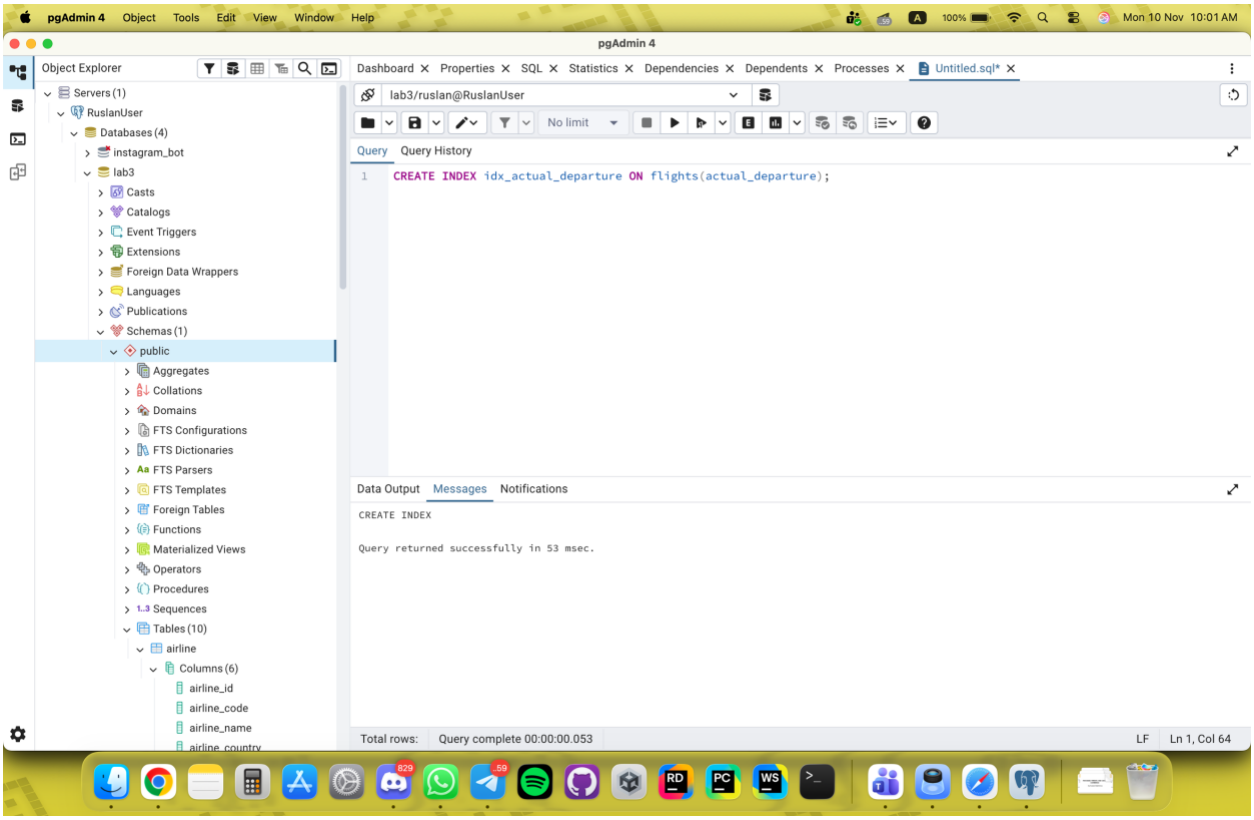
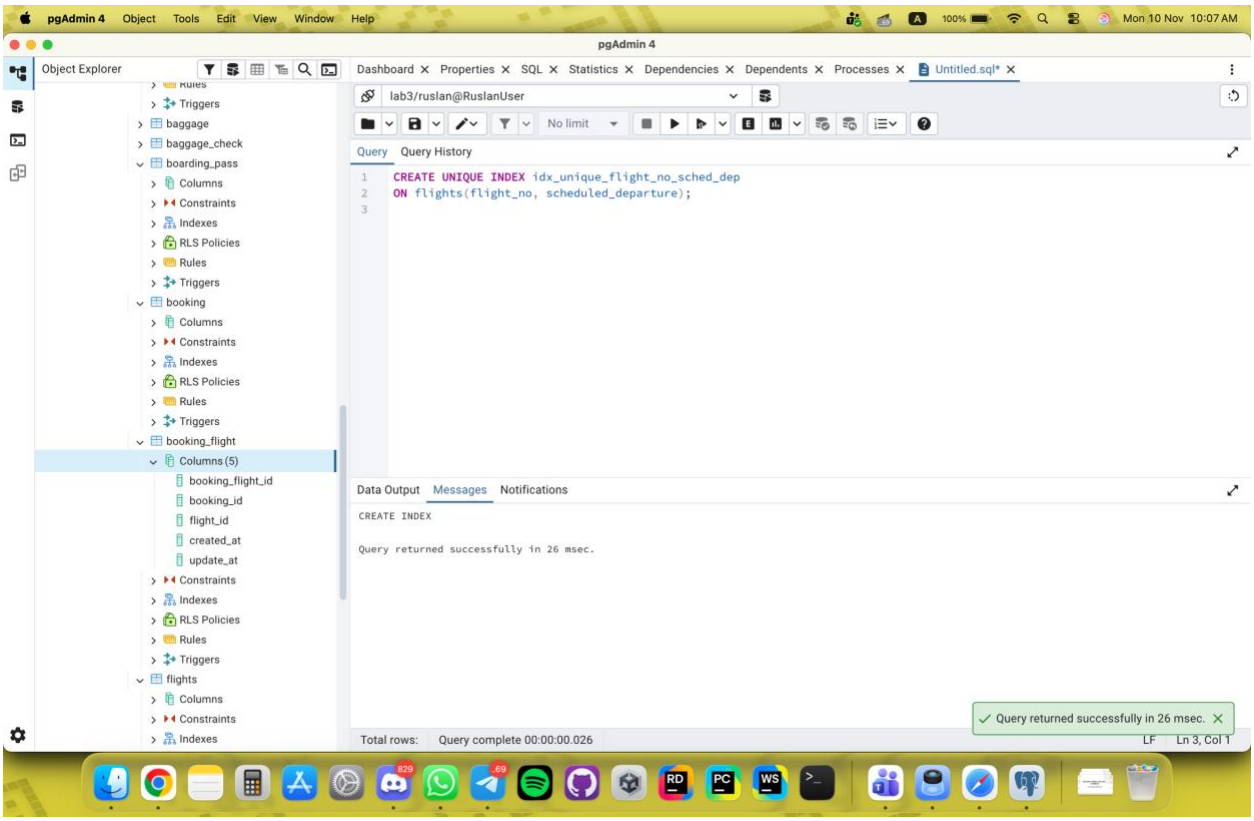
