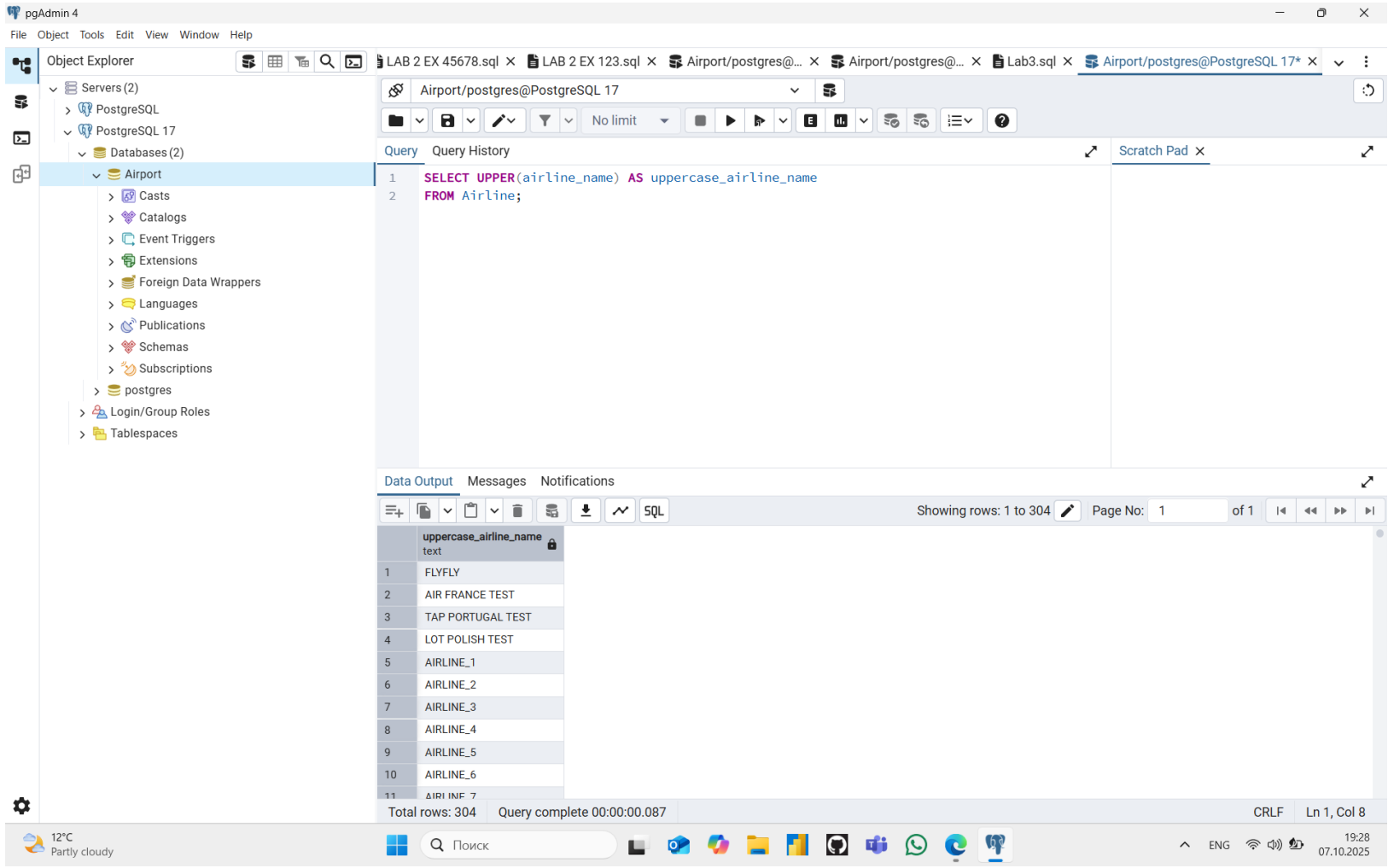
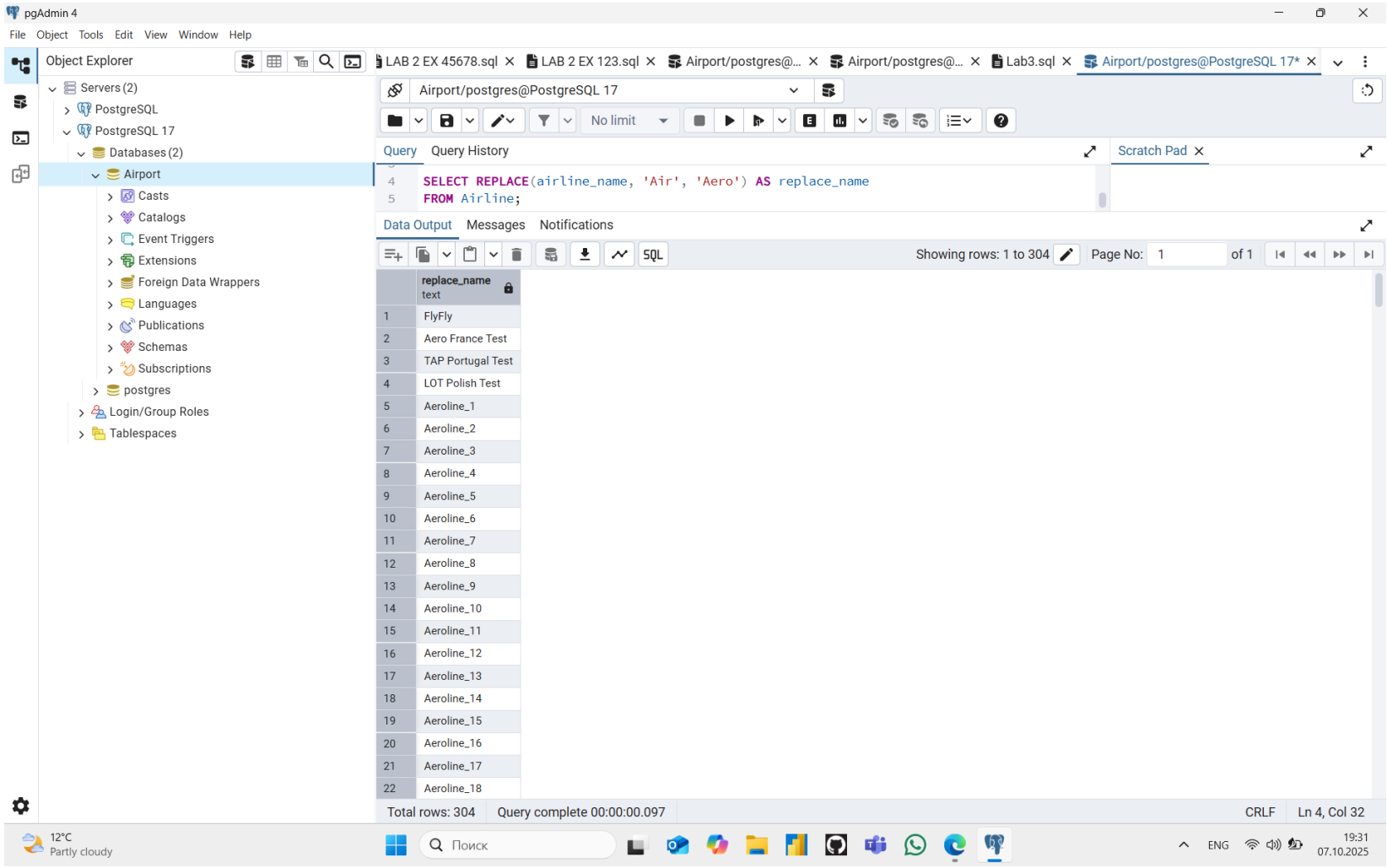
LAB-4
ZHARAS SEMBAYEV

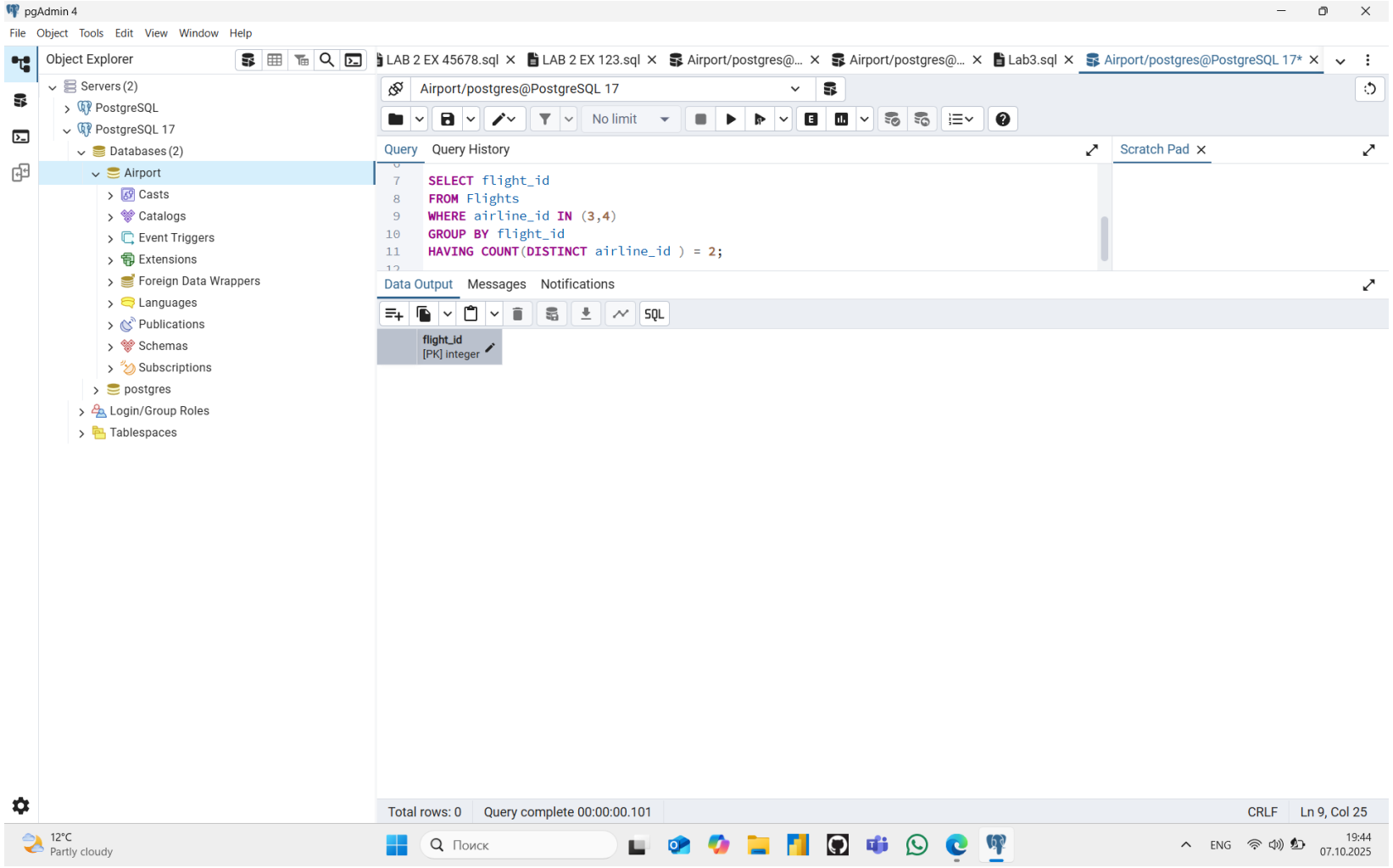
TASK #1


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
Servers (2)
PostgreSQL
PostgreSQL 17
Databases (2)
Airport
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas
Subscriptions
postgres
Login/Group Roles
Tablespaces
LAB 2 EX 45678.sql
LAB 2 EX 123.sql
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
1 SELECT UPPER(airline_name) AS uppercase_airline_name
2 FROM Airline;
Data Output
Messages
Notifications
SQL
Showing rows: 1 to 304
Page No: 1
of 1
uppercase_airline_name
