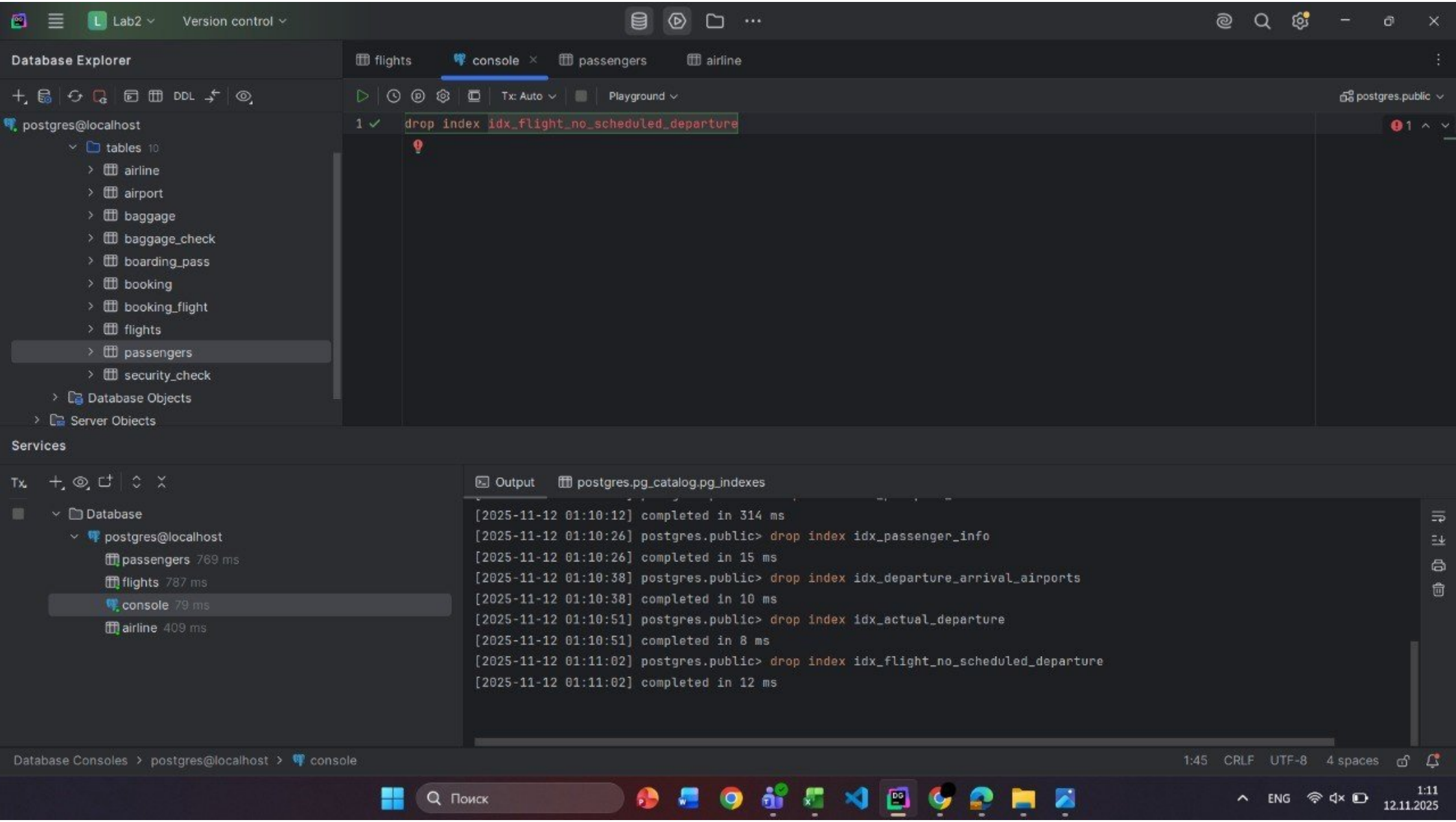
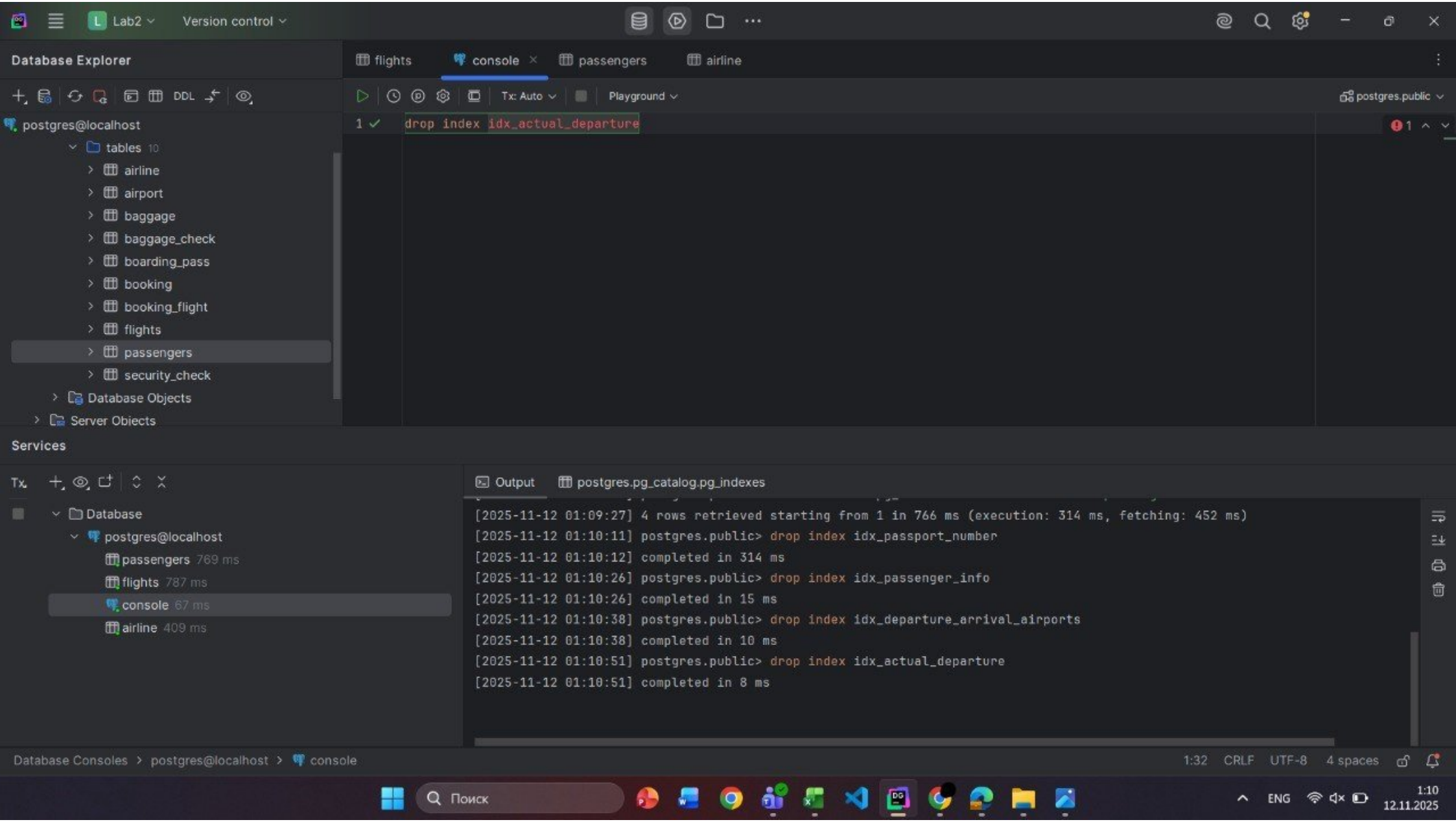
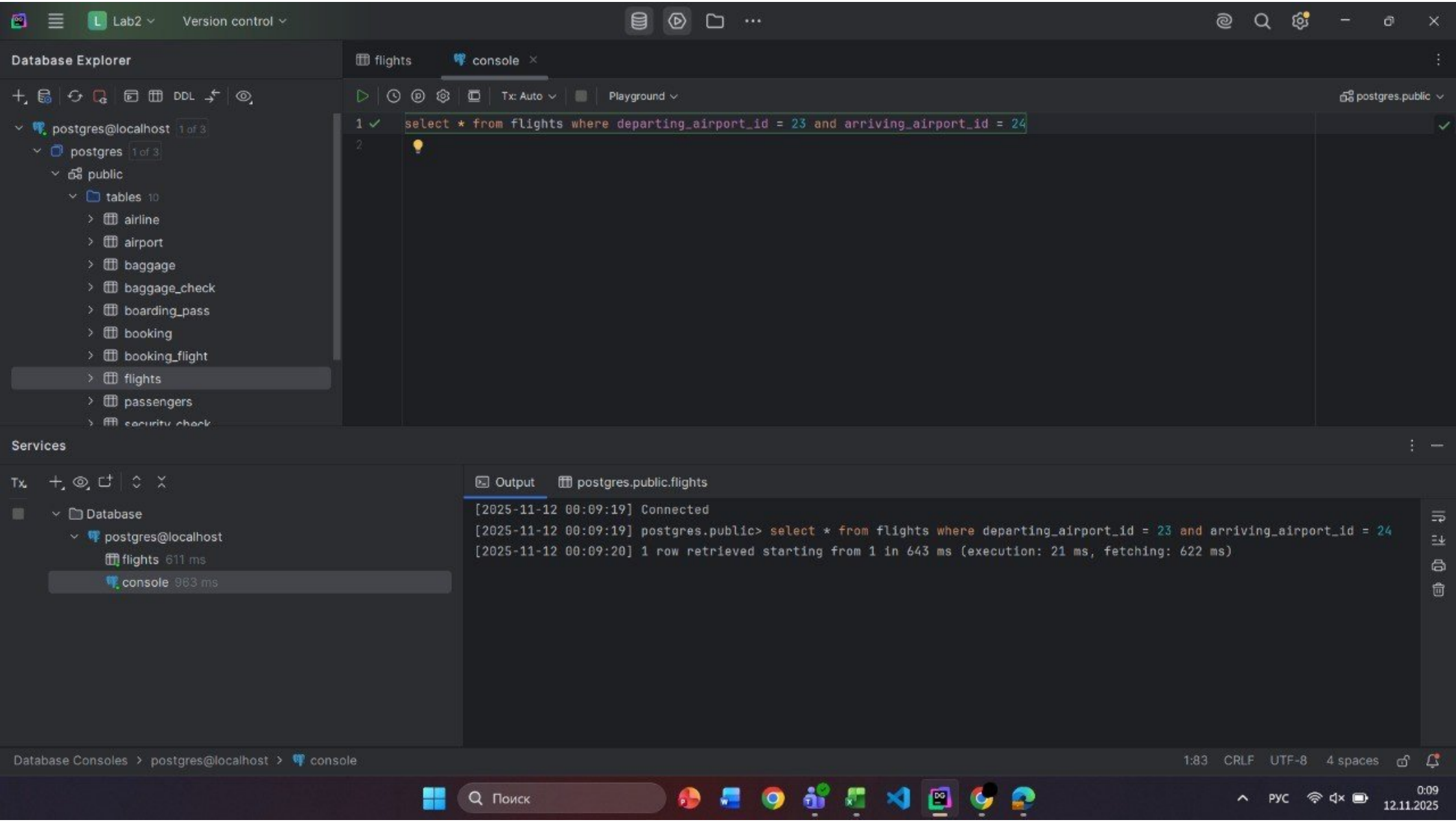
