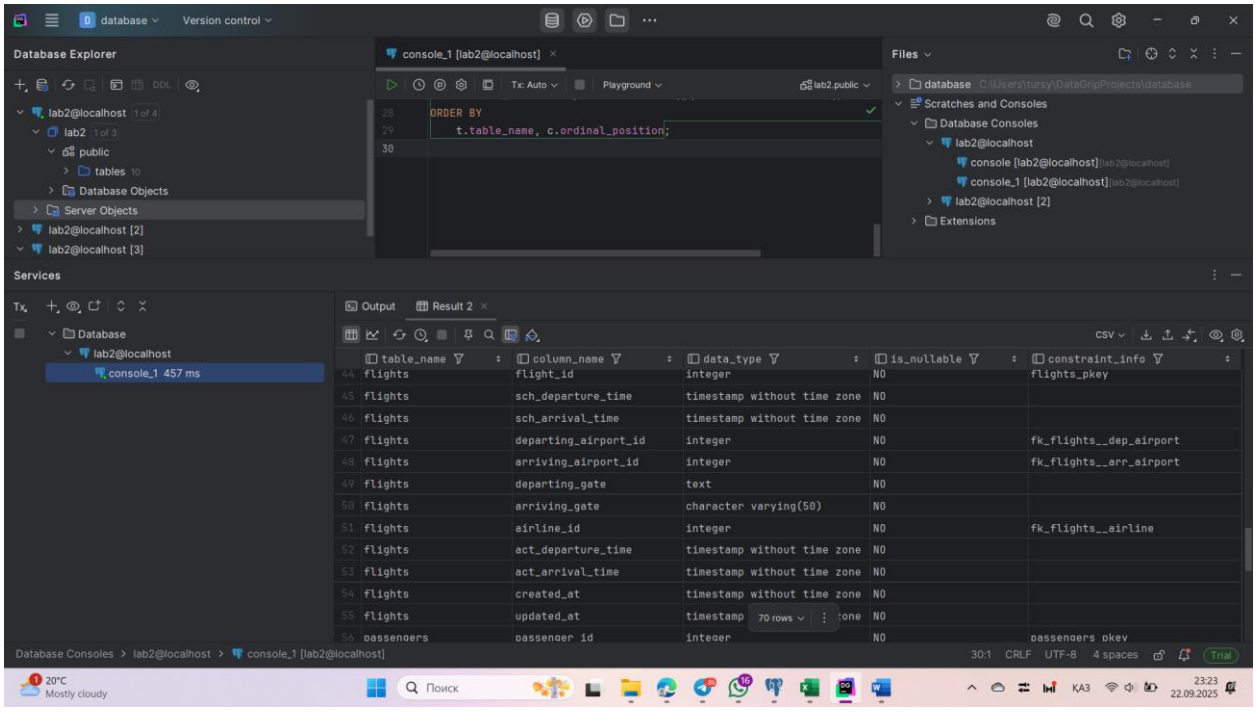
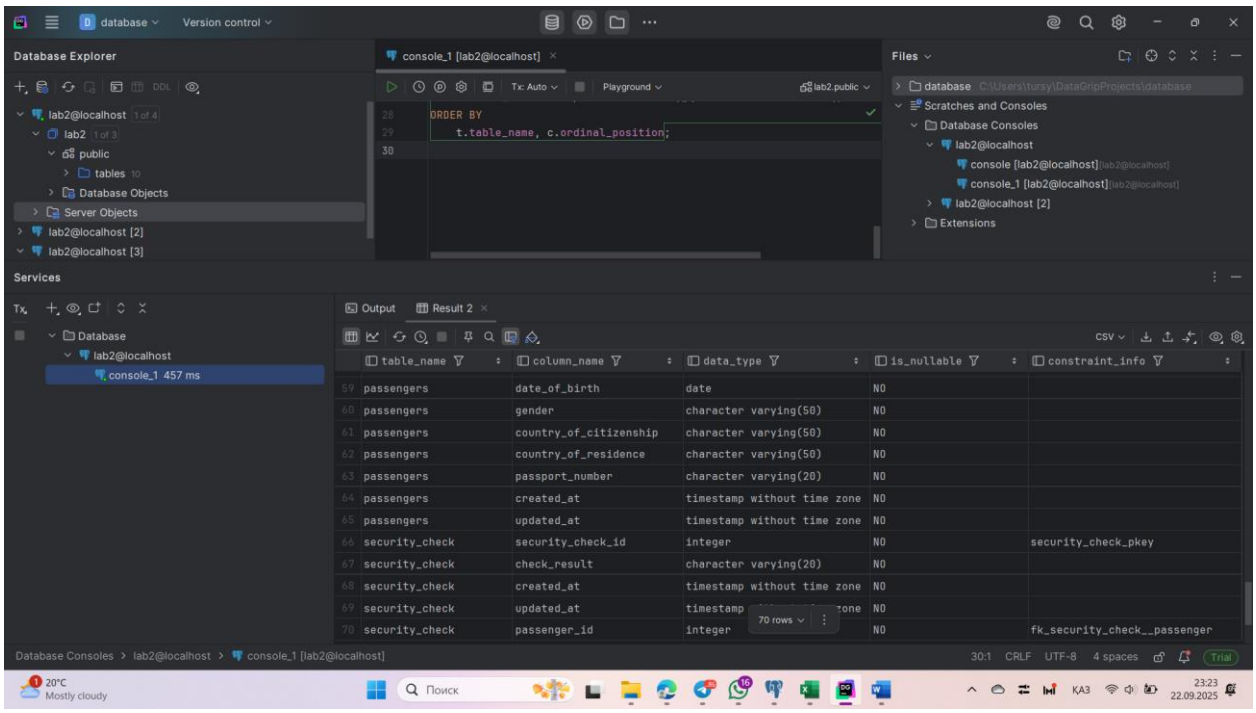
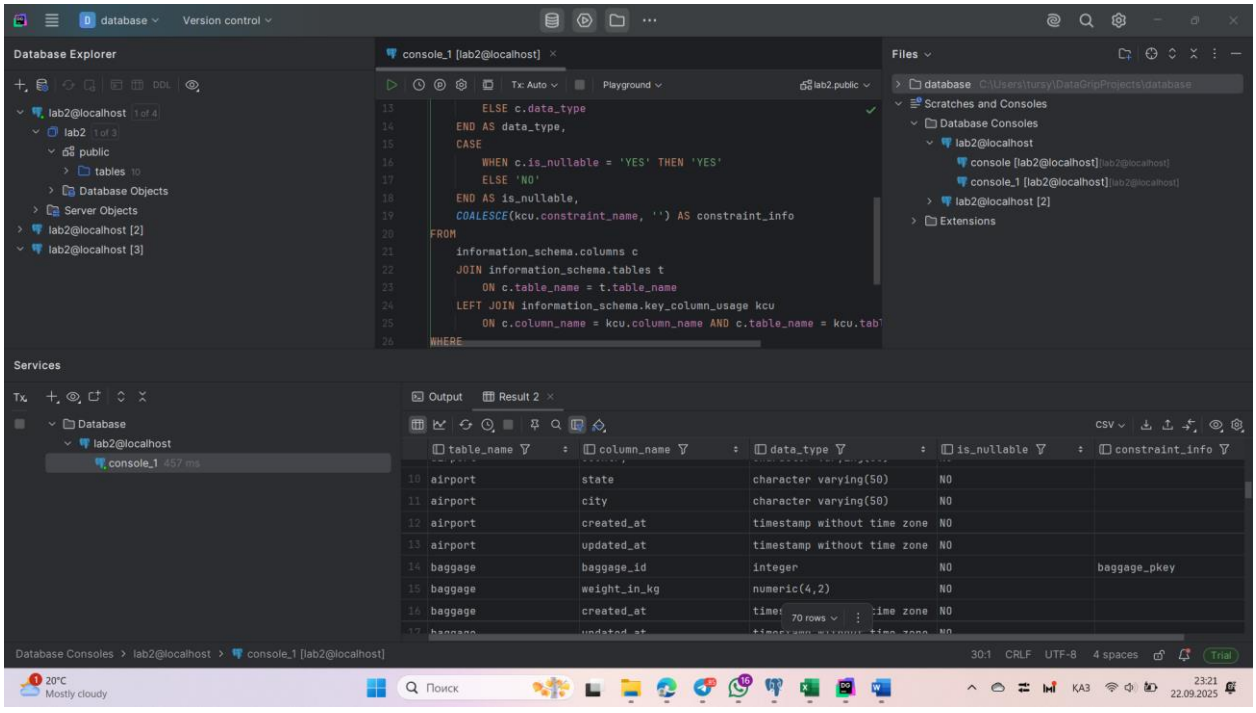