text
1 FLYFLY
2 AIR FRANCE TEST
3 TAP PORTUGAL TEST
4 LOT POLISH TEST
5 AIRLINE_1
6 AIRLINE_2
7 AIRLINE_3
8 AIRLINE_4
9 AIRLINE_5
10 AIRLINE_6
Total rows: 304
Query complete 00:00:00.087
CRLF
Ln 1, Col 8
12°C
Partly cloudy
Поиск
ENG
19:28
07.10.2025

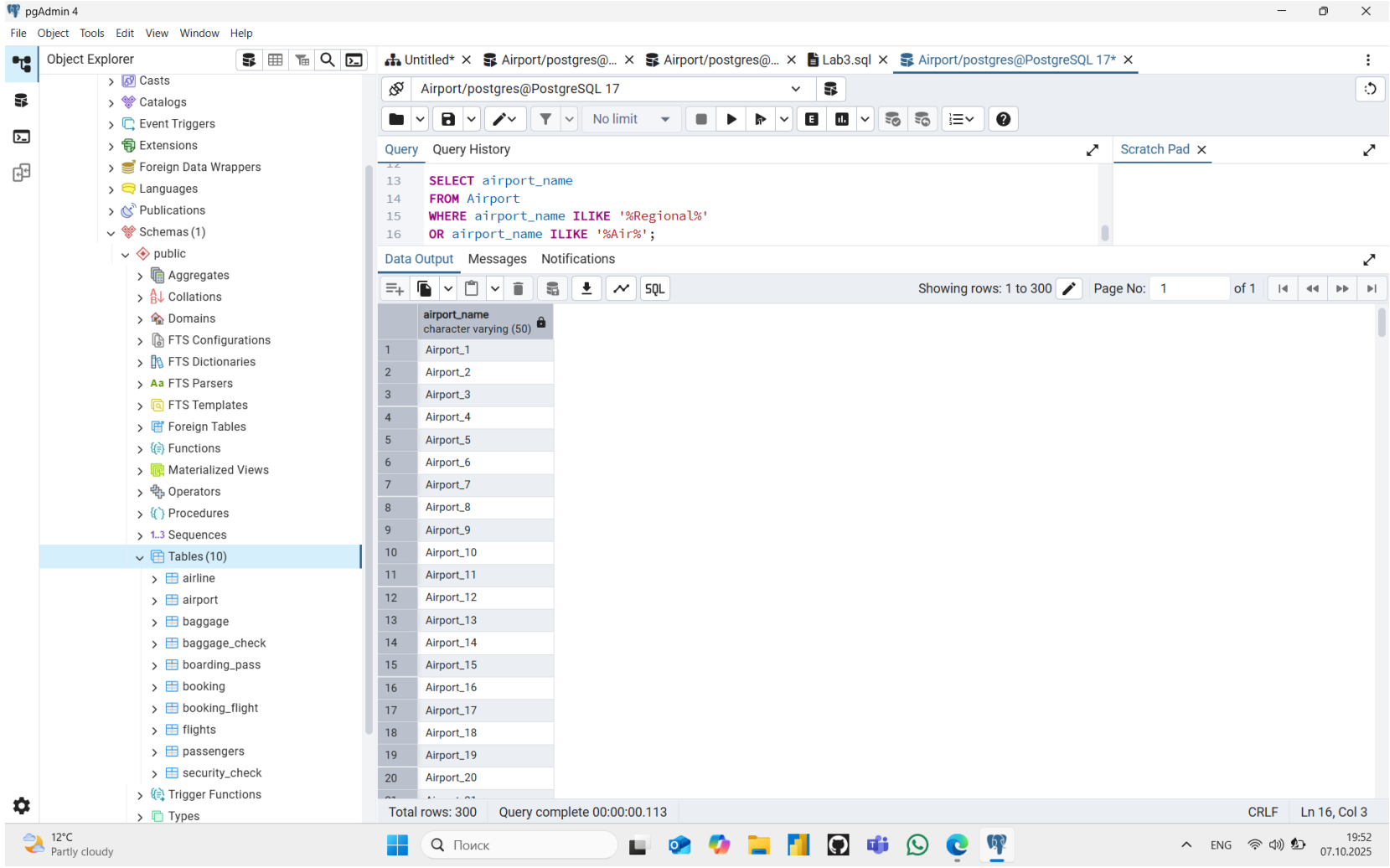
TASK #2


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
Servers (2)
PostgreSQL
PostgreSQL 17
Databases (2)
Airport
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas
Subscriptions
postgres
Login/Group Roles
Tablespaces
LAB 2 EX 45678.sql
LAB 2 EX 123.sql
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