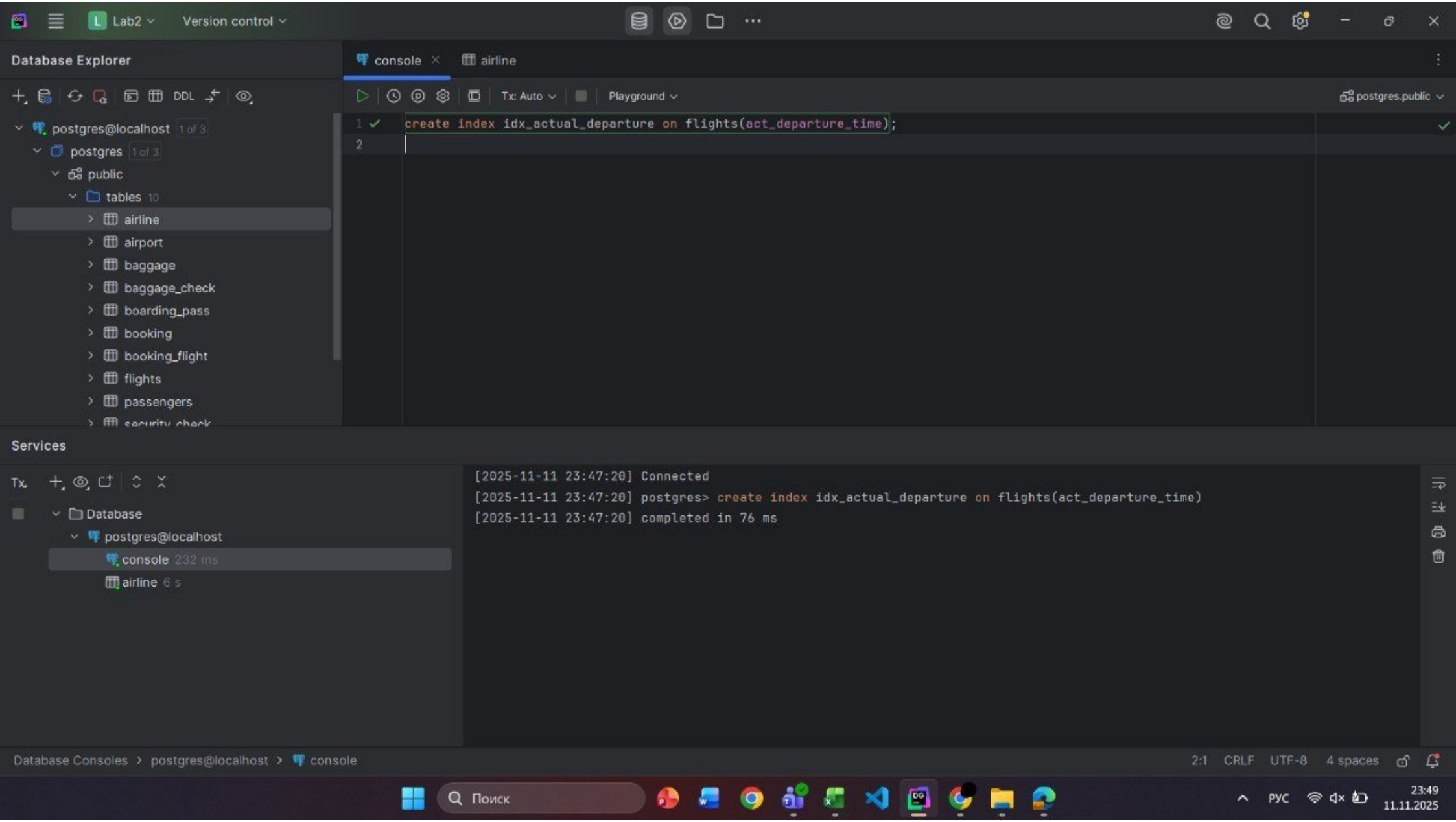
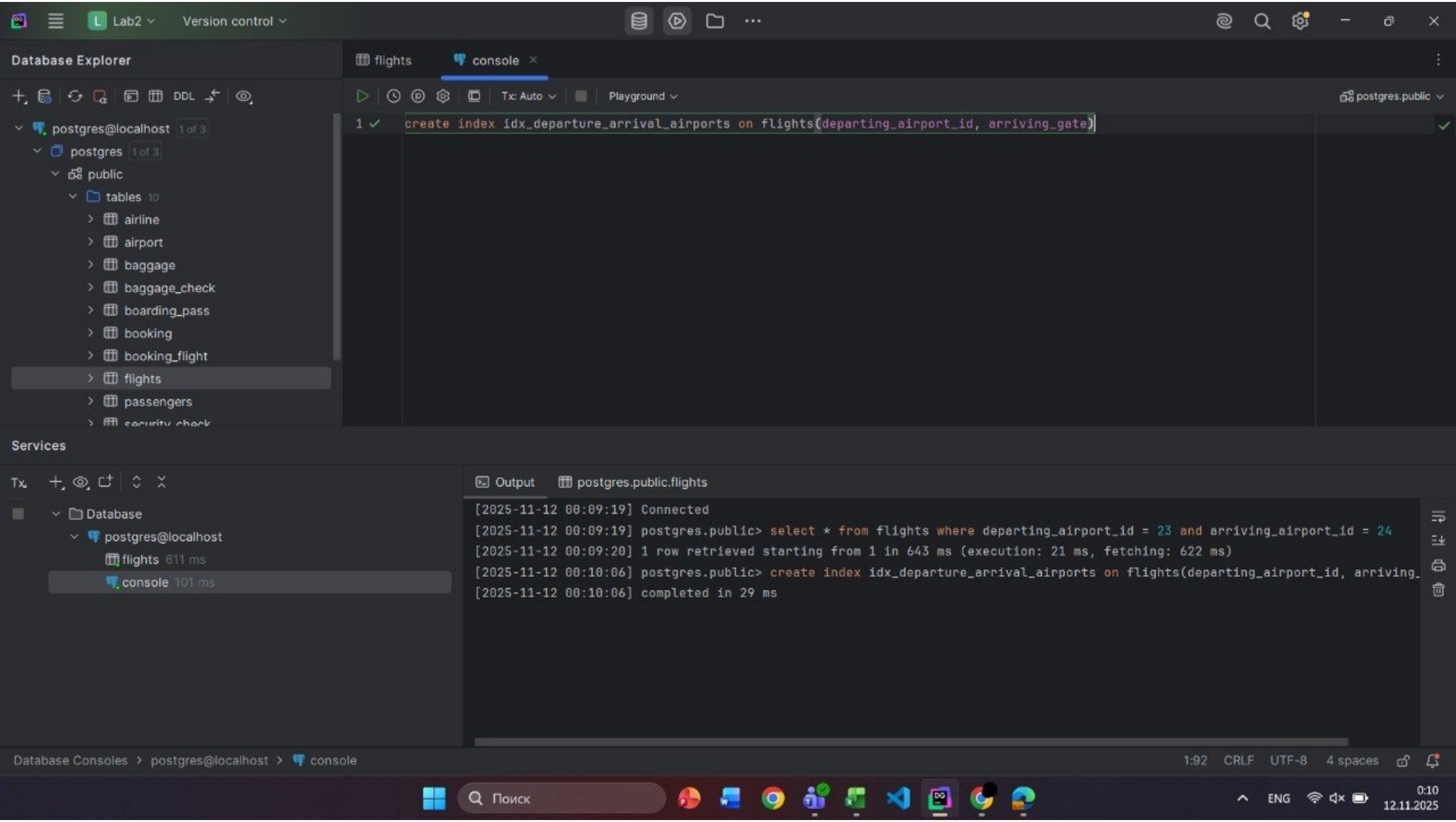
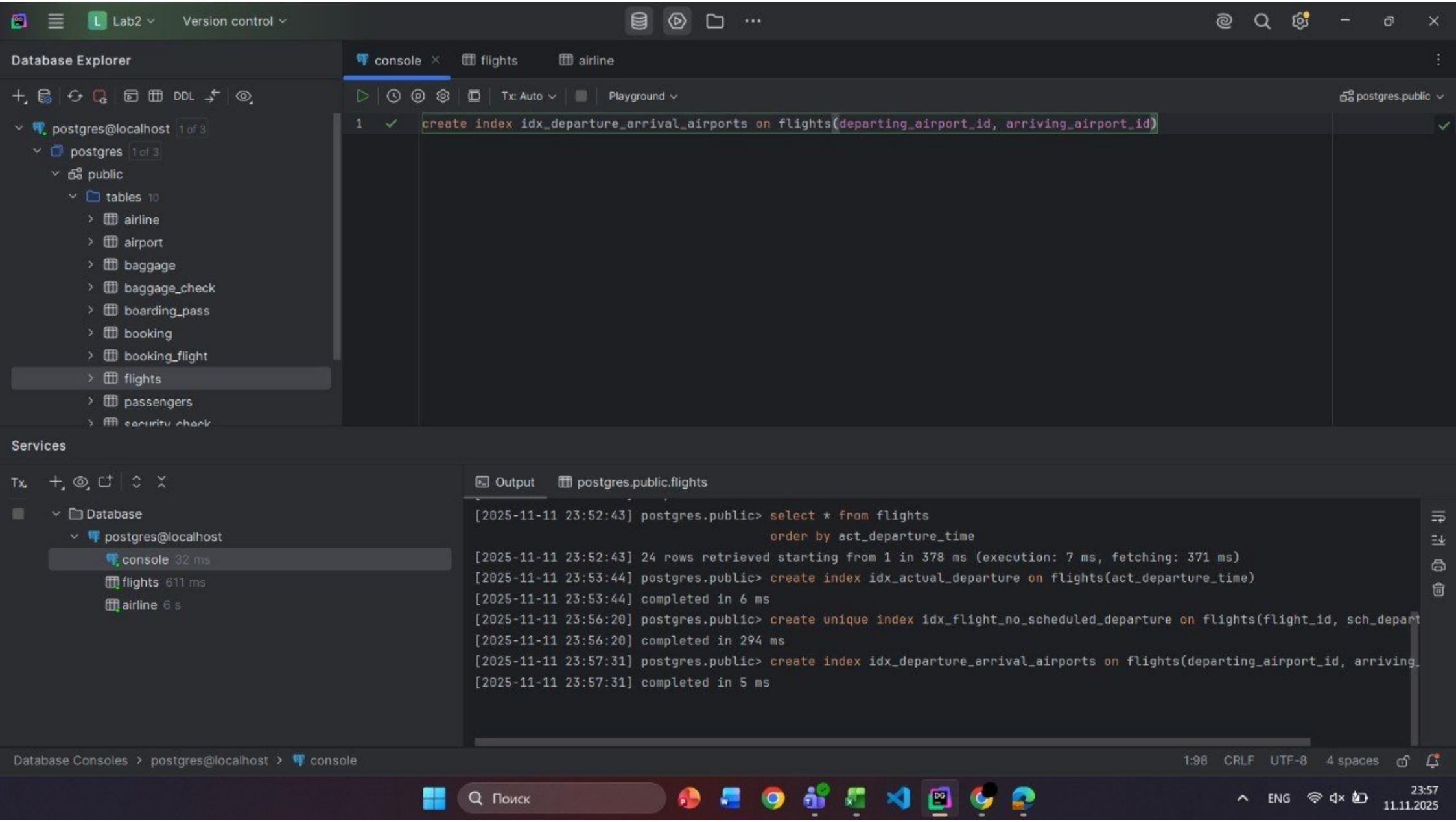