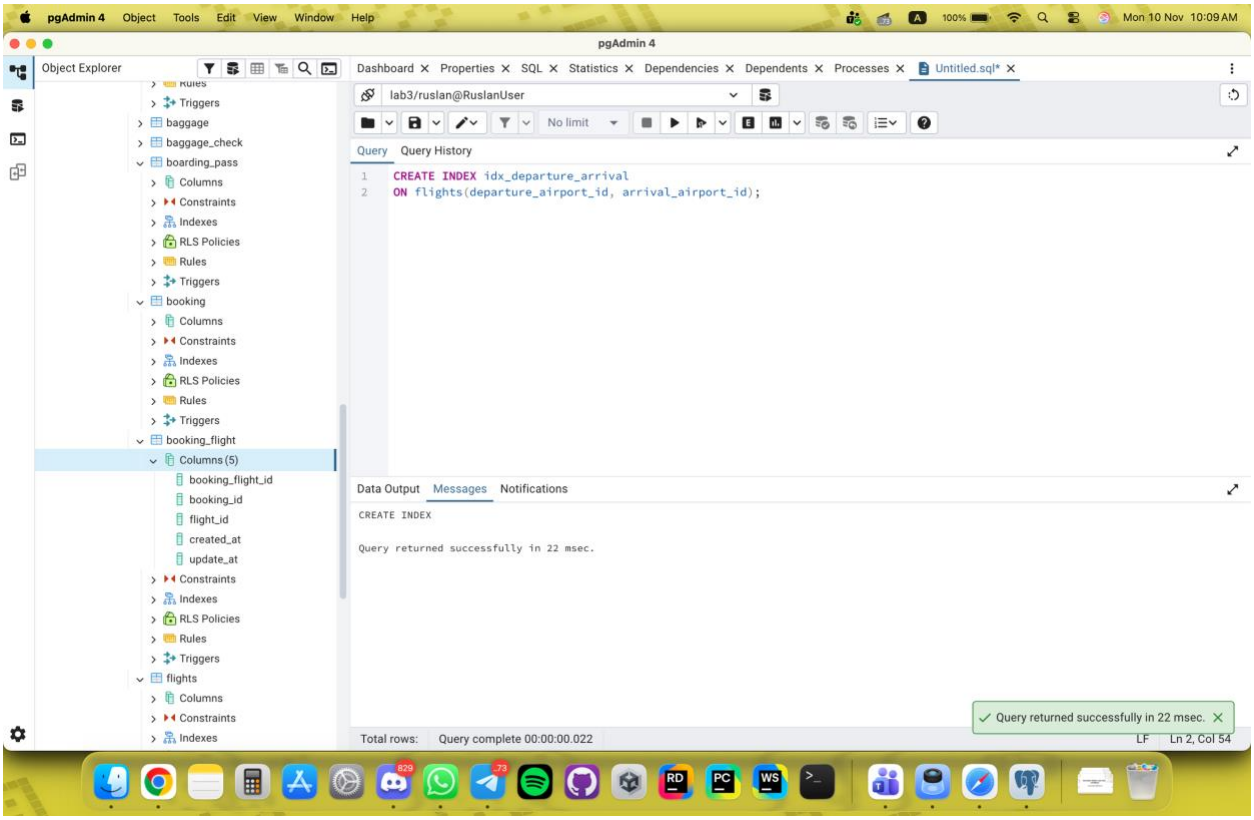