4 SELECT REPLACE(airline_name, 'Air', 'Aero') AS replace_name
5 FROM Airline;
Data Output
Messages
Notifications
Showing rows: 1 to 304
Page No: 1
of 1
replace_name text
1 FlyFly
2 Aero France Test
3 TAP Portugal Test
4 LOT Polish Test
5 Aeroline_1
6 Aeroline_2
7 Aeroline_3
8 Aeroline_4
9 Aeroline_5
10 Aeroline_6
11 Aeroline_7
12 Aeroline_8
13 Aeroline_9
14 Aeroline_10
15 Aeroline_11
16 Aeroline_12
17 Aeroline_13
18 Aeroline_14
19 Aeroline_15
20 Aeroline_16
21 Aeroline_17
22 Aeroline_18
Total rows: 304
Query complete 00:00:00.097
CRLF
Ln 4, Col 32
12°C
Partly cloudy
Поиск
ENG
19:31
07.10.2025

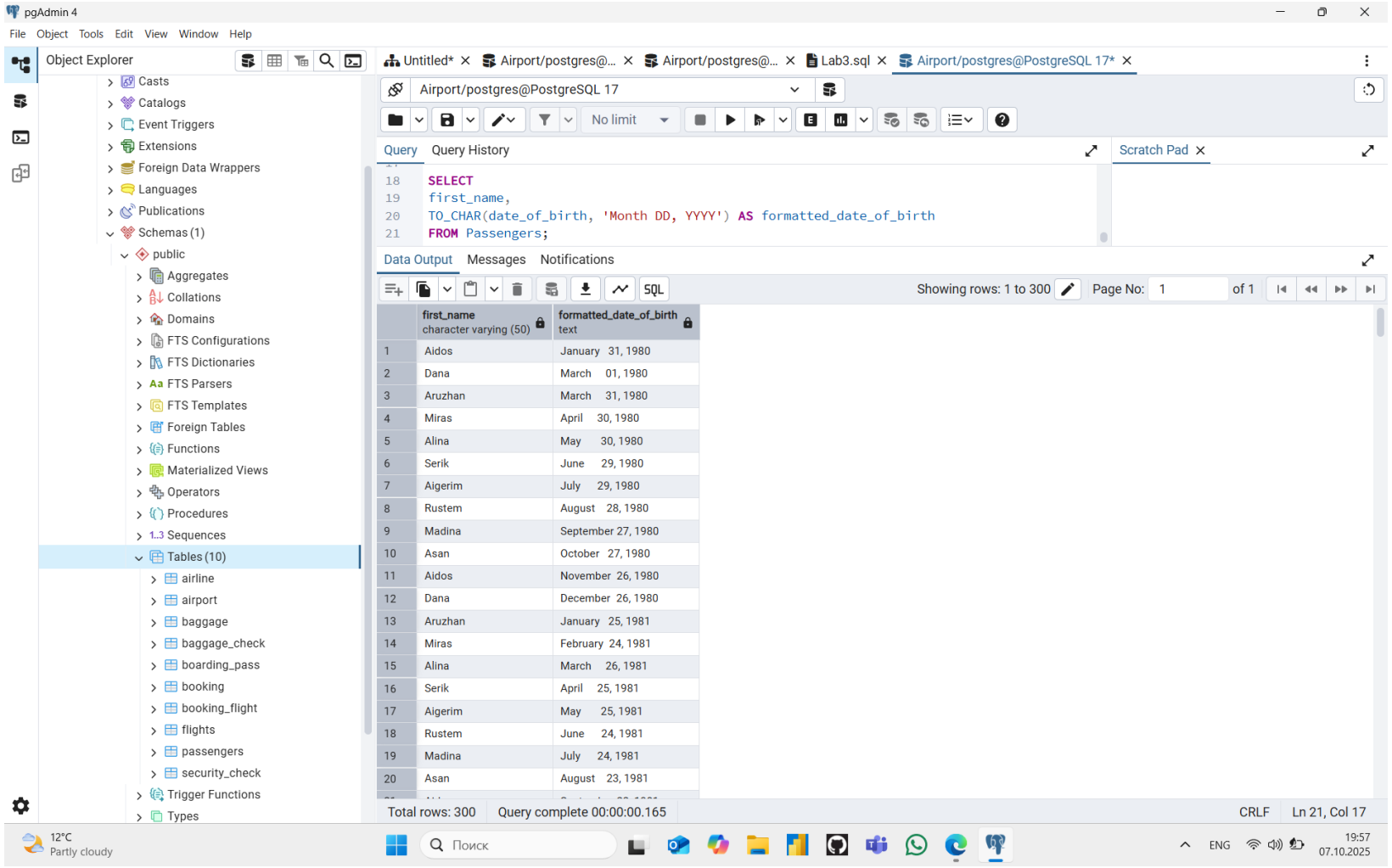