Lab2
Version control
Database Explorer
flights
console
passengers
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
1 drop index idx_flight_no_scheduled_departure
Services
Tx
Database
postgres@localhost
passengers 769 ms
flights 787 ms
console 79 ms
airline 409 ms
Output
postgres.pg_catalog.pg_indexes
[2025-11-12 01:10:12] completed in 314 ms
[2025-11-12 01:10:26] postgres.public> drop index idx_passenger_info
[2025-11-12 01:10:26] completed in 15 ms
[2025-11-12 01:10:38] postgres.public> drop index idx_departure_arrival_airports
[2025-11-12 01:10:38] completed in 10 ms
[2025-11-12 01:10:51] postgres.public> drop index idx_actual_departure
[2025-11-12 01:10:51] completed in 8 ms
[2025-11-12 01:11:02] postgres.public> drop index idx_flight_no_scheduled_departure
[2025-11-12 01:11:02] completed in 12 ms
Database Consoles > postgres@localhost > console
1:45 CRLF UTF-8 4 spaces
Поиск
ENG
1:11
12.11.2025

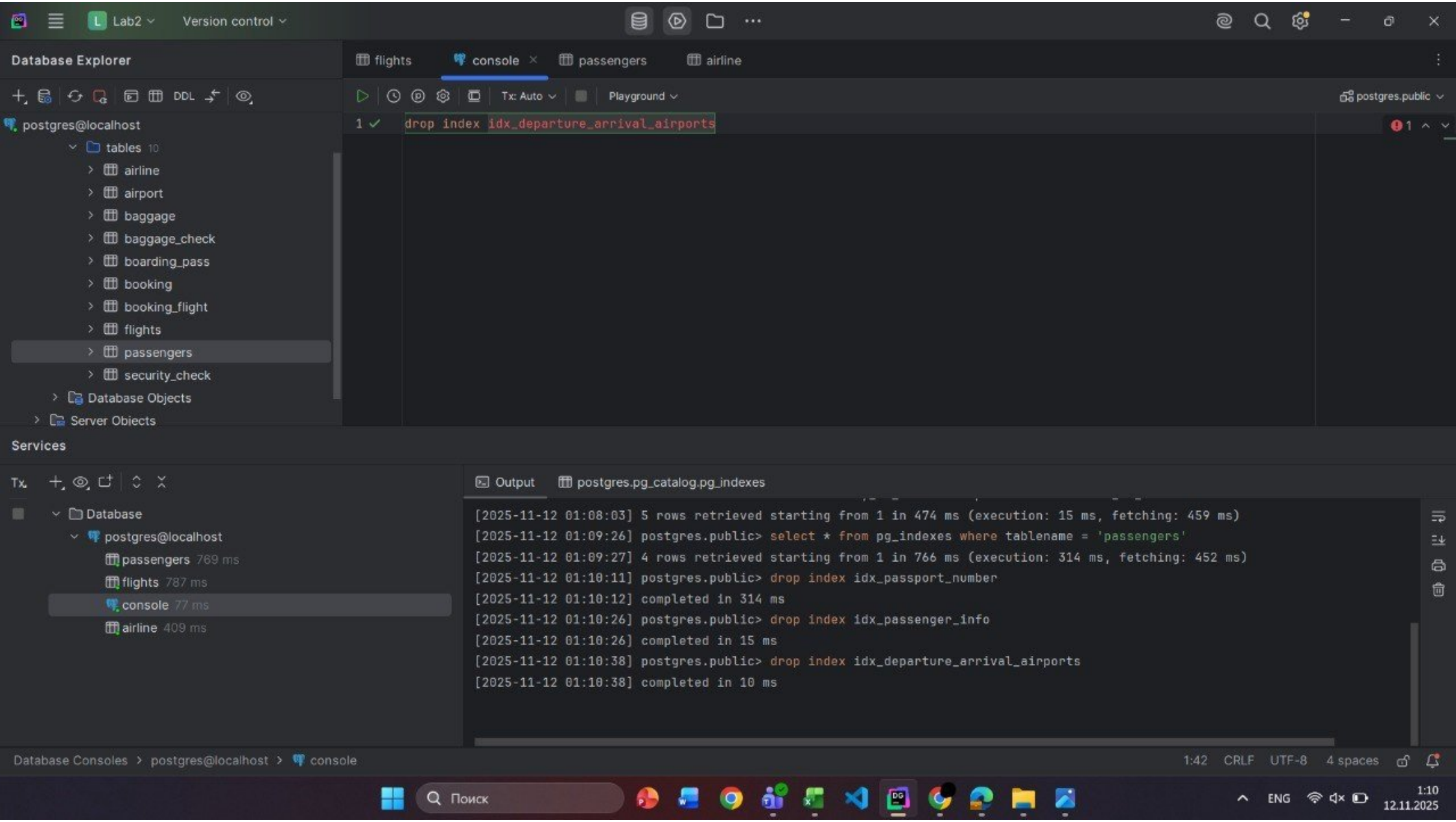

Lab2
Version control
Database Explorer
flights
console
passengers
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
1 drop index idx_actual_departure
Services
Output
postgres.pg_catalog.pg_indexes
[2025-11-12 01:09:27] 4 rows retrieved starting from 1 in 766 ms (execution: 314 ms, fetching: 452 ms)
[2025-11-12 01:10:11] postgres.public> drop index idx_passport_number
[2025-11-12 01:10:12] completed in 314 ms
[2025-11-12 01:10:26] postgres.public> drop index idx_passenger_info
[2025-11-12 01:10:26] completed in 15 ms
[2025-11-12 01:10:38] postgres.public> drop index idx_departure_arrival_airports
[2025-11-12 01:10:38] completed in 10 ms
[2025-11-12 01:10:51] postgres.public> drop index idx_actual_departure
[2025-11-12 01:10:51] completed in 8 ms
Database
postgres@localhost
passengers 769 ms
flights 787 ms
console 67 ms
airline 409 ms
Database Consoles > postgres@localhost > console
1:32 CRLF UTF-8 4 spaces
Поиск
ENG
1:10
12.11.2025