database
Version control
Database Explorer
console_1 [lab2@localhost]
Files
SELECT
t.table_name,
c.column_name,
CASE
WHEN c.data_type = 'character varying' THEN
c.data_type || '(' || c.character_maximum_length || ')'
WHEN c.data_type = 'character' THEN
c.data_type || '(' || c.character_maximum_length || ')'
WHEN c.data_type = 'decimal' THEN
WHEN c.data_type = 'numeric' THEN
ELSE c.data_type
END AS data_type,
Services
Output
Result 2
table_name
column_name
data_type
is_nullable
constraint_info
airline airline_id integer NO airline_info_pkey
airline airline_code character varying(30) NO
airline airline_name character varying(50) NO
airline airline_country character varying(50) NO
airline created_at timestamp without time zone NO
airline updated_at timestamp without time zone NO
airport airport_id NO airport_pkey
airport airport_name NO
70 rows
Database Consoles
lab2@localhost
console_1 [lab2@localhost]
30:1
CRLF
UTF-8
4 spaces
20°C
Mostly cloudy
Поиск
23:20
22.09.2025


database
Version control
Database Explorer
console_1 [lab2@localhost]
Files
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.tab
WHERE
t.table_schema = 'public' -- или другая схема вашей базы данных
ORDER BY
t.table_name, c.ordinal_position;
Services
Output
Result 2
table_name
column_name
data_type
is_nullable
constraint_info
baggage booking_id integer NO fk_baggage__booking
baggage_check baggage_check_id integer NO baggage_check_pkey
baggage_check check_result character varying(50) NO
baggage_check created_at timestamp without time zone NO
baggage_check updated_at timestamp without time zone NO
baggage_check booking_id integer NO fk_baggage_check__booking
baggage_check passenger_id integer NO fk_baggage_check__passenger
boarding_pass boarding_pass_id integer NO boarding_pass_pkey
boarding_pass booking_id integer NO fk_boarding_pass__booking
boarding_pass seat character varying(50) NO
boarding_pass boarding_time timestamp without time zone NO
boarding_pass created_at timestamp NO
boarding_pass updated_at timestamp without time zone NO
70 rows
Database Consoles
lab2@localhost
console_1 [lab2@localhost]
30:1
CRLF
UTF-8
4 spaces
20°C
Mostly cloudy
Поиск
23:22
22.09.2025

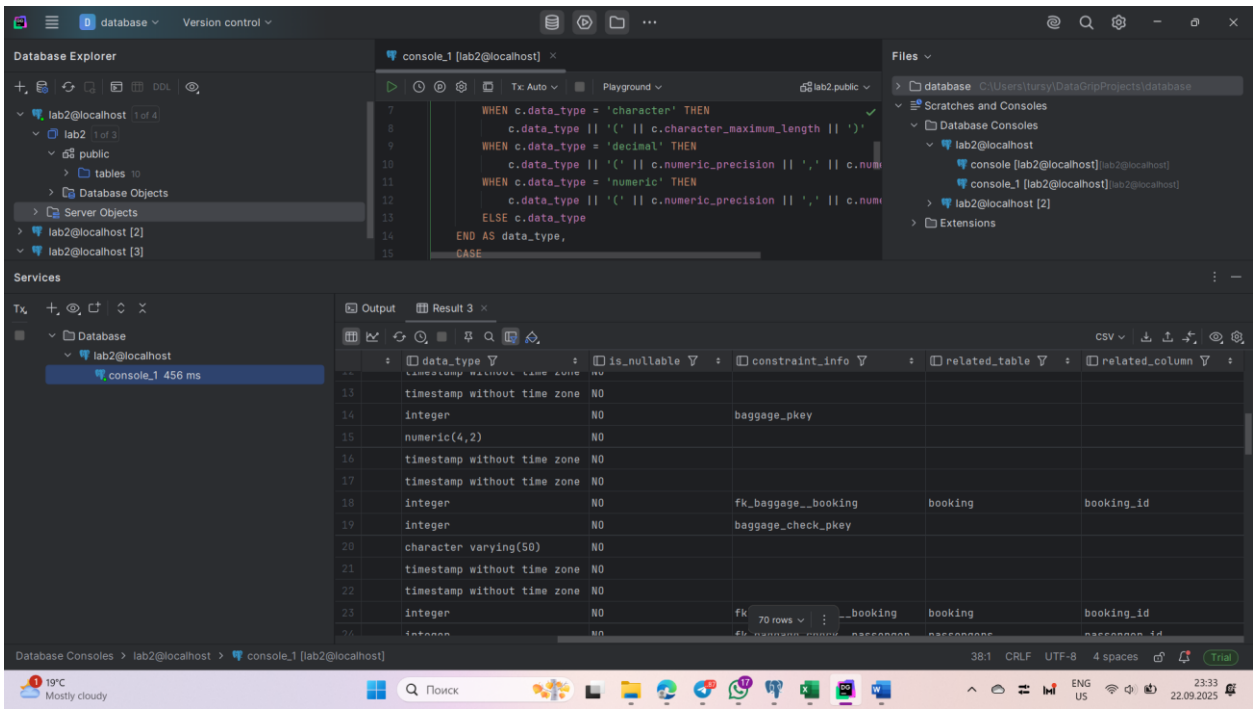

database
Version control
Database Explorer
console_1 [lab2@localhost]
Files
ORDER BY
t.table_name, c.ordinal_position;
Services
Output
Result 2
table_name
column_name
data_type
is_nullable
constraint_info
booking booking_id integer NO booking_pkey
booking flight_id integer NO
booking passenger_id integer 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 NO
booking_flight updated_at timestamp without time zone NO
70 rows
Database Consoles
lab2@localhost
console_1 [lab2@localhost]
30:1
CRLF
UTF-8
4 spaces
Trial
20°C
Mostly cloudy
Поиск
23:23
22.09.2025


database
Version control
Database Explorer
console_1 [lab2@localhost]
Files
ORDER BY
t.table_name, c.ordinal_position;
Services
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 NO
70 rows
passengers passenger_id integer NO passengers_pkey
Database Consoles
lab2@localhost
console_1 [lab2@localhost]
30:1
CRLF
UTF-8
4 spaces
Trial
20°C
Mostly cloudy
Поиск
23:23
22.09.2025