TASK #3


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
Servers (2)
PostgreSQL
PostgreSQL 17
Databases (2)
Airport
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas
Subscriptions
postgres
Login/Group Roles
Tablespaces
LAB 2 EX 45678.sql
LAB 2 EX 123.sql
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
SELECT flight_id
FROM Flights
WHERE airline_id IN (3,4)
GROUP BY flight_id
HAVING COUNT(DISTINCT airline_id) = 2;
Data Output
Messages
Notifications
SQL
flight_id
[PK] integer
Total rows: 0
Query complete 00:00:00.101
CRLF
Ln 9, Col 25
12°C
Partly cloudy
Поиск
ENG
19:44
07.10.2025

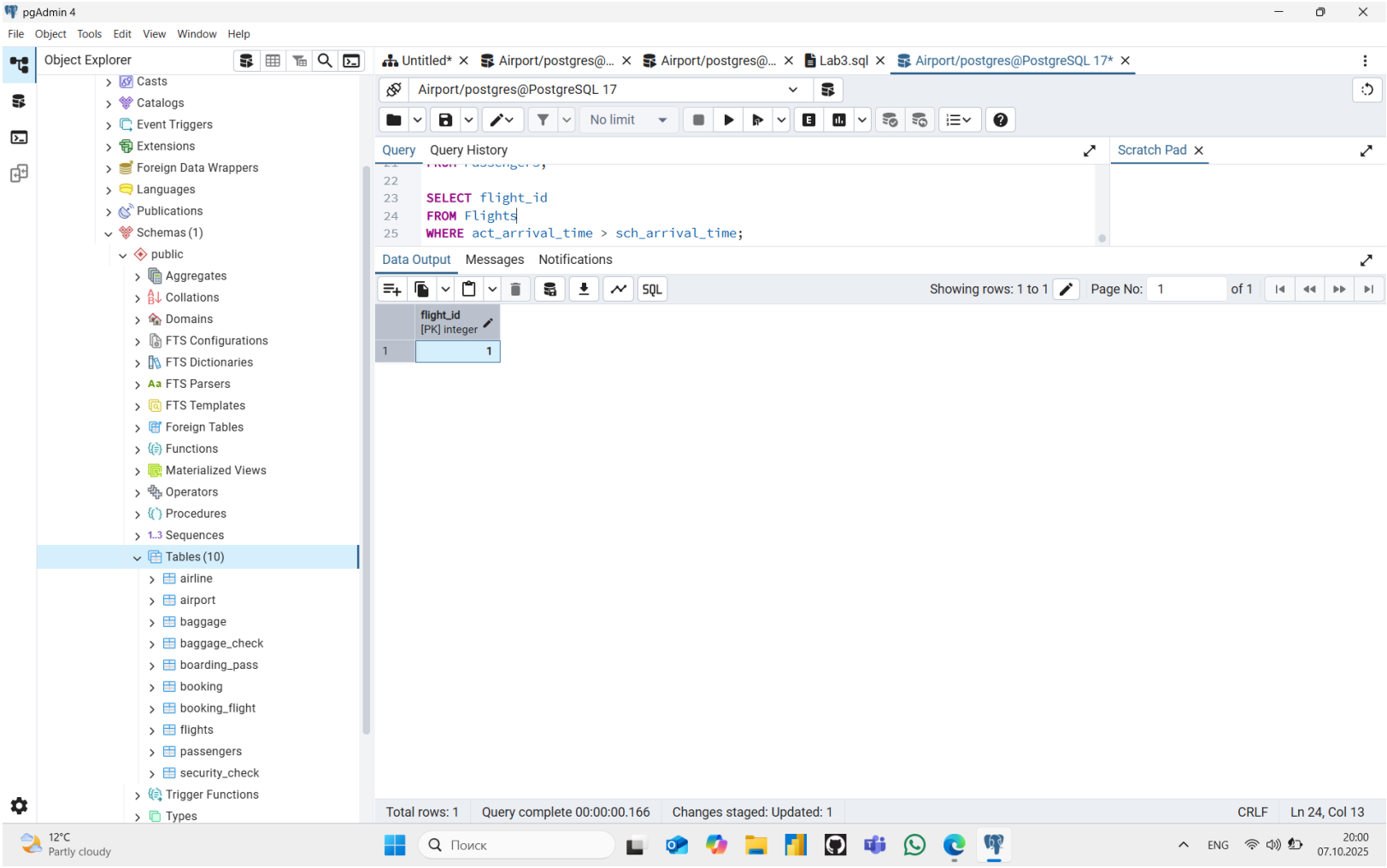
TASK #4


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
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
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Untitled*
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
SELECT airport_name
FROM Airport
WHERE airport_name ILIKE '%Regional%'
OR airport_name ILIKE '%Air%';
Data Output
Messages
Notifications
Showing rows: 1 to 300
Page No: 1 of 1
airport_name
character varying (50)
Airport_1
Airport_2
Airport_3
Airport_4
Airport_5
Airport_6
Airport_7
Airport_8
Airport_9
Airport_10
Airport_11
Airport_12
Airport_13
Airport_14
Airport_15