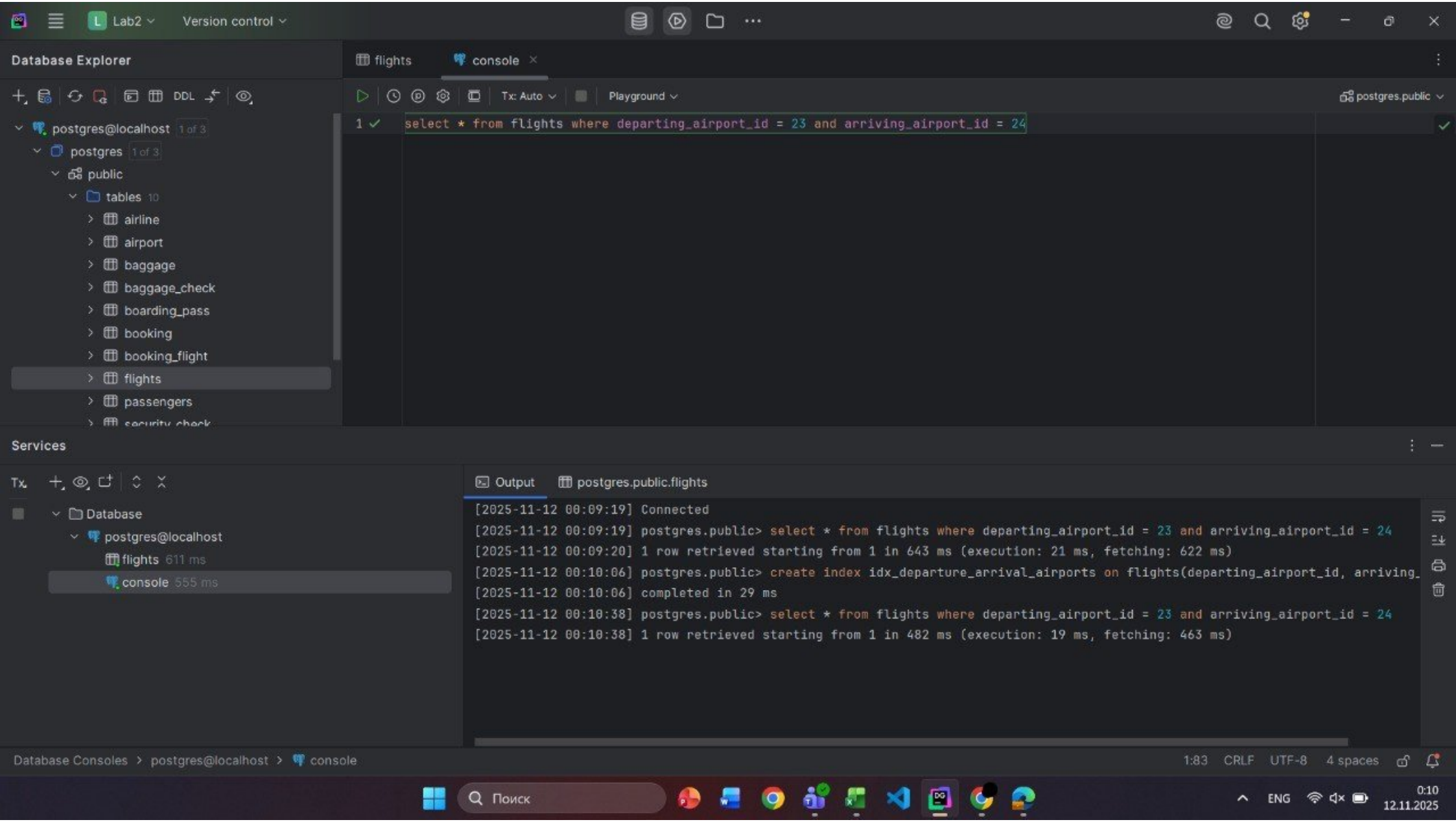

Lab2
Version control
Database Explorer
flights
console
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost 1 of 3
postgres 1 of 3
public
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
1 select * from flights where departing_airport_id = 23 and arriving_airport_id = 24
2
Services
Tx
Database
postgres@localhost
flights 611 ms
console 963 ms
Output
postgres.public.flights
[2025-11-12 00:09:19] Connected
[2025-11-12 00:09:19] postgres.public> select * from flights where departing_airport_id = 23 and arriving_airport_id = 24
[2025-11-12 00:09:20] 1 row retrieved starting from 1 in 643 ms (execution: 21 ms, fetching: 622 ms)
Database Consoles > postgres@localhost > console
1:83
CRLF
UTF-8
4 spaces
Поиск
РУС
0:09
12.11.2025

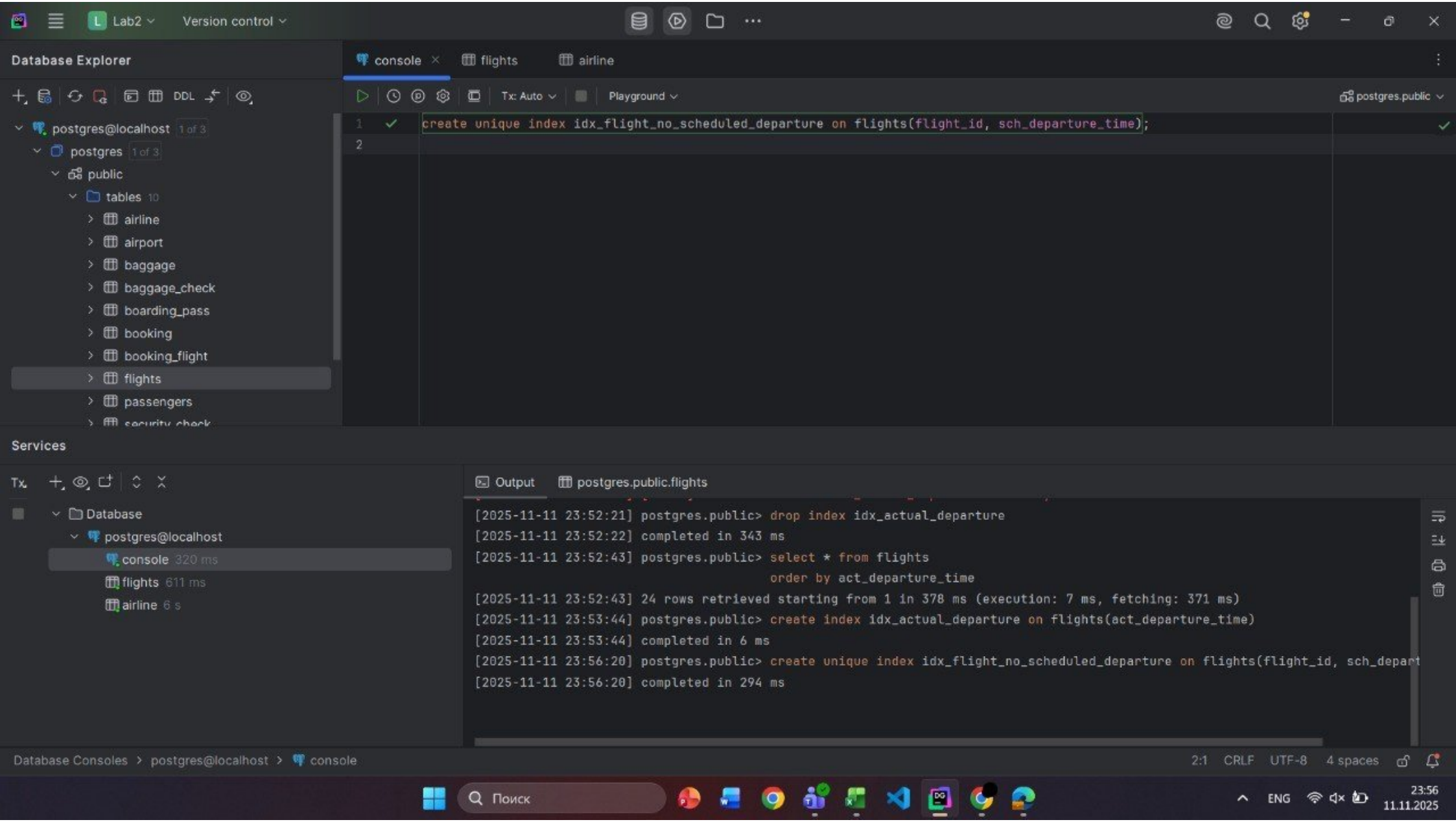

Lab2
Version control
Database Explorer
console
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost 1 of 3
postgres 1 of 3
public
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
create index idx_actual_departure on flights(act_departure_time);
Services
Database
postgres@localhost
console 232 ms
airline 6 s
[2025-11-11 23:47:20] Connected
[2025-11-11 23:47:20] postgres> create index idx_actual_departure on flights(act_departure_time)
[2025-11-11 23:47:20] completed in 76 ms
Database Consoles > postgres@localhost > console
2:1 CRLF UTF-8 4 spaces
Поиск
РУС
23:49
11.11.2025