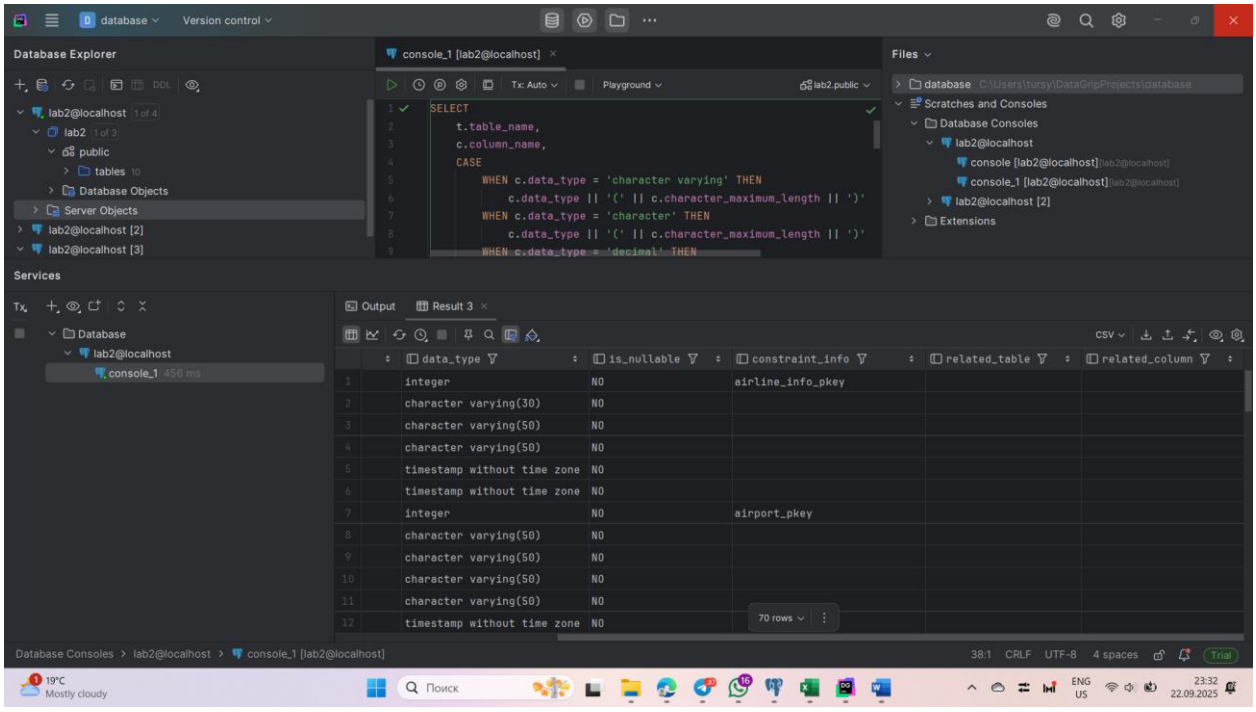




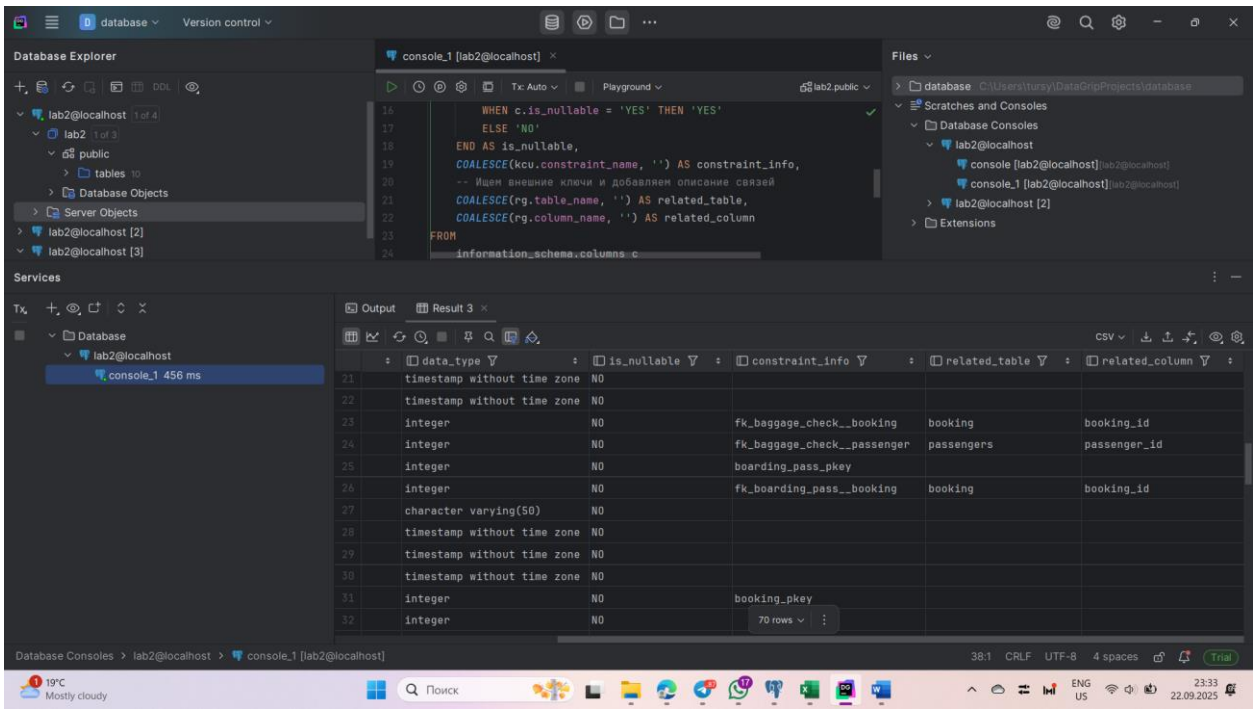
relationships

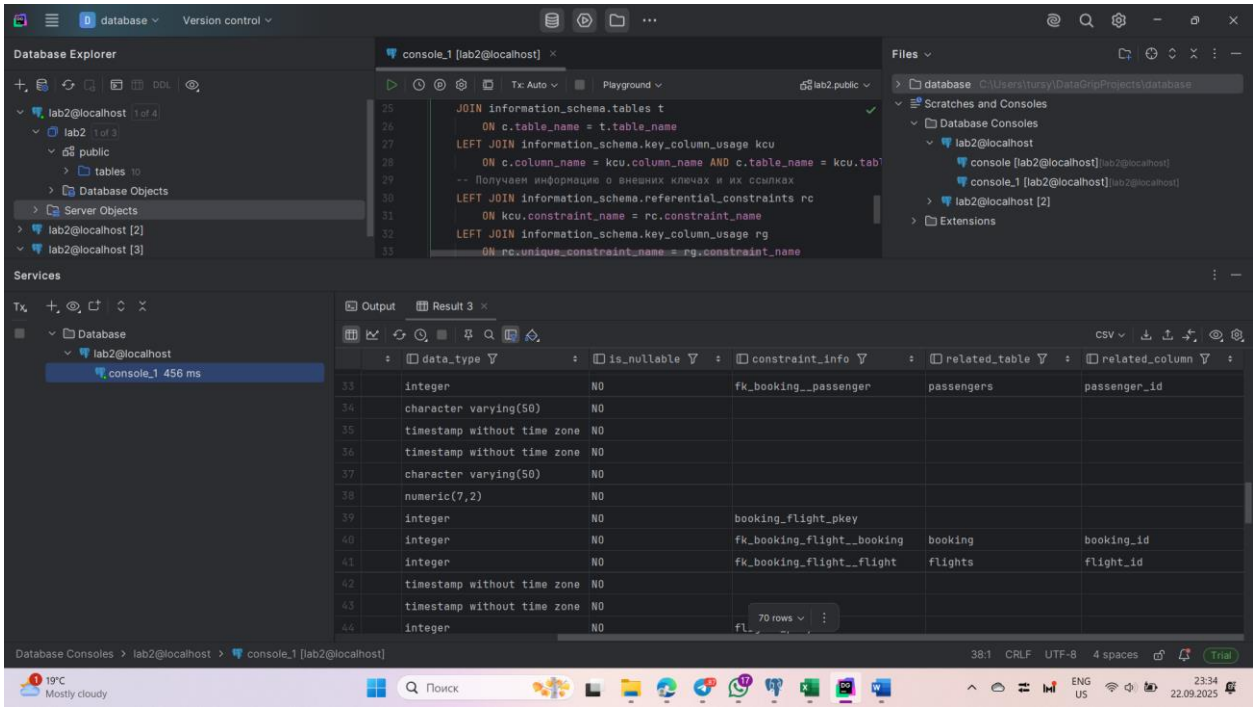


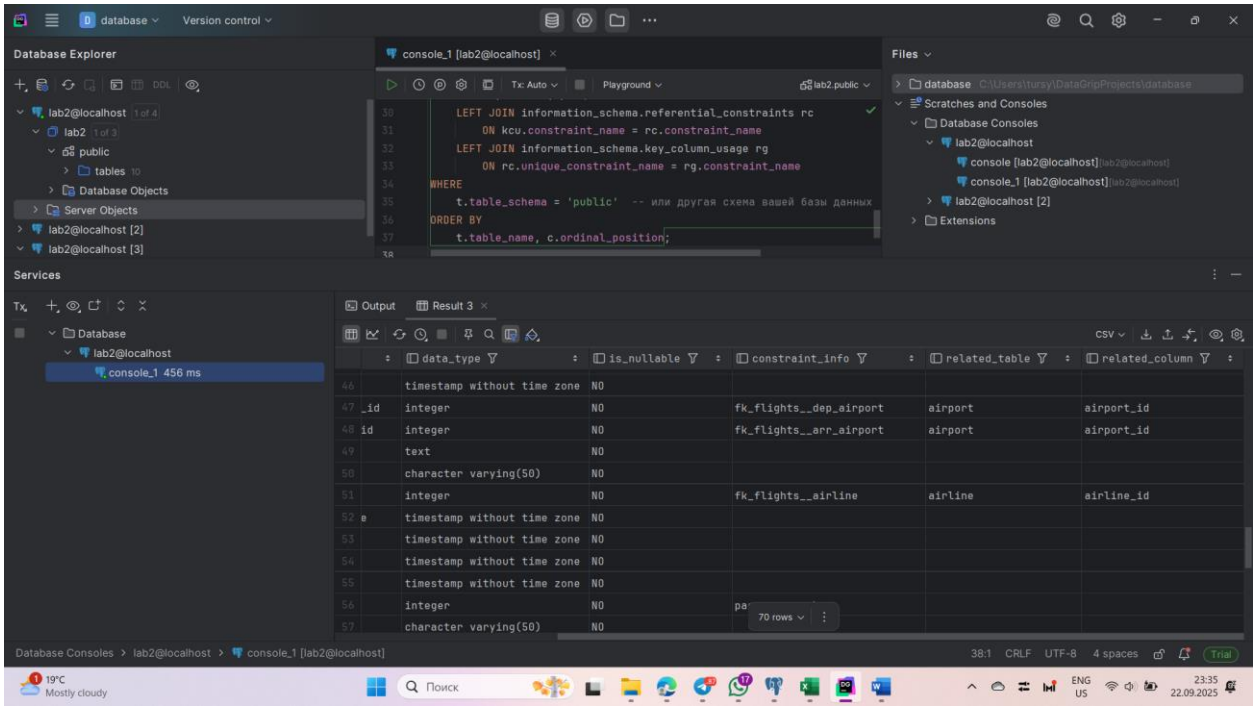
Database Explorer
console_1 [lab2@localhost]
Files
WHEN c.data_type = 'character' THEN
c.data_type || '(' || c.character_maximum_length || ')'
WHEN c.data_type = 'decimal' THEN
c.data_type || '(' || c.numeric_precision || ',' || c.num
WHEN c.data_type = 'numeric' THEN
c.data_type || '(' || c.numeric_precision || ',' || c.num
ELSE c.data_type
END AS data_type,
CASE
Services
Output
Result 3
data_type
is_nullable
constraint_info
related_table
related_column
timestamp without time zone NO
integer NO baggage_pkey
numeric(4,2) NO
timestamp without time zone NO
timestamp without time zone NO
integer NO fk_baggage__booking booking booking_id
integer NO baggage_check_pkey
character varying(50) NO
timestamp without time zone NO
timestamp without time zone NO
integer NO fk__booking booking booking_id
Database Consoles > lab2@localhost > console_1 [lab2@localhost]