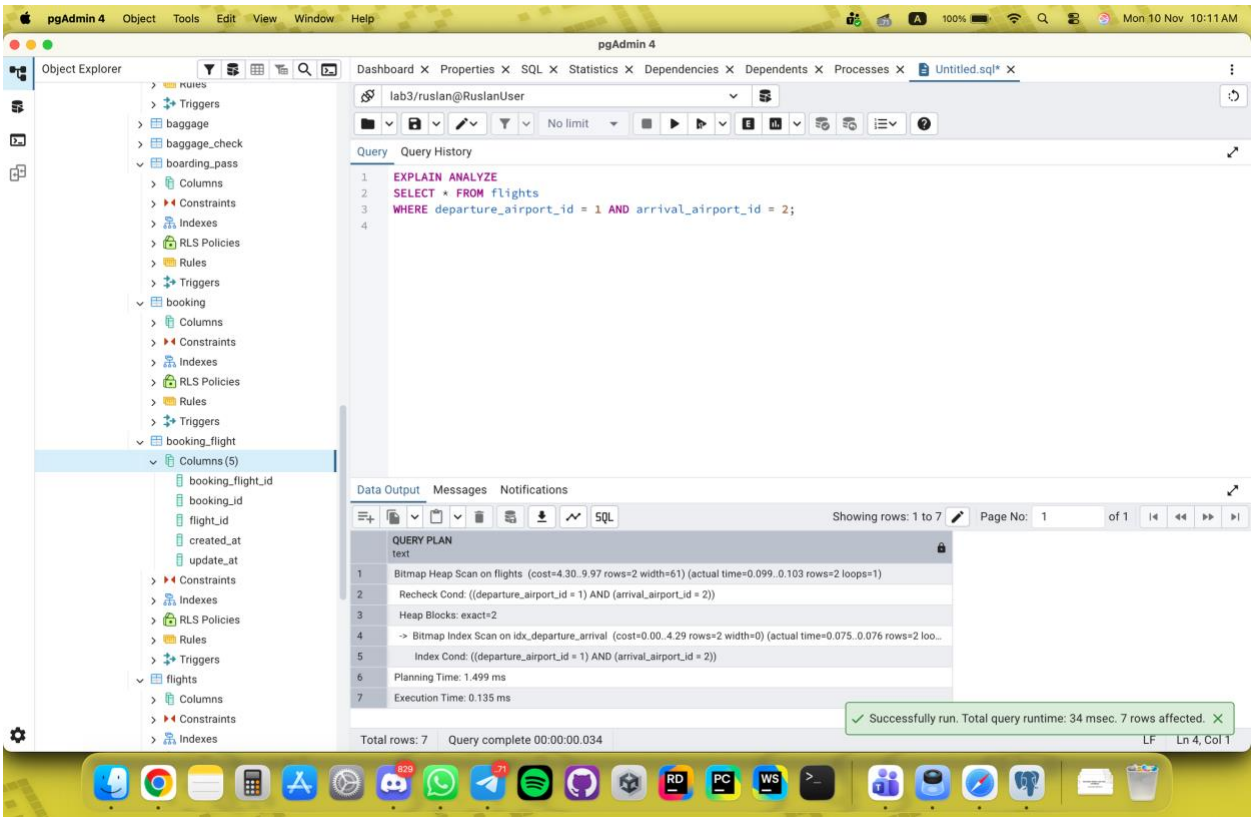
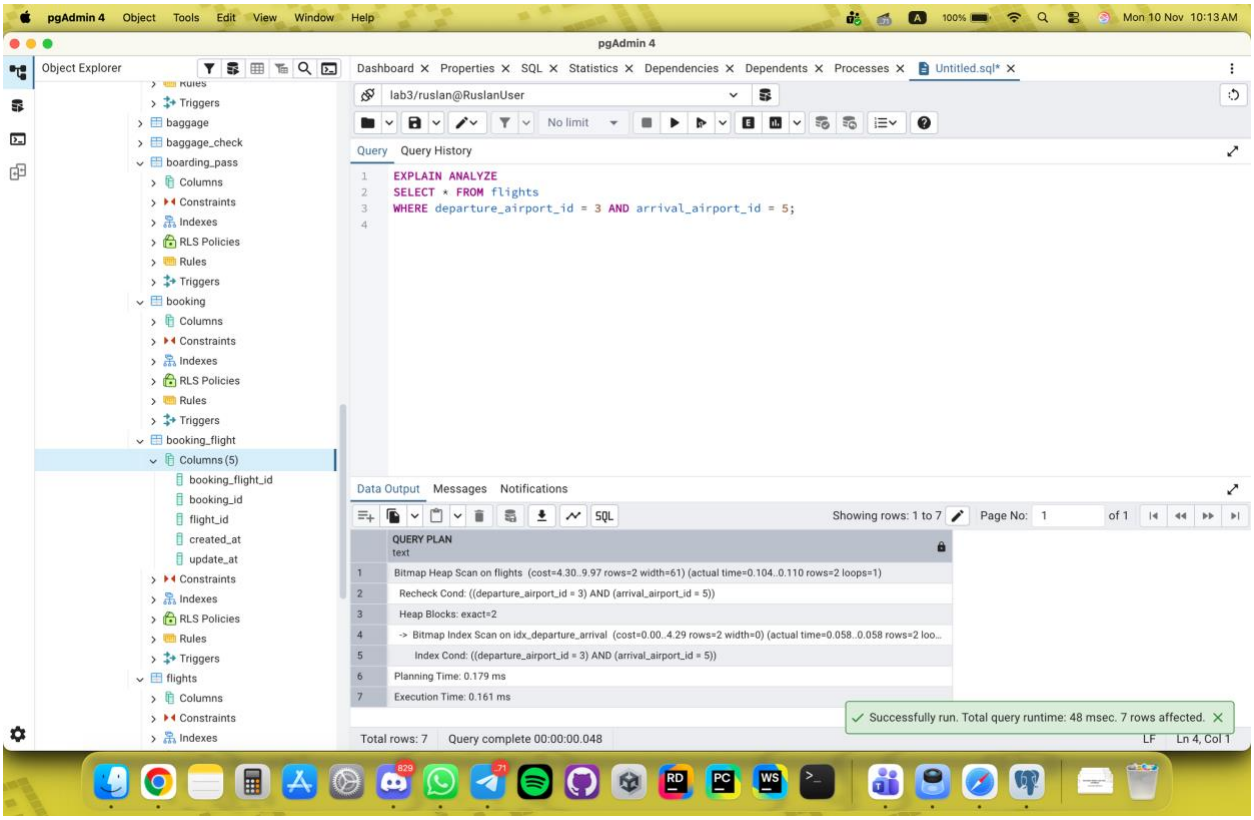