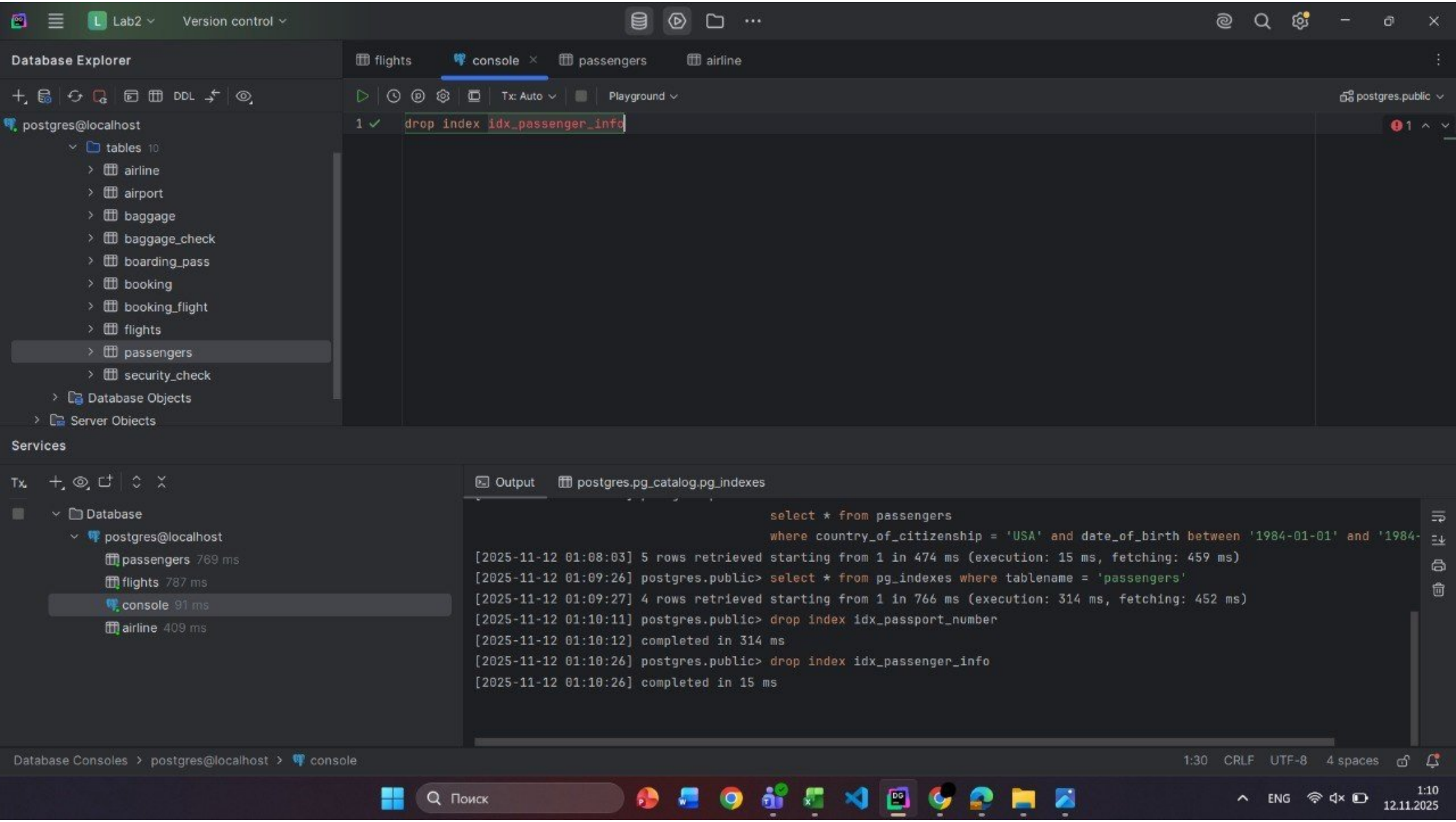

Lab2
Version control
Database Explorer
flights
console
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost 1 of 3
postgres 1 of 3
public
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
1 create index idx_departure_arrival_airports on flights(departing_airport_id, arriving_gate)
Services
Database
postgres@localhost
flights 611 ms
console 101 ms
Output
postgres.public.flights
[2025-11-12 00:09:19] Connected
[2025-11-12 00:09:19] postgres.public> select * from flights where departing_airport_id = 23 and arriving_airport_id = 24
[2025-11-12 00:09:20] 1 row retrieved starting from 1 in 643 ms (execution: 21 ms, fetching: 622 ms)
[2025-11-12 00:10:06] postgres.public> create index idx_departure_arrival_airports on flights(departing_airport_id, arriving_
[2025-11-12 00:10:06] completed in 29 ms
Database Consoles > postgres@localhost > console
1:92 CRLF UTF-8 4 spaces
Поиск
ENG
0:10
12.11.2025

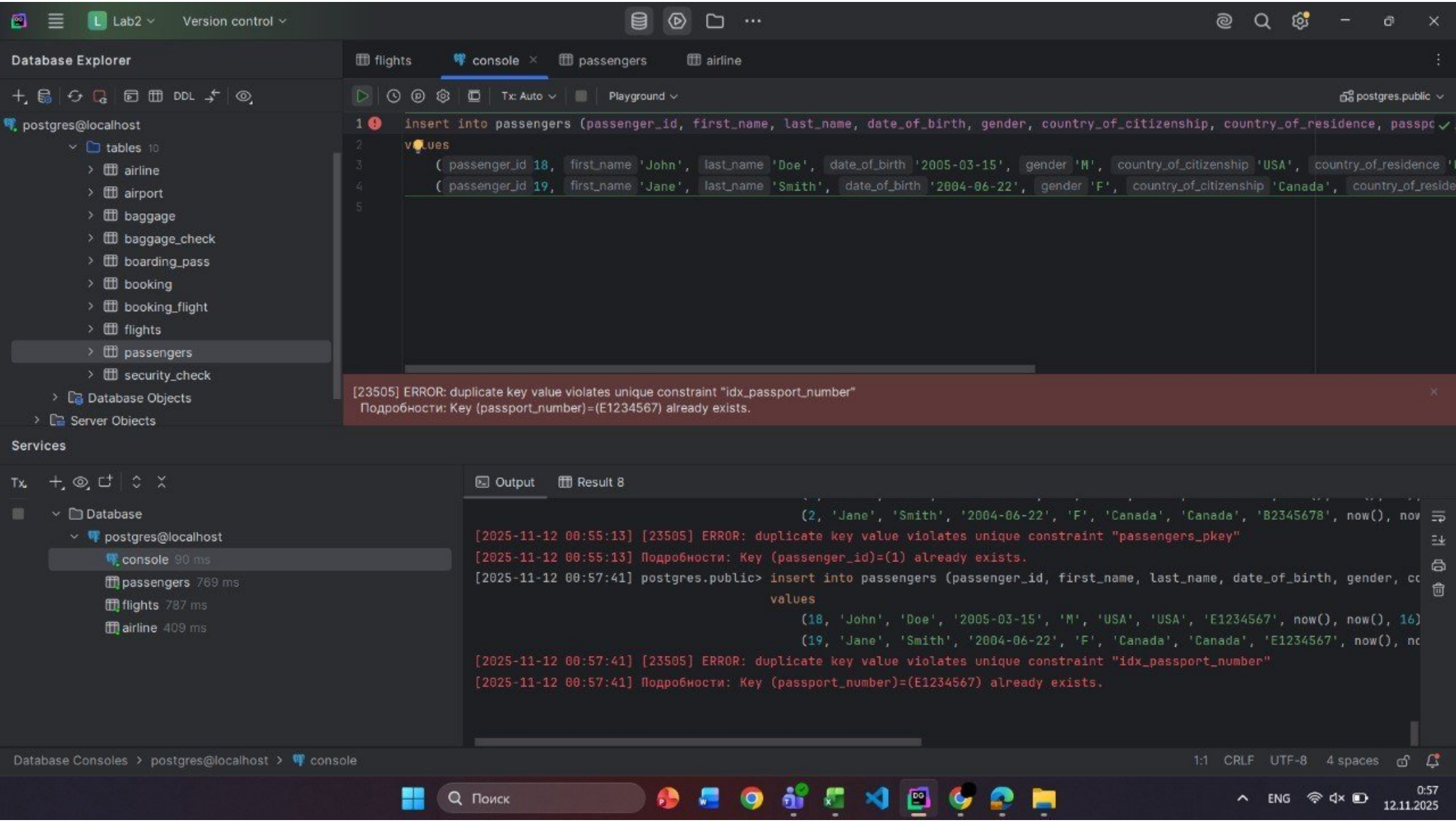

Lab2
Version control
Database Explorer
console
flights
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost 1 of 3
postgres 1 of 3
public
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
1 create index idx_departure_arrival_airports on flights(departing_airport_id, arriving_airport_id)
Services
Database
postgres@localhost
console 32 ms
flights 611 ms
airline 6 s
Output
postgres.public.flights
[2025-11-11 23:52:43] postgres.public> select * from flights
order by act_departure_time
[2025-11-11 23:52:43] 24 rows retrieved starting from 1 in 378 ms (execution: 7 ms, fetching: 371 ms)
[2025-11-11 23:53:44] postgres.public> create index idx_actual_departure on flights(act_departure_time)
[2025-11-11 23:53:44] completed in 6 ms
[2025-11-11 23:56:20] postgres.public> create unique index idx_flight_no_scheduled_departure on flights(flight_id, sch_depart
[2025-11-11 23:56:20] completed in 294 ms
[2025-11-11 23:57:31] postgres.public> create index idx_departure_arrival_airports on flights(departing_airport_id, arriving_
[2025-11-11 23:57:31] completed in 5 ms
Database Consoles > postgres@localhost > console
1:98 CRLF UTF-8 4 spaces
Поиск
ENG
23:57
11.11.2025