Airport_16
Airport_17
Airport_18
Airport_19
Airport_20
Total rows: 300
Query complete 00:00:00.113
CRLF
Ln 16, Col 3
12°C
Partly cloudy
Поиск
ENG
19:52
07.10.2025

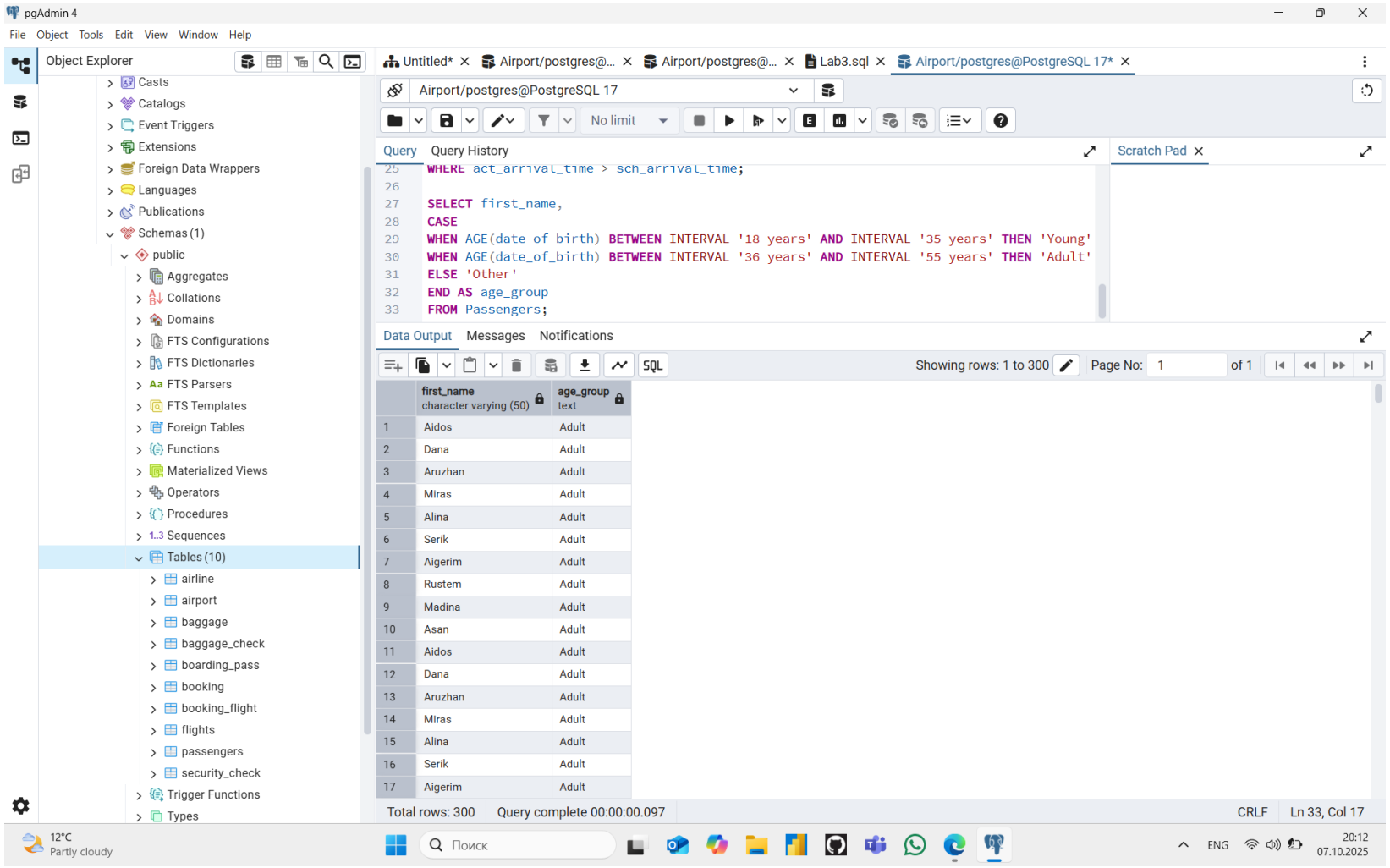
TASK #5


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
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
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Untitled*
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
18 SELECT
19 first_name,
20 TO_CHAR(date_of_birth, 'Month DD, YYYY') AS formatted_date_of_birth
21 FROM Passengers;
Data Output
Messages
Notifications
Showing rows: 1 to 300
Page No: 1 of 1