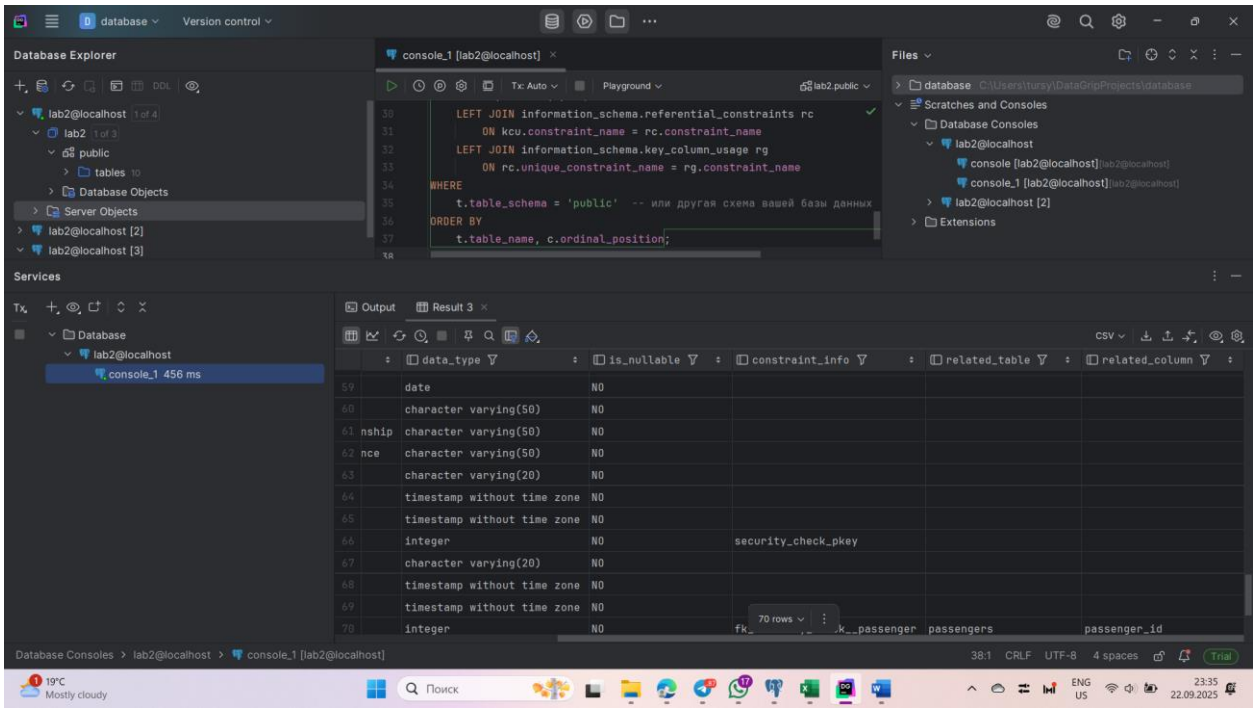


Database Explorer
console_1 [lab2@localhost]
Files
SELECT
t.table_name,
c.column_name,
CASE
WHEN c.data_type = 'character varying' THEN
c.data_type || '(' || c.character_maximum_length || ')'
WHEN c.data_type = 'character' THEN
c.data_type || '(' || c.character_maximum_length || ')'
WHEN c.data_type = 'decimal' THEN
Services
Output
Result 3
data_type
is_nullable
constraint_info
related_table
related_column
integer NO airline_info_pkey
character varying(30) NO
character varying(50) NO
character varying(50) NO
timestamp without time zone NO
timestamp without time zone NO
integer NO airport_pkey
character varying(50) NO
character varying(50) NO
character varying(50) NO
character varying(50) NO
timestamp without time zone NO
Database Consoles > lab2@localhost > console_1 [lab2@localhost]

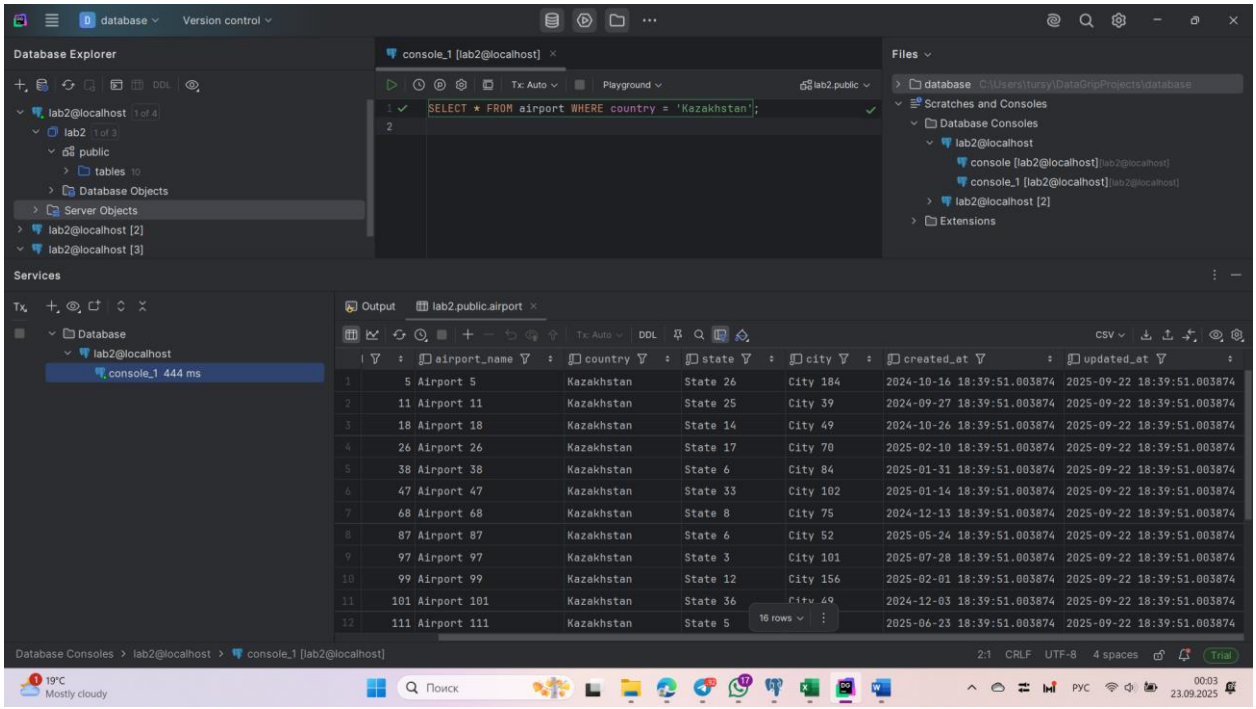

database
Version control
Database Explorer
console_1 [lab2@localhost]
Files
lab2@localhost
lab2
public
tables
Database Objects
Server Objects
lab2@localhost [2]
lab2@localhost [3]
Scratches and Consoles
Database Consoles
Extensions
Services
Output
Result 3
Database
console_1 456 ms
data_type
is_nullable
constraint_info
related_table
related_column
70 rows
Database Consoles > lab2@localhost > console_1 [lab2@localhost]
38:1 CRLF UTF-8 4 spaces
Trial
19°C
Mostly cloudy
Поиск
23:33
22.09.2025


database
Version control
Database Explorer
console_1 [lab2@localhost]
Files
lab2@localhost
lab2
public
tables
Database Objects
Server Objects
lab2@localhost [2]
lab2@localhost [3]
Scratches and Consoles
Database Consoles
Extensions
Services
Output
Result 3
Database
console_1 456 ms
data_type
is_nullable
constraint_info
related_table
related_column
70 rows
Database Consoles > lab2@localhost > console_1 [lab2@localhost]
38:1 CRLF UTF-8 4 spaces
Trial
19°C
Mostly cloudy
Поиск
23:34
22.09.2025