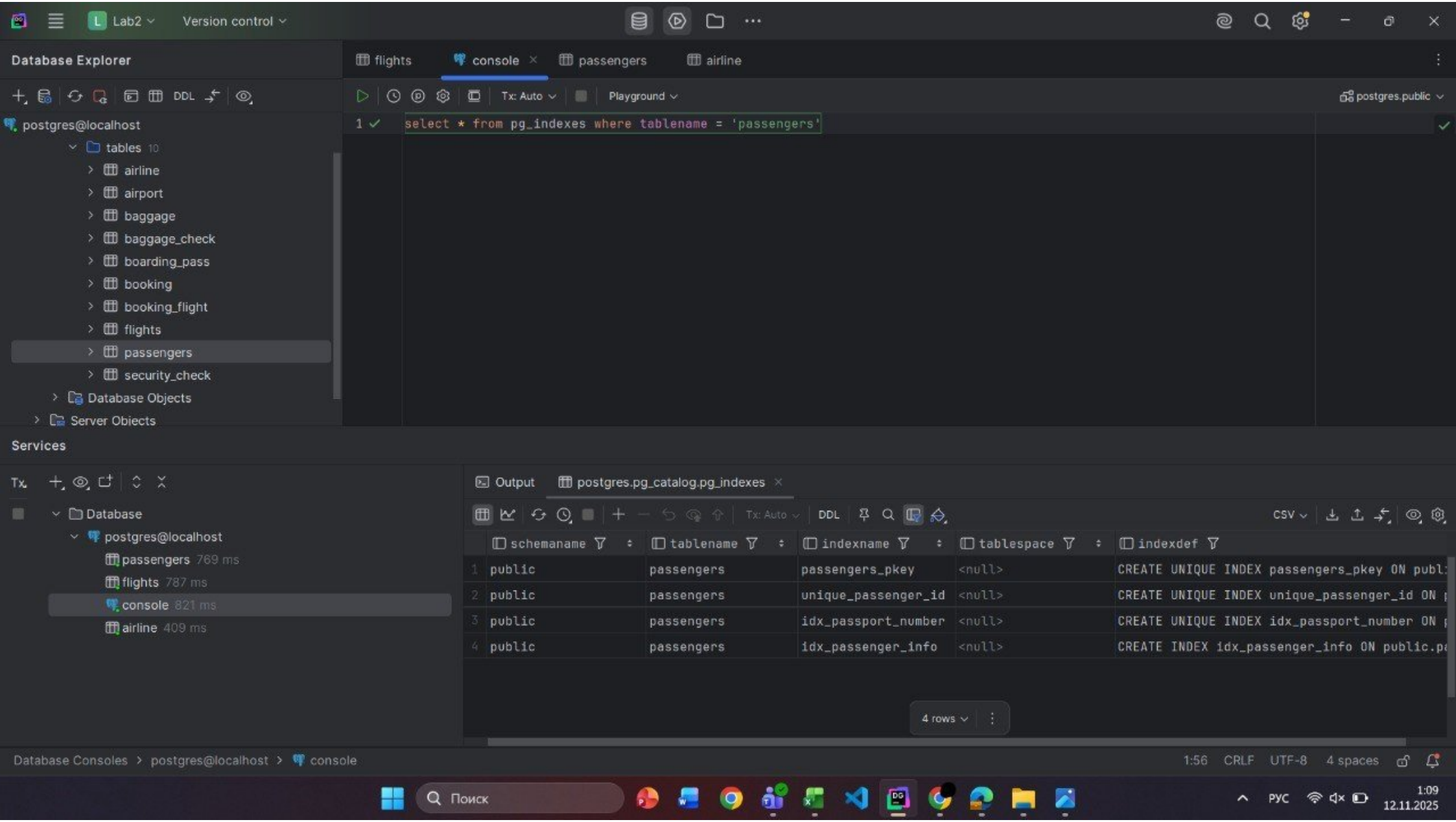

Lab2
Version control
Database Explorer
flights
console
passengers
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
1 drop index idx_departure_arrival_airports
Services
Tx
Database
postgres@localhost
passengers 769 ms
flights 787 ms
console 77 ms
airline 409 ms
Output
postgres.pg_catalog.pg_indexes
[2025-11-12 01:08:03] 5 rows retrieved starting from 1 in 474 ms (execution: 15 ms, fetching: 459 ms)
[2025-11-12 01:09:26] postgres.public> select * from pg_indexes where tablename = 'passengers'
[2025-11-12 01:09:27] 4 rows retrieved starting from 1 in 766 ms (execution: 314 ms, fetching: 452 ms)
[2025-11-12 01:10:11] postgres.public> drop index idx_passport_number
[2025-11-12 01:10:12] completed in 314 ms
[2025-11-12 01:10:26] postgres.public> drop index idx_passenger_info
[2025-11-12 01:10:26] completed in 15 ms
[2025-11-12 01:10:38] postgres.public> drop index idx_departure_arrival_airports
[2025-11-12 01:10:38] completed in 10 ms
Database Consoles > postgres@localhost > console
1:42 CRLF UTF-8 4 spaces
Поиск
ENG
1:10
12.11.2025

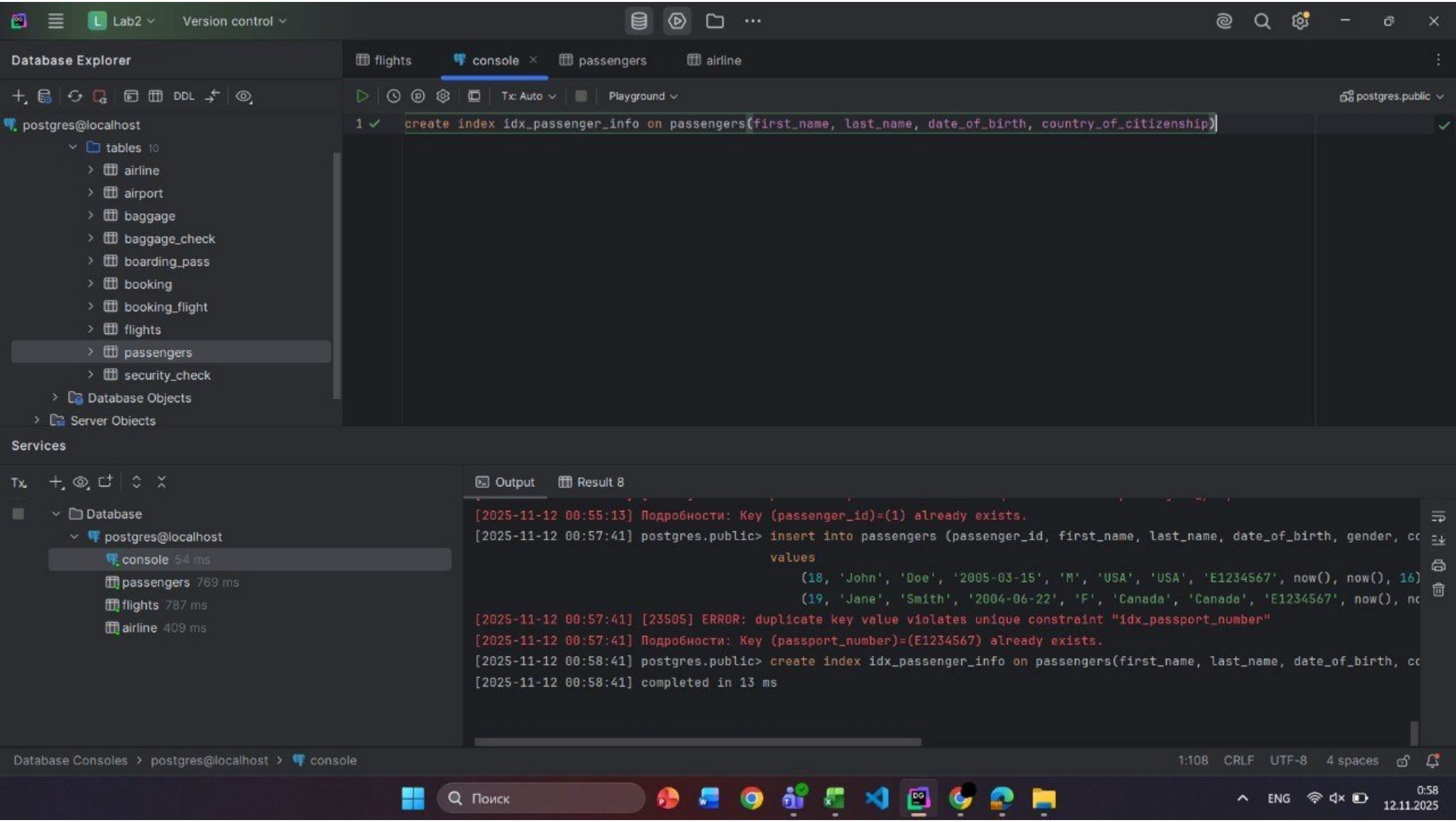

Lab2
Version control
Database Explorer
flights
console
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost 1 of 3
postgres 1 of 3
public
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
1 select * from flights where departing_airport_id = 23 and arriving_airport_id = 24
Services
Database
postgres@localhost
flights 611 ms
console 555 ms
Output
postgres.public.flights
[2025-11-12 00:09:19] Connected
[2025-11-12 00:09:19] postgres.public> select * from flights where departing_airport_id = 23 and arriving_airport_id = 24
[2025-11-12 00:09:20] 1 row retrieved starting from 1 in 643 ms (execution: 21 ms, fetching: 622 ms)
[2025-11-12 00:10:06] postgres.public> create index idx_departure_arrival_airports on flights(departing_airport_id, arriving_
[2025-11-12 00:10:06] completed in 29 ms
[2025-11-12 00:10:38] postgres.public> select * from flights where departing_airport_id = 23 and arriving_airport_id = 24
[2025-11-12 00:10:38] 1 row retrieved starting from 1 in 482 ms (execution: 19 ms, fetching: 463 ms)
Database Consoles > postgres@localhost > console
1:83 CRLF UTF-8 4 spaces
Поиск
ENG
0:10
12.11.2025