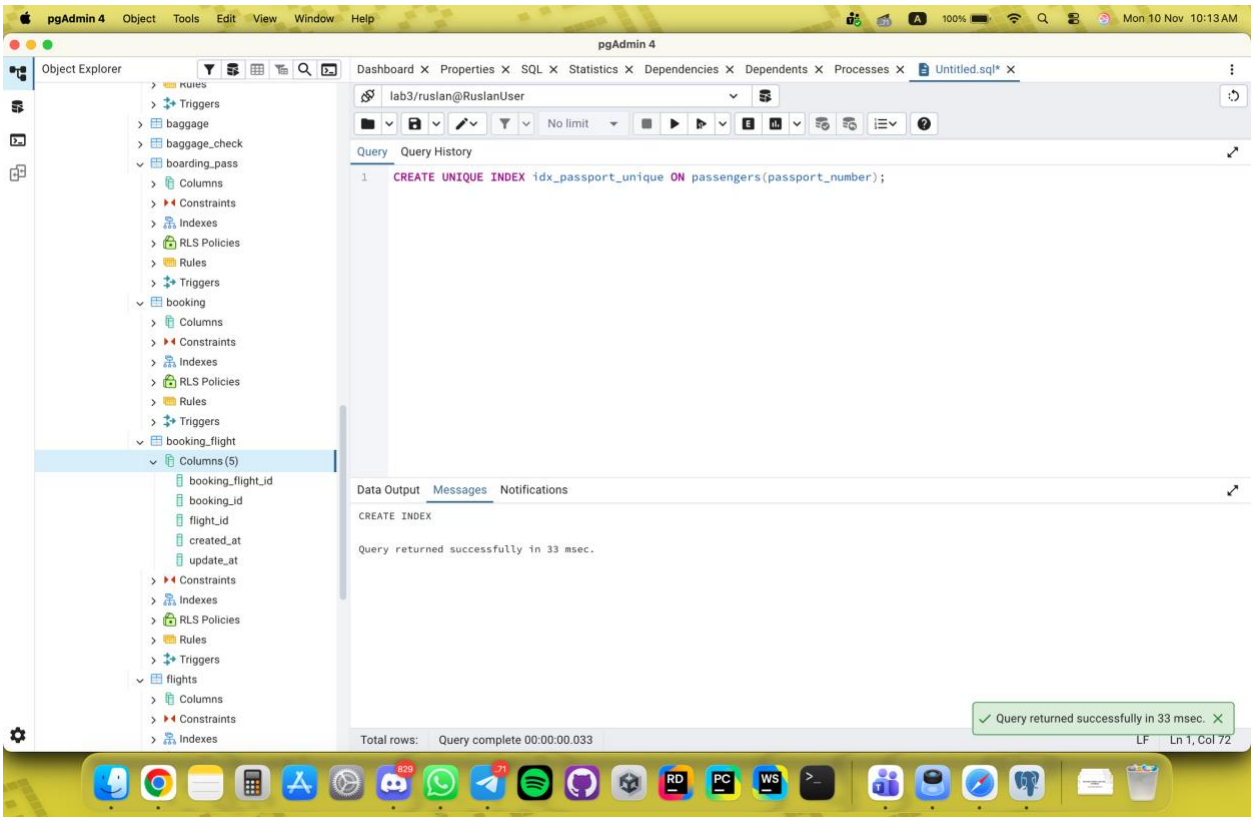