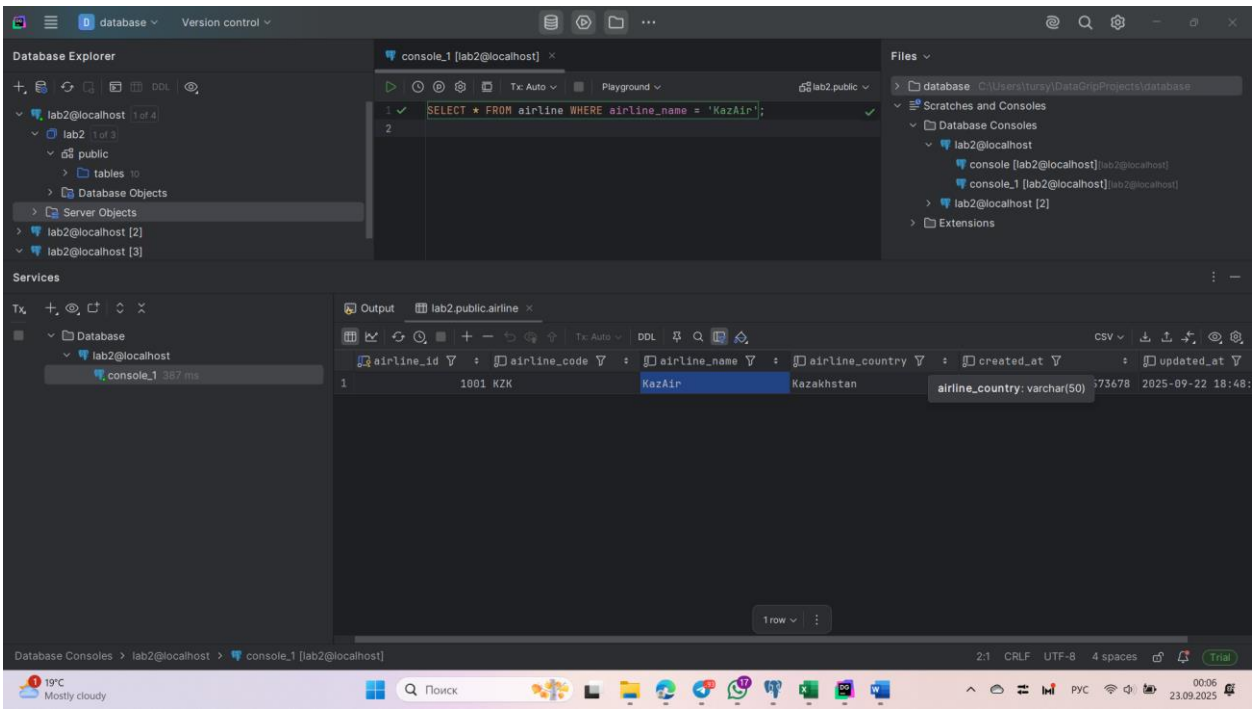

database
Version control
Database Explorer
lab2@localhost 1 of 4
lab2 1 of 3
public
tables 10
Database Objects
Server Objects
lab2@localhost [2]
lab2@localhost [3]
console_1 [lab2@localhost]
Tx: Auto
Playground
lab2.public
LEFT JOIN information_schema.referential_constraints rc
ON kcu.constraint_name = rc.constraint_name
LEFT JOIN information_schema.key_column_usage rg
ON rc.unique_constraint_name = rg.constraint_name
WHERE
t.table_schema = 'public' -- или другая схема вашей базы данных
ORDER BY
t.table_name, c.ordinal_position;
Files
database C:\Users\tursy\DataGripProjects\database
Scratches and Consoles
Database Consoles
lab2@localhost
console [lab2@localhost]
console_1 [lab2@localhost]
lab2@localhost [2]
Extensions
Services
Database
lab2@localhost
console_1 456 ms
Output
Result 3
CSV
data_type
is_nullable
constraint_info
related_table
related_column
timestamp without time zone NO
integer NO fk_flights__dep_airport airport airport_id
integer NO fk_flights__arr_airport airport airport_id
text NO
character varying(50) NO
integer NO fk_flights__airline airline airline_id
timestamp without time zone NO
timestamp without time zone NO
timestamp without time zone NO
timestamp without time zone NO
integer NO
character varying(50) NO
70 rows
Database Consoles > lab2@localhost > console_1 [lab2@localhost]
38:1 CRLF UTF-8 4 spaces
Trial
19°C
Mostly cloudy
Поиск
ENG
US
23:35
22.09.2025


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]
Tx: Auto
Playground
lab2.public
LEFT JOIN information_schema.referential_constraints rc
ON kcu.constraint_name = rc.constraint_name
LEFT JOIN information_schema.key_column_usage rg
ON rc.unique_constraint_name = rg.constraint_name
WHERE
t.table_schema = 'public' -- или другая схема вашей базы данных
ORDER BY
t.table_name, c.ordinal_position;
Files
database C:\Users\tursy\DataGripProjects\database
Scratches and Consoles
Database Consoles
lab2@localhost
console [lab2@localhost]
console_1 [lab2@localhost]
lab2@localhost [2]
Extensions
Services
Database
lab2@localhost
console_1 456 ms
Output
Result 3
CSV
data_type
is_nullable
constraint_info
related_table
related_column
date NO
character varying(50) NO
character varying(50) NO
character varying(50) NO
character varying(20) NO
timestamp without time zone NO
timestamp without time zone NO
integer NO security_check_pkey
character varying(20) NO
timestamp without time zone NO
timestamp without time zone NO
integer NO passengers passenger_id
70 rows
Database Consoles > lab2@localhost > console_1 [lab2@localhost]
38:1 CRLF UTF-8 4 spaces
Trial
19°C
Mostly cloudy
Поиск
ENG
US
23:35
22.09.2025