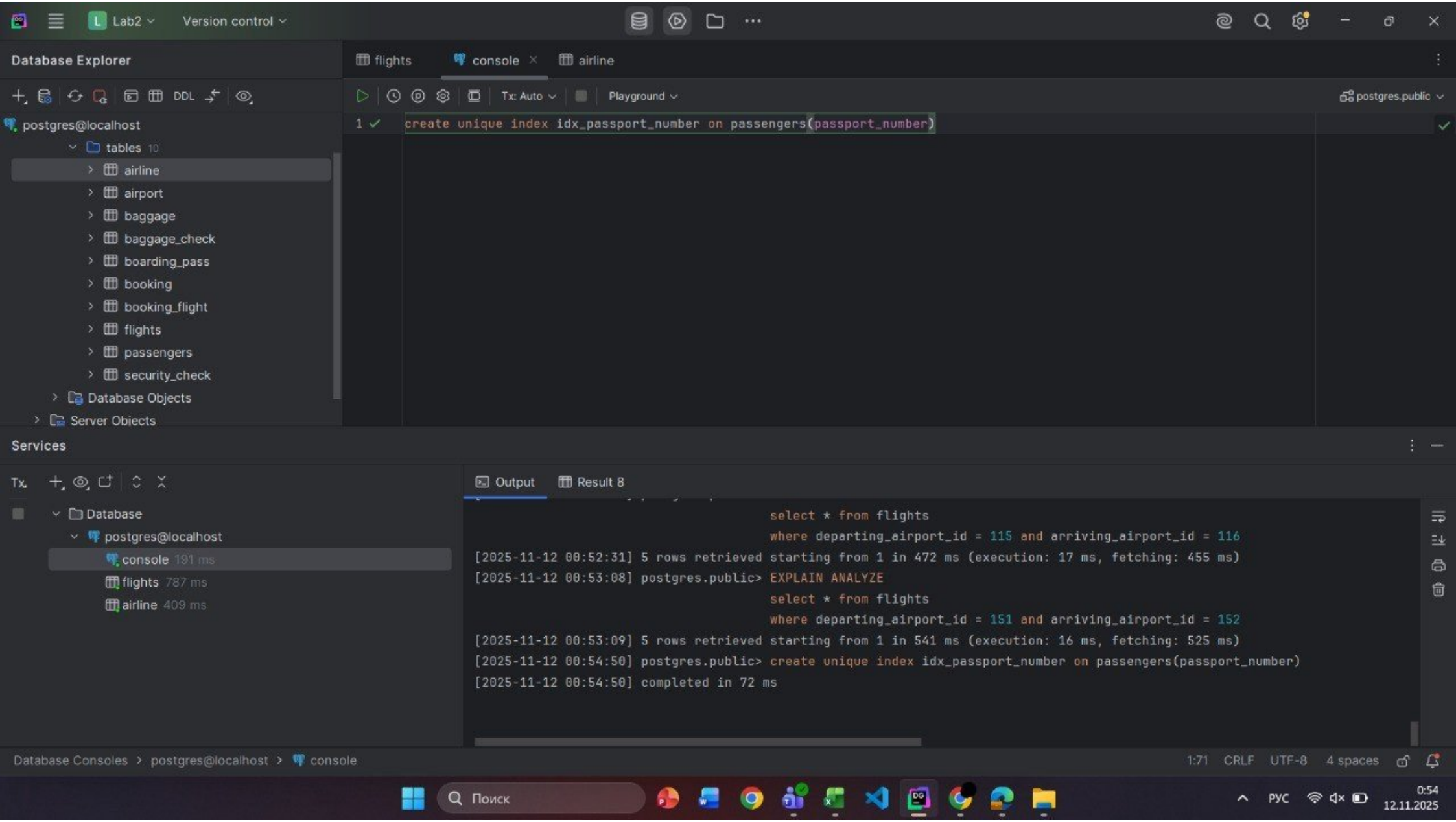

Lab2
Version control
Database Explorer
console
flights
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost 1 of 3
postgres 1 of 3
public
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
create unique index idx_flight_no_scheduled_departure on flights(flight_id, sch_departure_time);
Services
Database
postgres@localhost
console 320 ms
flights 611 ms
airline 6 s
Output
postgres.public.flights
[2025-11-11 23:52:21] postgres.public> drop index idx_actual_departure
[2025-11-11 23:52:22] completed in 343 ms
[2025-11-11 23:52:43] postgres.public> select * from flights
order by act_departure_time
[2025-11-11 23:52:43] 24 rows retrieved starting from 1 in 378 ms (execution: 7 ms, fetching: 371 ms)
[2025-11-11 23:53:44] postgres.public> create index idx_actual_departure on flights(act_departure_time)
[2025-11-11 23:53:44] completed in 6 ms
[2025-11-11 23:56:20] postgres.public> create unique index idx_flight_no_scheduled_departure on flights(flight_id, sch_depart
[2025-11-11 23:56:20] completed in 294 ms
Database Consoles > postgres@localhost > console
2:1 CRLF UTF-8 4 spaces
Поиск
ENG
23:56
11.11.2025

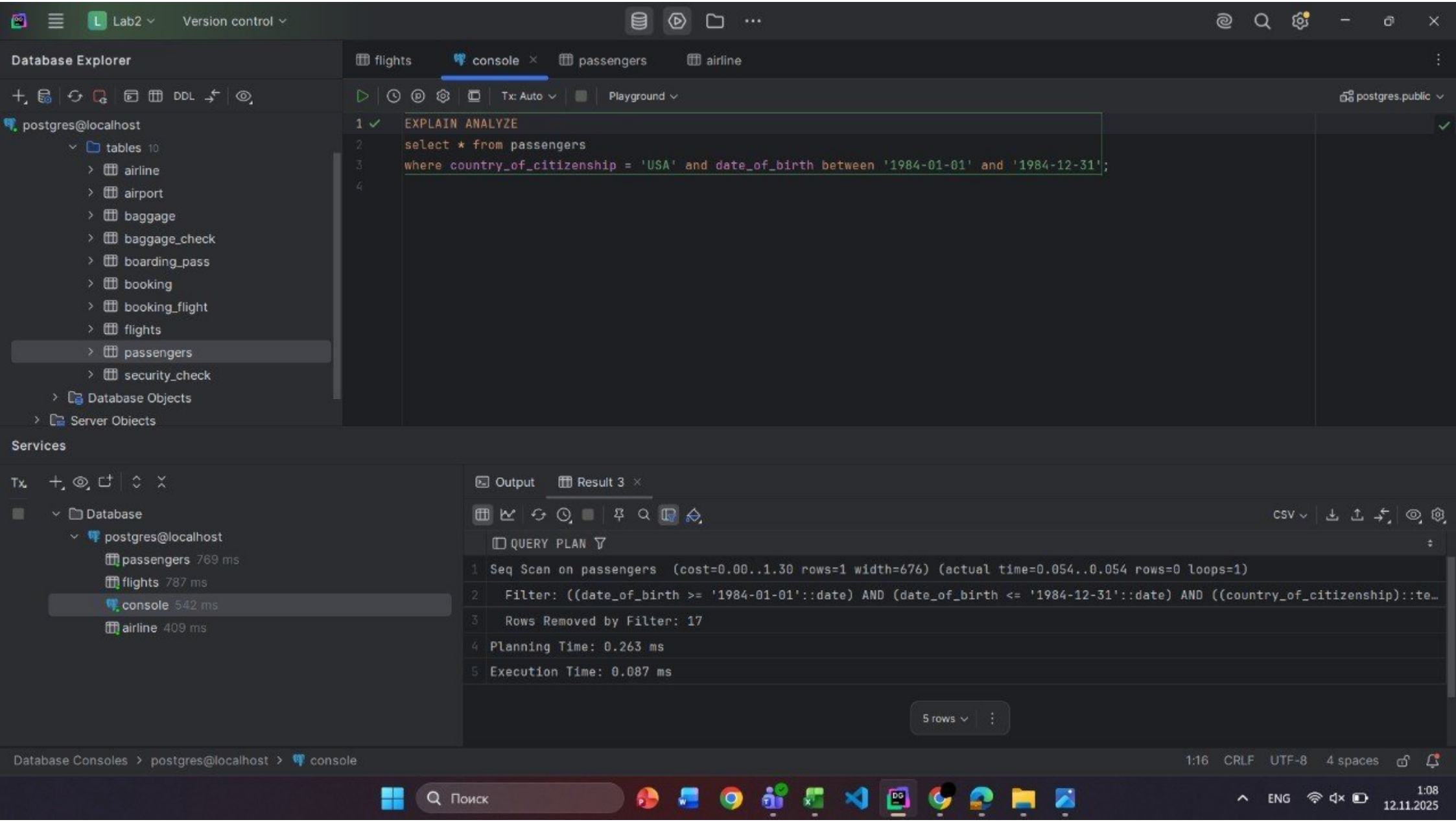

Lab2
Version control
Database Explorer
flights
console
passengers
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
1 drop index idx_passenger_info
Services
Output
postgres.pg_catalog.pg_indexes
Database
postgres@localhost
passengers 769 ms
flights 787 ms
console 91 ms
airline 409 ms
select * from passengers
where country_of_citizenship = 'USA' and date_of_birth between '1984-01-01' and '1984-
[2025-11-12 01:08:03] 5 rows retrieved starting from 1 in 474 ms (execution: 15 ms, fetching: 459 ms)
[2025-11-12 01:09:26] postgres.public> select * from pg_indexes where tablename = 'passengers'
[2025-11-12 01:09:27] 4 rows retrieved starting from 1 in 766 ms (execution: 314 ms, fetching: 452 ms)
[2025-11-12 01:10:11] postgres.public> drop index idx_passport_number
[2025-11-12 01:10:12] completed in 314 ms
[2025-11-12 01:10:26] postgres.public> drop index idx_passenger_info
[2025-11-12 01:10:26] completed in 15 ms
Database Consoles > postgres@localhost > console
1:30 CRLF UTF-8 4 spaces
Поиск
ENG
1:10
12.11.2025