pgAdmin 4
Object Explorer
Servers (1)
RuslanUser
Databases (4)
instagram_bot
lab3
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas (1)
public
Aggregates
Collations
Domains
FTS Configurations
FTS Dictionaries
FTS Parsers
FTS Templates
Foreign Tables
Functions
Materialized Views
Operators
Procedures
Sequences
Tables (10)
airline
Columns (6)
airline_id
airline_code
airline_name
airline_country
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
1 CREATE INDEX idx_actual_departure ON flights(actual_departure);
Data Output
Messages
Notifications
CREATE INDEX
Query returned successfully in 53 msec.
Total rows:
Query complete 00:00:00.053
LF
Ln 1, Col 64

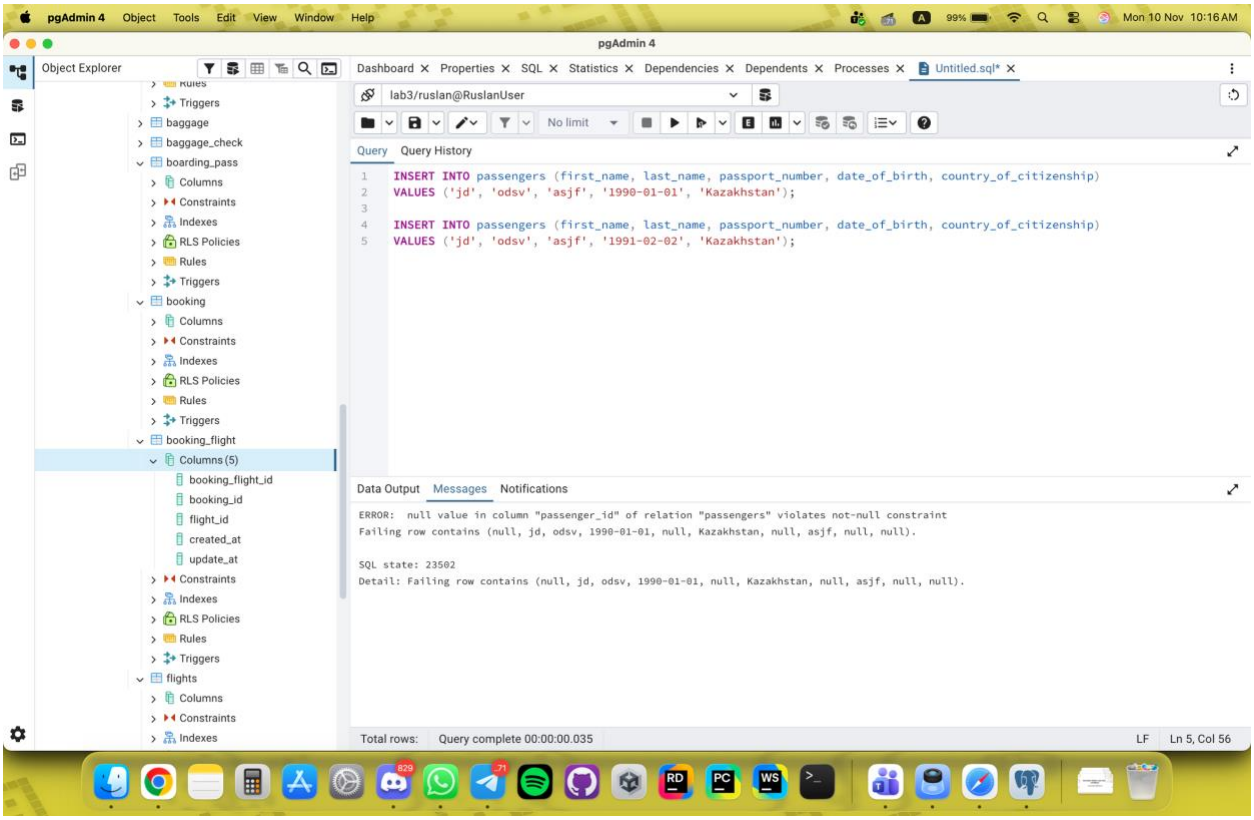

pgAdmin 4
Object Explorer
Triggers
baggage
baggage_check
boarding_pass
Columns
Constraints
Indexes
RLS Policies
Rules
Triggers
booking
Columns
Constraints
Indexes
RLS Policies
Rules
Triggers
booking_flight
Columns (5)
booking_flight_id
booking_id
flight_id
created_at
update_at
Constraints
Indexes
RLS Policies
Rules
Triggers
flights
Columns
Constraints
Indexes
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
1 CREATE UNIQUE INDEX idx_unique_flight_no_sched_dep
2 ON flights(flight_no, scheduled_departure);
3
Data Output
Messages
Notifications
CREATE INDEX
Query returned successfully in 26 msec.
Query returned successfully in 26 msec.
Total rows:
Query complete 00:00:00.026
LF
Ln 3, Col 1


pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
CREATE INDEX idx_departure_arrival
ON flights(departure_airport_id, arrival_airport_id);
Data Output
Messages
Notifications
CREATE INDEX
Query returned successfully in 22 msec.
Total rows:
Query complete 00:00:00.022
Query returned successfully in 22 msec.
LF
Ln 2, Col 54