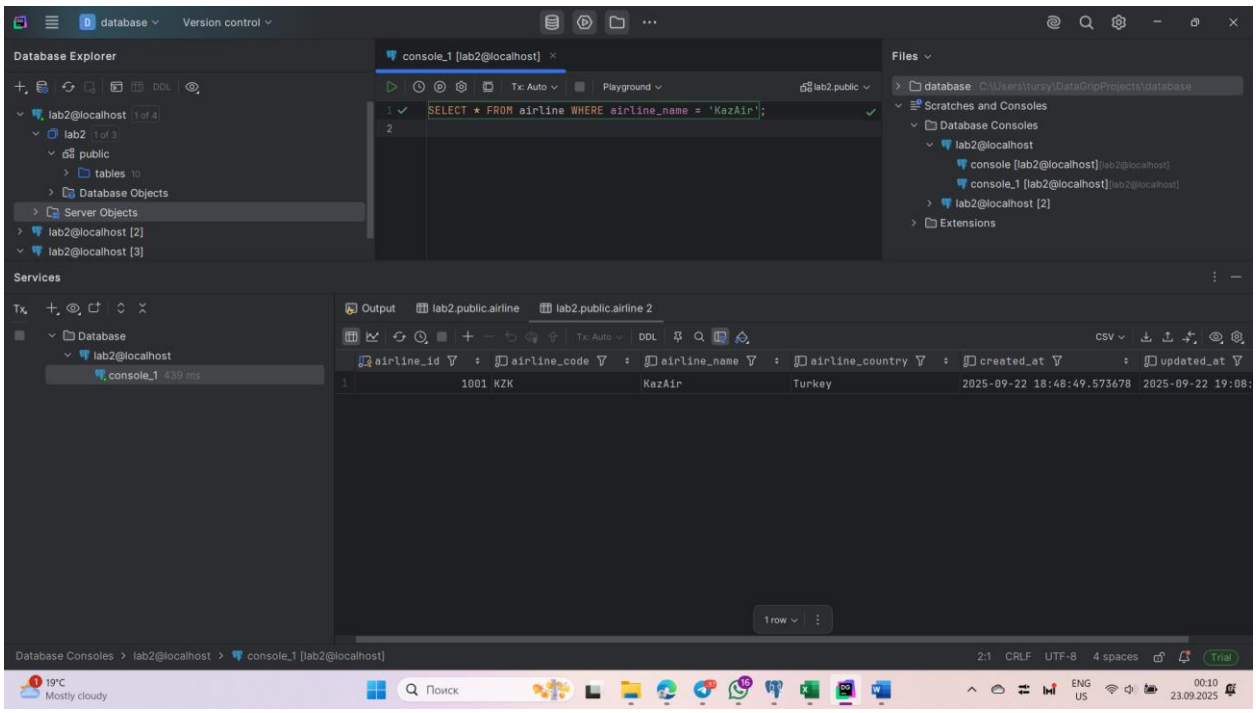
DML



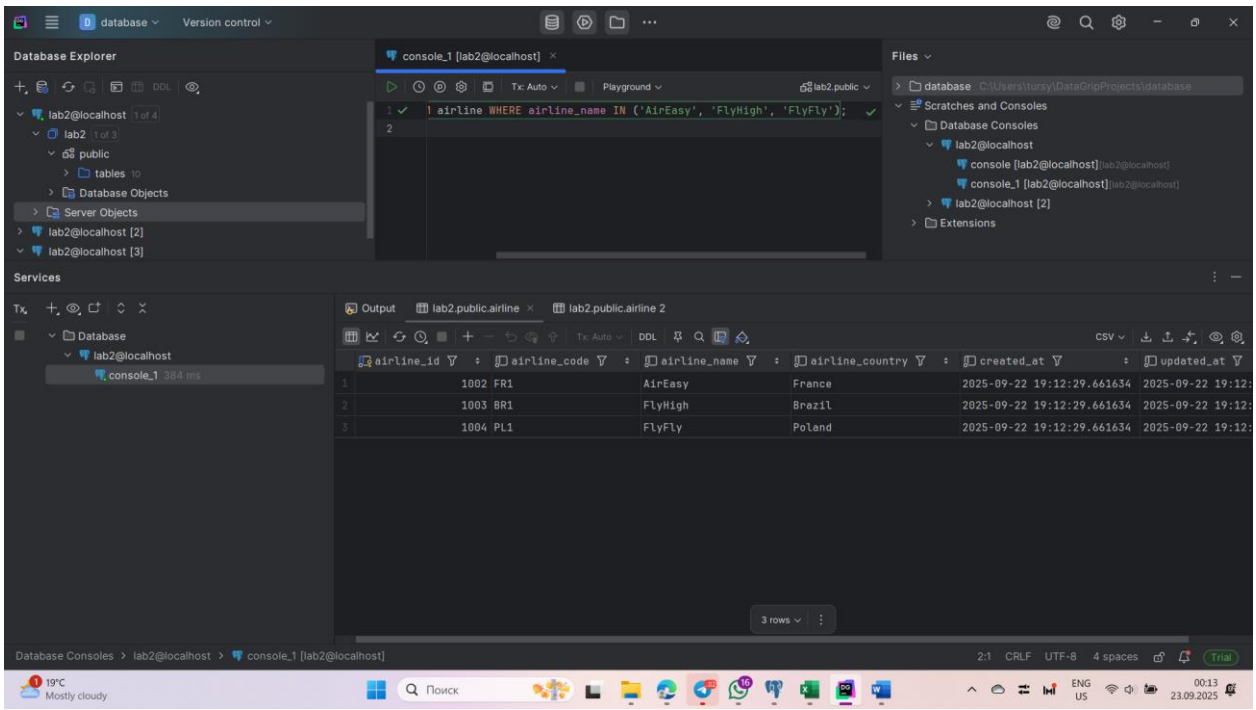

```
INSERT INTO airport(airport_id, airport_name, country, state, city, created_at, updated_at)
SELECT gs,
    'Airport '||gs,
    (ARRAY['Kazakhstan','USA','France','Turkey','Brazil','Poland'])[1 + (random()*5)::int],
    'State '||((random()*50)::int),
    'City '||((random()*200)::int),
    now() - ((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';
```

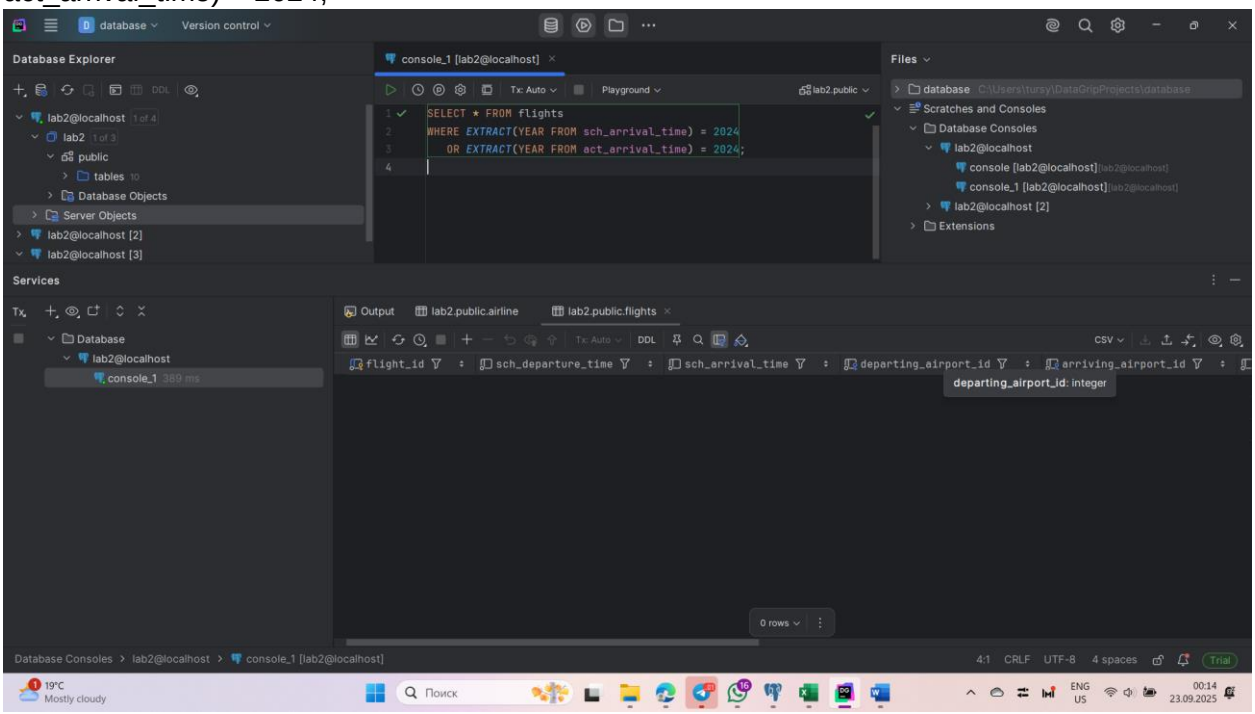



```
INSERT INTO airline(airline_id, airline_code, airline_name, airline_country, created_at,
updated_at)
VALUES
(1002,'FR1','AirEasy','France', now(), now()),
(1003,'BR1','FlyHigh','Brazil', now(), now()),
(1004,'PL1','FlyFly','Poland', now(), now())
ON CONFLICT (airline_id) DO NOTHING;
```