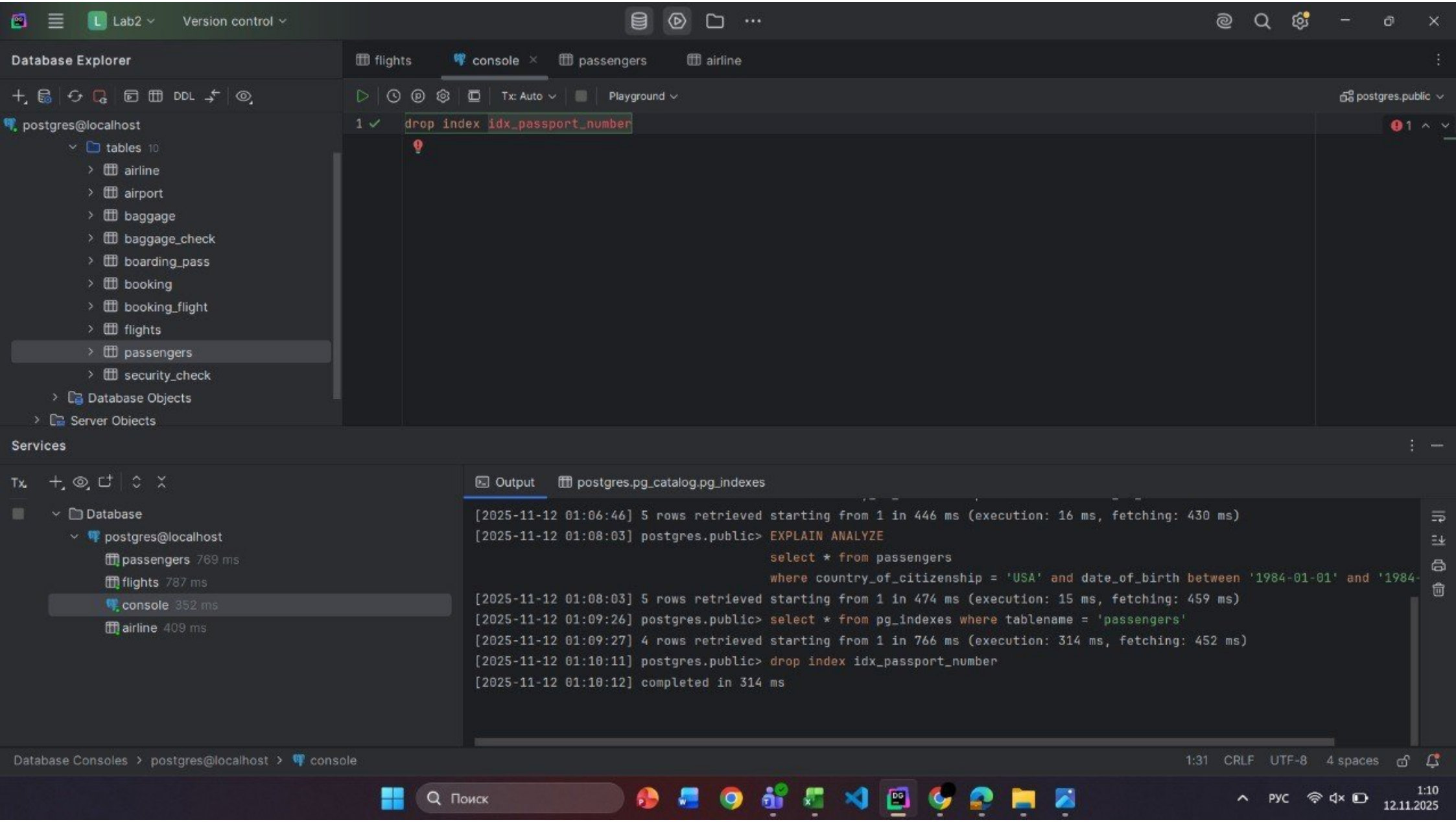

Lab2
Version control
Database Explorer
flights
console
passengers
airline
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
insert into passengers (passenger_id, first_name, last_name, date_of_birth, gender, country_of_citizenship, country_of_residence, passpo
values
(passenger_id 18, first_name 'John', last_name 'Doe', date_of_birth '2005-03-15', gender 'M', country_of_citizenship 'USA', country_of_residence '
(passenger_id 19, first_name 'Jane', last_name 'Smith', date_of_birth '2004-06-22', gender 'F', country_of_citizenship 'Canada', country_of_reside
[23505] ERROR: duplicate key value violates unique constraint "idx_passport_number"
Подробности: Key (passport_number)=(E1234567) already exists.
Services
Database
postgres@localhost
console 90 ms
passengers 769 ms
flights 787 ms
airline 409 ms
Output
Result 8
(2, 'Jane', 'Smith', '2004-06-22', 'F', 'Canada', 'Canada', 'B2345678', now(), now
[2025-11-12 00:55:13] [23505] ERROR: duplicate key value violates unique constraint "passengers_pkey"
[2025-11-12 00:55:13] Подробности: Key (passenger_id)=(1) already exists.
[2025-11-12 00:57:41] postgres.public> insert into passengers (passenger_id, first_name, last_name, date_of_birth, gender, cc
values
(18, 'John', 'Doe', '2005-03-15', 'M', 'USA', 'USA', 'E1234567', now(), now(), 16)
(19, 'Jane', 'Smith', '2004-06-22', 'F', 'Canada', 'Canada', 'E1234567', now(), nc
[2025-11-12 00:57:41] [23505] ERROR: duplicate key value violates unique constraint "idx_passport_number"
[2025-11-12 00:57:41] Подробности: Key (passport_number)=(E1234567) already exists.
Database Consoles > postgres@localhost > console
1:1 CRLF UTF-8 4 spaces
Поиск
ENG
0:57
12.11.2025


Lab2
Version control
Database Explorer
flights
console
passengers
airline
DDL
Tx: Auto
Playground
postgres.public
1 select * from pg_indexes where tablename = 'passengers'
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
Services
Tx:
Database
postgres@localhost
passengers 769 ms
flights 787 ms
console 821 ms
airline 409 ms
Output
postgres.pg_catalog.pg_indexes
Tx: Auto
DDL
CSV
schemaname tablename indexname tablespace indexdef
1 public passengers passengers_pkey <null> CREATE UNIQUE INDEX passengers_pkey ON publ
2 public passengers unique_passenger_id <null> CREATE UNIQUE INDEX unique_passenger_id ON
3 public passengers idx_passport_number <null> CREATE UNIQUE INDEX idx_passport_number ON
4 public passengers idx_passenger_info <null> CREATE INDEX idx_passenger_info ON public.pa
4 rows
Database Consoles > postgres@localhost > console
1:56 CRLF UTF-8 4 spaces
Поиск
РУС
1:09
12.11.2025


Lab2
Version control
Database Explorer
flights
console
passengers
airline
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
1 create index idx_passenger_info on passengers(first_name, last_name, date_of_birth, country_of_citizenship)
Services
Database
postgres@localhost
console 54 ms
passengers 769 ms
flights 787 ms
airline 409 ms
Output
Result 8
[2025-11-12 00:55:13] Подробности: Key (passenger_id)=(1) already exists.
[2025-11-12 00:57:41] postgres.public> insert into passengers (passenger_id, first_name, last_name, date_of_birth, gender, co
values
(18, 'John', 'Doe', '2005-03-15', 'M', 'USA', 'USA', 'E1234567', now(), now(), 16)
(19, 'Jane', 'Smith', '2004-06-22', 'F', 'Canada', 'Canada', 'E1234567', now(), no
[2025-11-12 00:57:41] [23505] ERROR: duplicate key value violates unique constraint "idx_passport_number"
[2025-11-12 00:57:41] Подробности: Key (passport_number)=(E1234567) already exists.
[2025-11-12 00:58:41] postgres.public> create index idx_passenger_info on passengers(first_name, last_name, date_of_birth, co
[2025-11-12 00:58:41] completed in 13 ms
Database Consoles > postgres@localhost > console
1:108 CRLF UTF-8 4 spaces
Поиск
ENG
0:58
12.11.2025


Lab2
Version control
Database Explorer
flights
console
airline
Tx: Auto
Playground
postgres.public
1 create unique index idx_passport_number on passengers(passport_number)
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
Services
Output
Result 8
Database
postgres@localhost
console 191 ms
flights 787 ms
airline 409 ms
select * from flights
where departing_airport_id = 115 and arriving_airport_id = 116
[2025-11-12 00:52:31] 5 rows retrieved starting from 1 in 472 ms (execution: 17 ms, fetching: 455 ms)
[2025-11-12 00:53:08] postgres.public> EXPLAIN ANALYZE
select * from flights
where departing_airport_id = 151 and arriving_airport_id = 152
[2025-11-12 00:53:09] 5 rows retrieved starting from 1 in 541 ms (execution: 16 ms, fetching: 525 ms)
[2025-11-12 00:54:50] postgres.public> create unique index idx_passport_number on passengers(passport_number)
[2025-11-12 00:54:50] completed in 72 ms
Database Consoles > postgres@localhost > console
1:71 CRLF UTF-8 4 spaces
Поиск
РУС
0:54
12.11.2025


Lab2
Version control
Database Explorer
flights
console
passengers
airline
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
EXPLAIN ANALYZE
select * from passengers
where country_of_citizenship = 'USA' and date_of_birth between '1984-01-01' and '1984-12-31';
Services
Database
postgres@localhost
passengers 769 ms
flights 787 ms
console 542 ms
airline 409 ms
Output
Result 3
CSV
QUERY PLAN
Seq Scan on passengers (cost=0.00..1.30 rows=1 width=676) (actual time=0.054..0.054 rows=0 loops=1)
Filter: ((date_of_birth >= '1984-01-01'::date) AND (date_of_birth <= '1984-12-31'::date) AND ((country_of_citizenship)::te…
Rows Removed by Filter: 17
Planning Time: 0.263 ms
Execution Time: 0.087 ms
5 rows
Database Consoles > postgres@localhost > console
1:16 CRLF UTF-8 4 spaces
Поиск
ENG
1:08
12.11.2025


Lab2
Version control
Database Explorer
flights
console
passengers
airline
DDL
Tx: Auto
Playground
postgres.public
postgres@localhost
tables 10
airline
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Database Objects
Server Objects
1 drop index idx_passport_number
Services
Output
postgres.pg_catalog.pg_indexes
Database
postgres@localhost
passengers 769 ms
flights 787 ms
console 352 ms
airline 409 ms
[2025-11-12 01:06:46] 5 rows retrieved starting from 1 in 446 ms (execution: 16 ms, fetching: 430 ms)
[2025-11-12 01:08:03] postgres.public> EXPLAIN ANALYZE
select * from passengers
where country_of_citizenship = 'USA' and date_of_birth between '1984-01-01' and '1984-
[2025-11-12 01:08:03] 5 rows retrieved starting from 1 in 474 ms (execution: 15 ms, fetching: 459 ms)
[2025-11-12 01:09:26] postgres.public> select * from pg_indexes where tablename = 'passengers'
[2025-11-12 01:09:27] 4 rows retrieved starting from 1 in 766 ms (execution: 314 ms, fetching: 452 ms)
[2025-11-12 01:10:11] postgres.public> drop index idx_passport_number
[2025-11-12 01:10:12] completed in 314 ms
Database Consoles > postgres@localhost > console
1:31 CRLF UTF-8 4 spaces
Поиск
РУС
1:10
12.11.2025