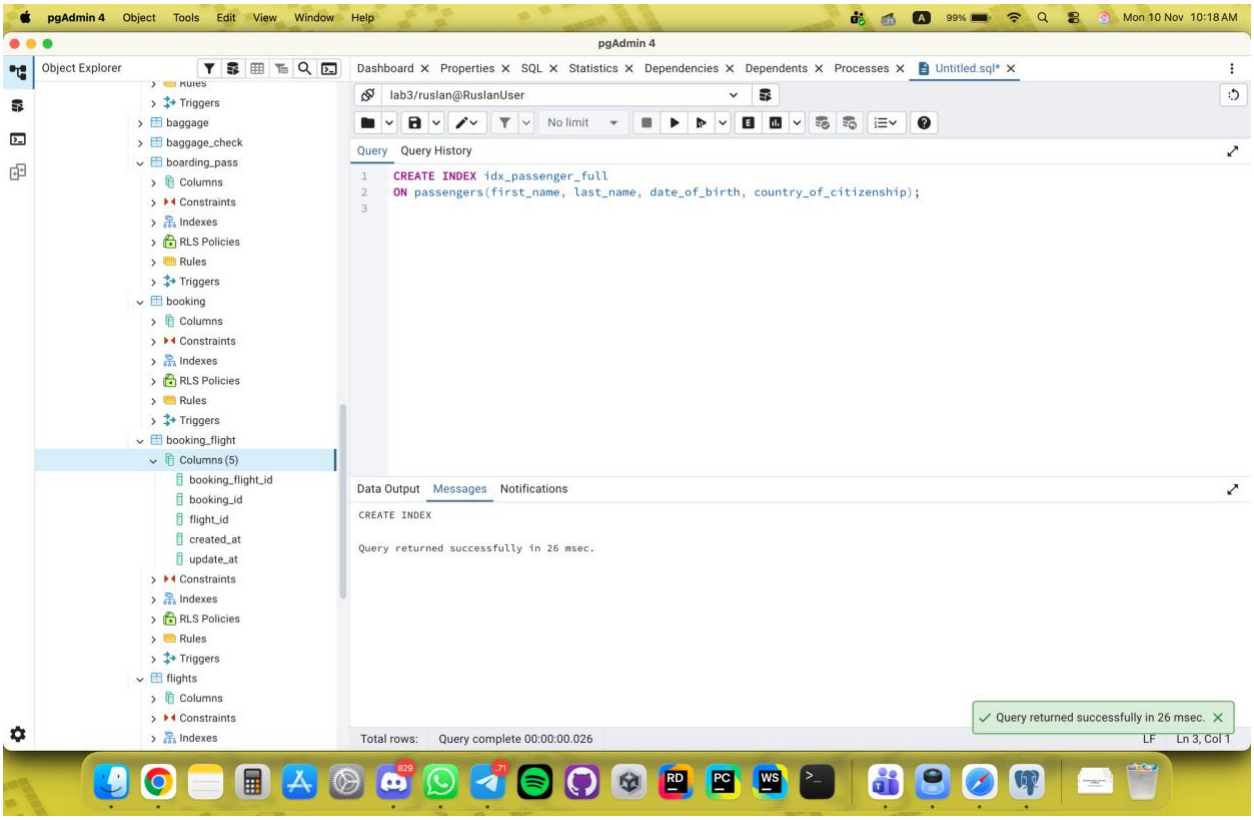

pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
EXPLAIN ANALYZE
SELECT * FROM flights
WHERE departure_airport_id = 1 AND arrival_airport_id = 2;
Data Output
Messages
Notifications
Showing rows: 1 to 7
Page No: 1
of 1
QUERY PLAN
text
Bitmap Heap Scan on flights (cost=4.30..9.97 rows=2 width=61) (actual time=0.099..0.103 rows=2 loops=1)
Recheck Cond: ((departure_airport_id = 1) AND (arrival_airport_id = 2))
Heap Blocks: exact=2
-> Bitmap Index Scan on idx_departure_arrival (cost=0.00..4.29 rows=2 width=0) (actual time=0.075..0.076 rows=2 loo...
Index Cond: ((departure_airport_id = 1) AND (arrival_airport_id = 2))
Planning Time: 1.499 ms
Execution Time: 0.135 ms
Total rows: 7
Query complete 00:00:00.034
Successfully run. Total query runtime: 34 msec. 7 rows affected.
LF
Ln 4, Col 1