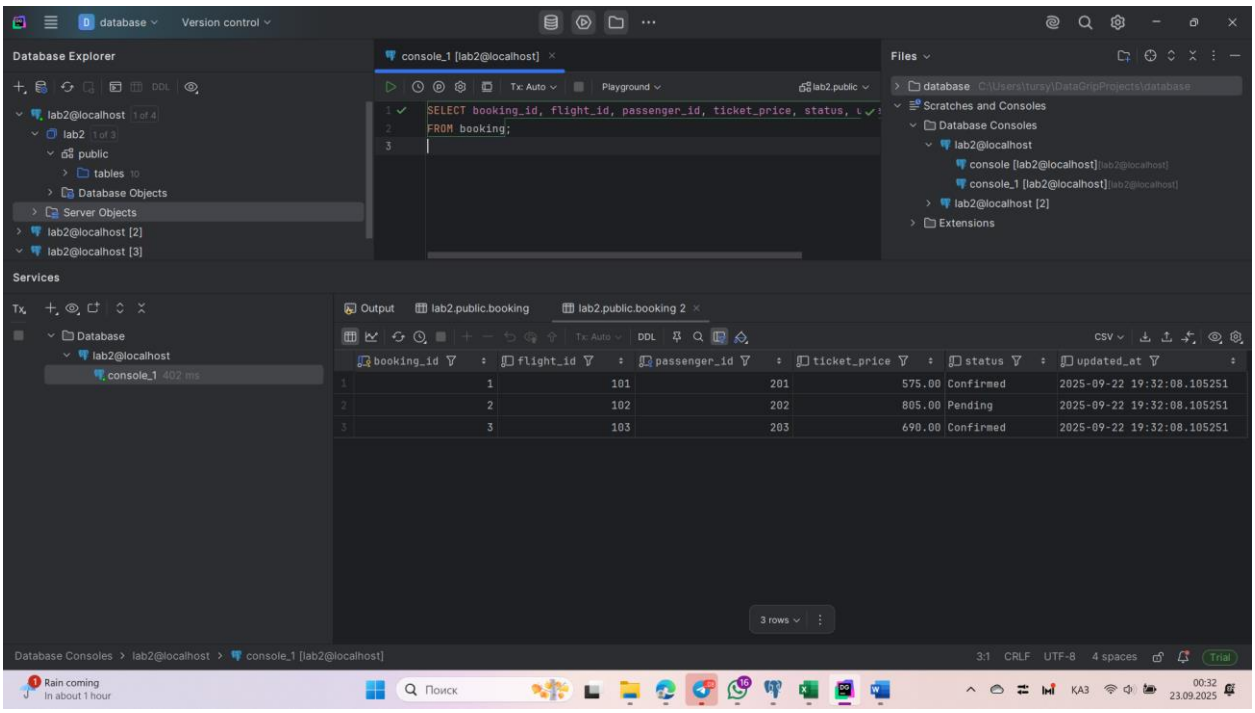


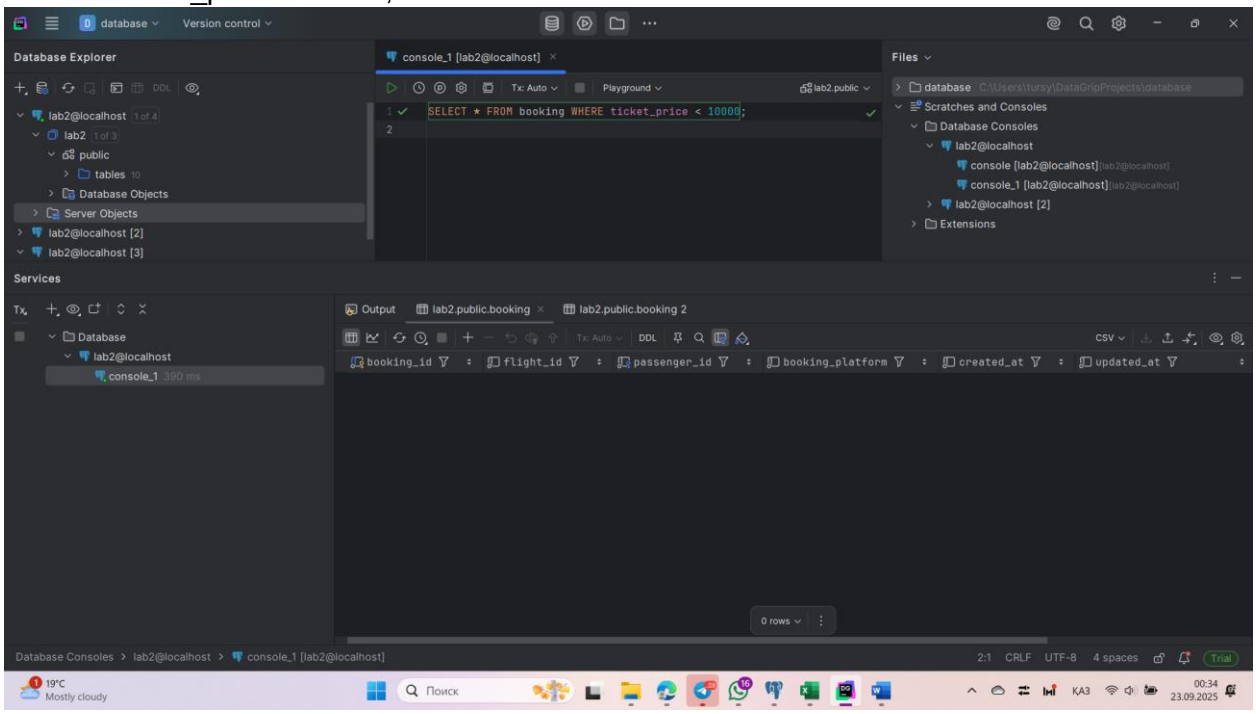
DELETE FROM flights

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



UPDATE booking
ticket_price = ticket_price * 1.15,
updated_at = now();



DELETE FROM booking

WHERE ticket_price < 10000;