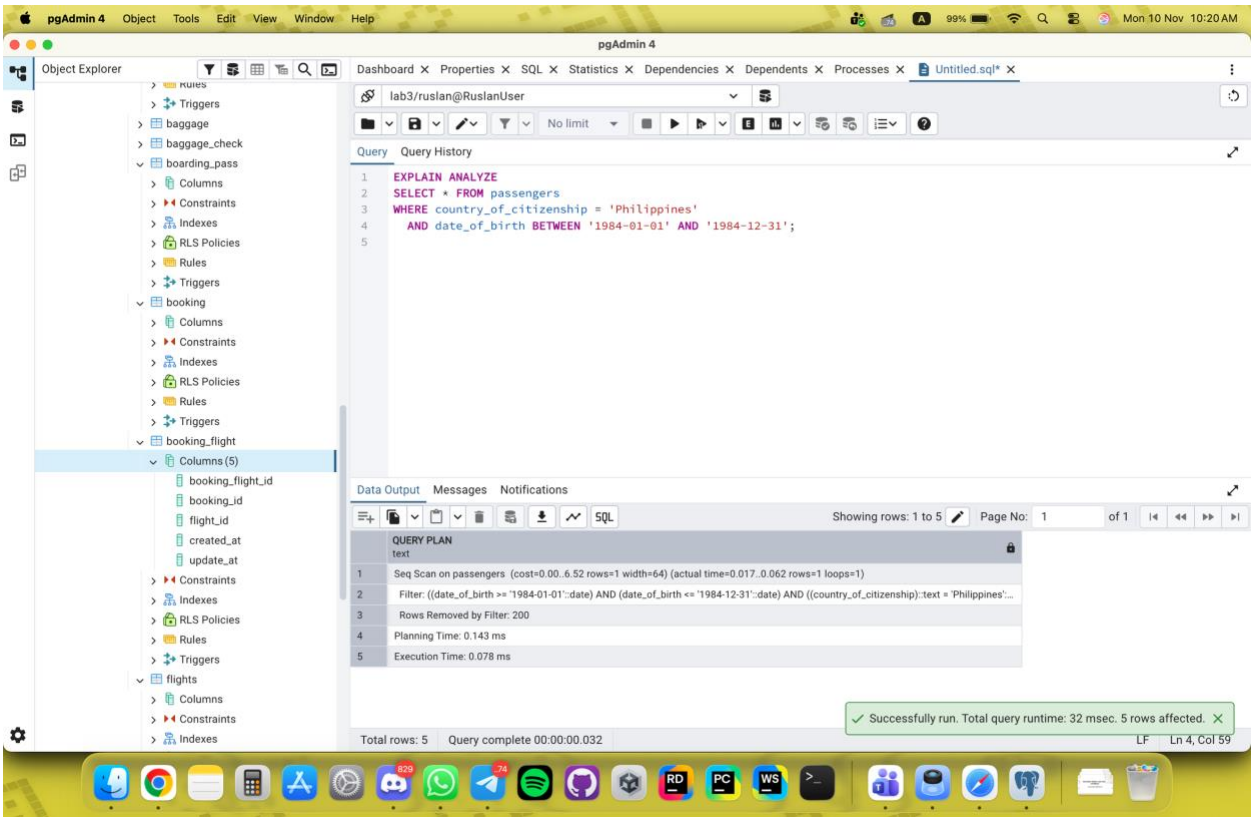

pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
EXPLAIN ANALYZE
SELECT * FROM flights
WHERE departure_airport_id = 3 AND arrival_airport_id = 5;
Data Output
Messages
Notifications
Showing rows: 1 to 7
Page No: 1
of 1
QUERY PLAN
text
Bitmap Heap Scan on flights (cost=4.30..9.97 rows=2 width=61) (actual time=0.104..0.110 rows=2 loops=1)
Recheck Cond: ((departure_airport_id = 3) AND (arrival_airport_id = 5))
Heap Blocks: exact=2
-> Bitmap Index Scan on idx_departure_arrival (cost=0.00..4.29 rows=2 width=0) (actual time=0.058..0.058 rows=2 loo...
Index Cond: ((departure_airport_id = 3) AND (arrival_airport_id = 5))
Planning Time: 0.179 ms
Execution Time: 0.161 ms
Successfully run. Total query runtime: 48 msec. 7 rows affected.
Total rows: 7
Query complete 00:00:00.048
LF
Ln 4, Col 1

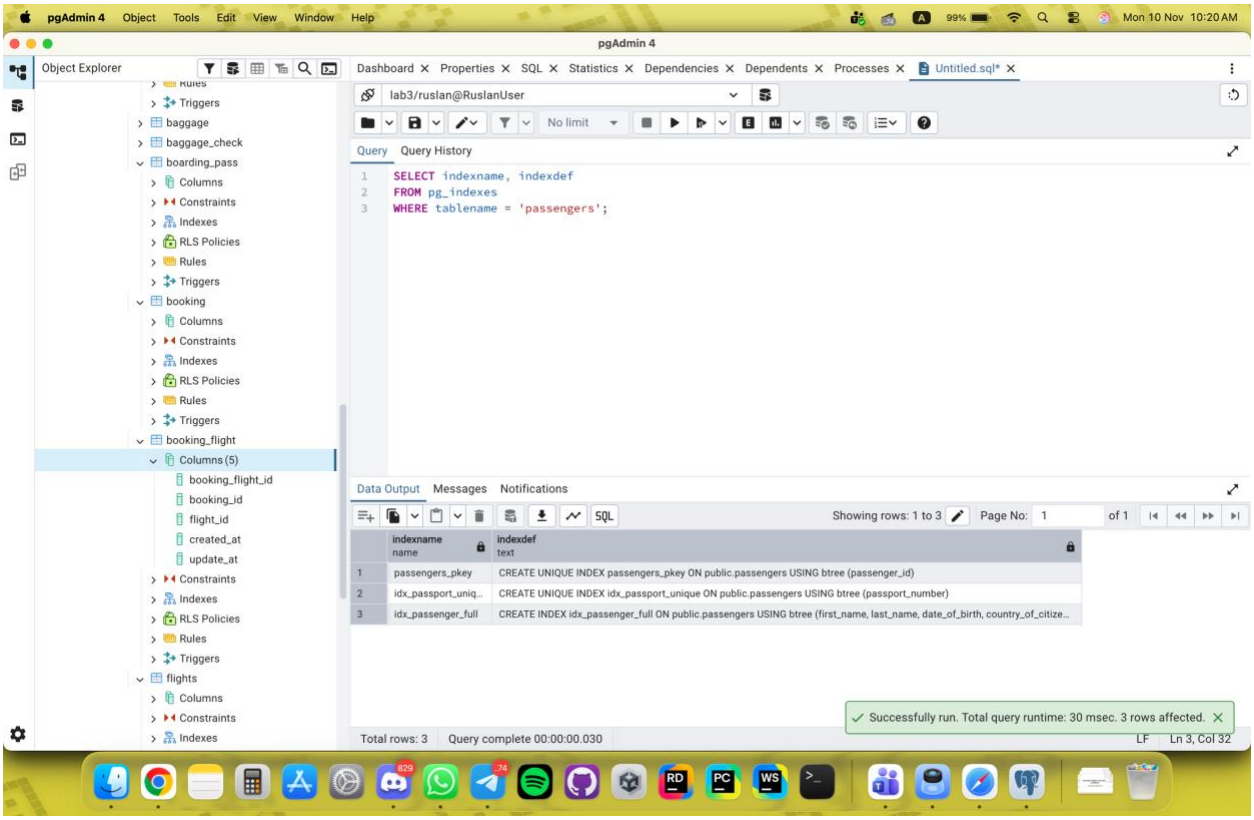

pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
CREATE UNIQUE INDEX idx_passport_unique ON passengers(passport_number);
Data Output
Messages
Notifications
CREATE INDEX
Query returned successfully in 33 msec.
Query returned successfully in 33 msec.
Total rows:
Query complete 00:00:00.033
LF
Ln 1, Col 72

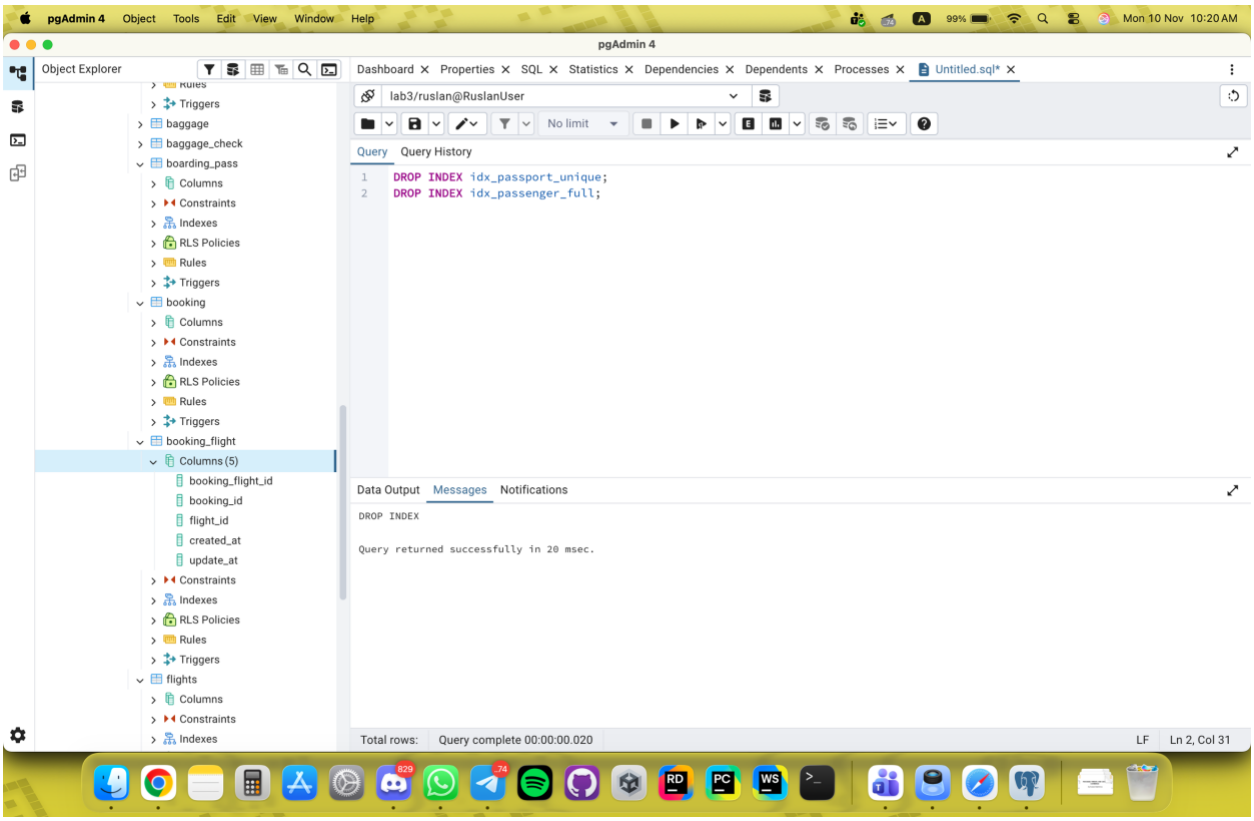


the index protects the column from repeated values, ensuring uniqueness


pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
CREATE INDEX idx_passenger_full
ON passengers(first_name, last_name, date_of_birth, country_of_citizenship);
Data Output
Messages
Notifications
CREATE INDEX
Query returned successfully in 26 msec.
Query returned successfully in 26 msec.
Total rows:
Query complete 00:00:00.026
LF
Ln 3, Col 1


pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
EXPLAIN ANALYZE
SELECT * FROM passengers
WHERE country_of_citizenship = 'Philippines'
AND date_of_birth BETWEEN '1984-01-01' AND '1984-12-31';
Data Output
Messages
Notifications
Showing rows: 1 to 5
Page No: 1
of 1
QUERY PLAN
text
Seq Scan on passengers (cost=0.00..6.52 rows=1 width=64) (actual time=0.017..0.062 rows=1 loops=1)
Filter: ((date_of_birth >= '1984-01-01'::date) AND (date_of_birth <= '1984-12-31'::date) AND ((country_of_citizenship)::text = 'Philippines'...
Rows Removed by Filter: 200
Planning Time: 0.143 ms
Execution Time: 0.078 ms
Successfully run. Total query runtime: 32 msec. 5 rows affected.
Total rows: 5
Query complete 00:00:00.032
LF
Ln 4, Col 59


pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
SELECT indexname, indexdef
FROM pg_indexes
WHERE tablename = 'passengers';
Data Output
Messages
Notifications
Showing rows: 1 to 3
Page No: 1
of 1
indexname name
indexdef text
1 passengers_pkey CREATE UNIQUE INDEX passengers_pkey ON public.passengers USING btree (passenger_id)
2 idx_passport_uniq... CREATE UNIQUE INDEX idx_passport_unique ON public.passengers USING btree (passport_number)
3 idx_passenger_full CREATE INDEX idx_passenger_full ON public.passengers USING btree (first_name, last_name, date_of_birth, country_of_citize...
Successfully run. Total query runtime: 30 msec. 3 rows affected.
Total rows: 3
Query complete 00:00:00.030
LF
Ln 3, Col 32


pgAdmin 4
Object Explorer
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Untitled.sql*
lab3/ruslan@RuslanUser
No limit
Query
Query History
DROP INDEX idx_passport_unique;
DROP INDEX idx_passenger_full;
Data Output
Messages
Notifications
DROP INDEX
Query returned successfully in 20 msec.
Total rows:
Query complete 00:00:00.020
LF
Ln 2, Col 31