first_name character varying (50)
formatted_date_of_birth text
1 Aidos January 31, 1980
2 Dana March 01, 1980
3 Aruzhan March 31, 1980
4 Miras April 30, 1980
5 Alina May 30, 1980
6 Serik June 29, 1980
7 Aigerim July 29, 1980
8 Rustem August 28, 1980
9 Madina September 27, 1980
10 Asan October 27, 1980
11 Aidos November 26, 1980
12 Dana December 26, 1980
13 Aruzhan January 25, 1981
14 Miras February 24, 1981
15 Alina March 26, 1981
16 Serik April 25, 1981
17 Aigerim May 25, 1981
18 Rustem June 24, 1981
19 Madina July 24, 1981
20 Asan August 23, 1981
Total rows: 300
Query complete 00:00:00.165
CRLF
Ln 21, Col 17
12°C
Partly cloudy
Поиск
ENG
19:57
07.10.2025

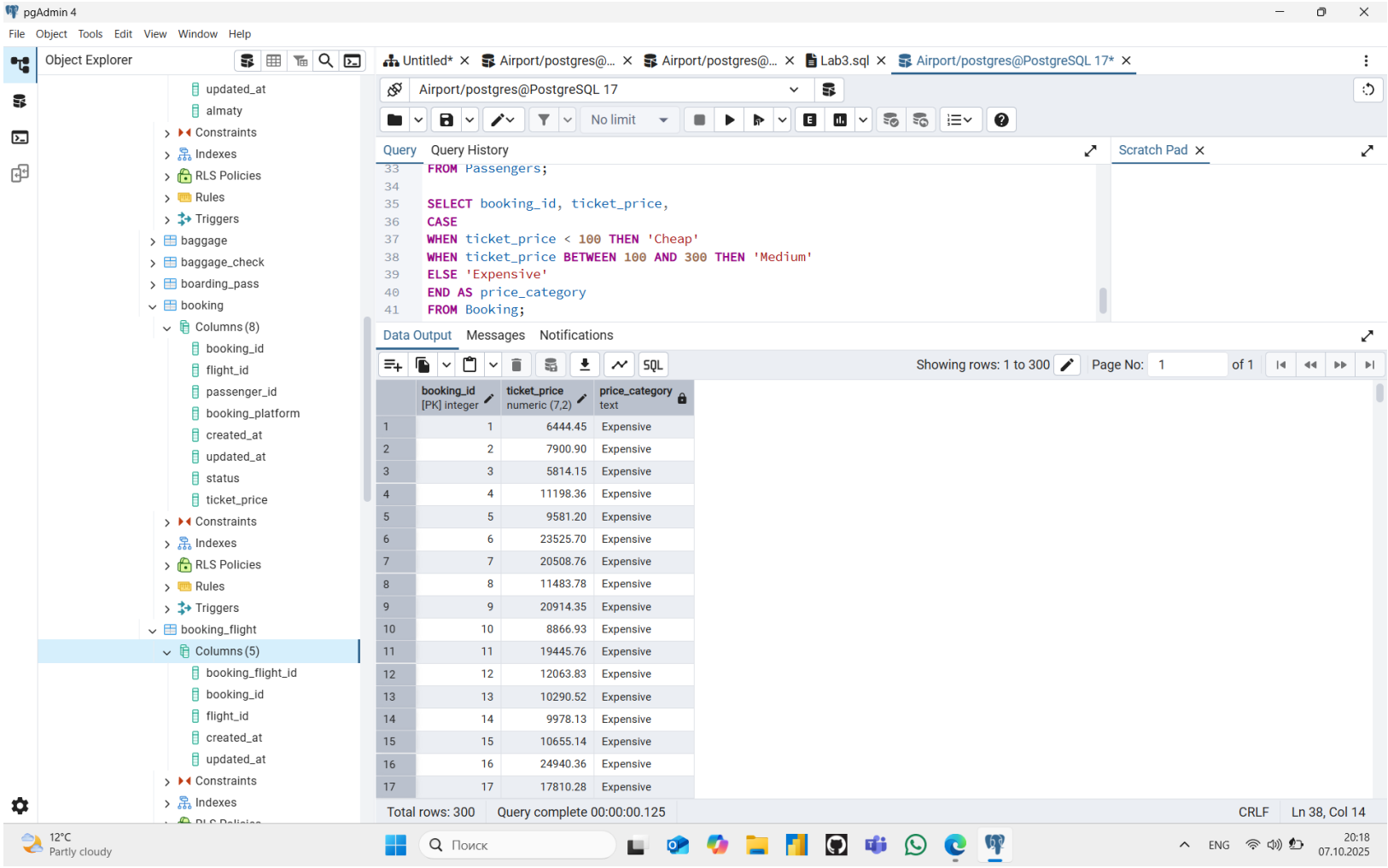
TASK #6


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
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
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Untitled*
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
22
23 SELECT flight_id
24 FROM Flights
25 WHERE act_arrival_time > sch_arrival_time;
Data Output
Messages
Notifications
Showing rows: 1 to 1
Page No: 1 of 1
flight_id
[PK] integer
1 1
Total rows: 1
Query complete 00:00:00.166
Changes staged: Updated: 1
CRLF
Ln 24, Col 13
12°C
Partly cloudy
Поиск
ENG
20:00
07.10.2025

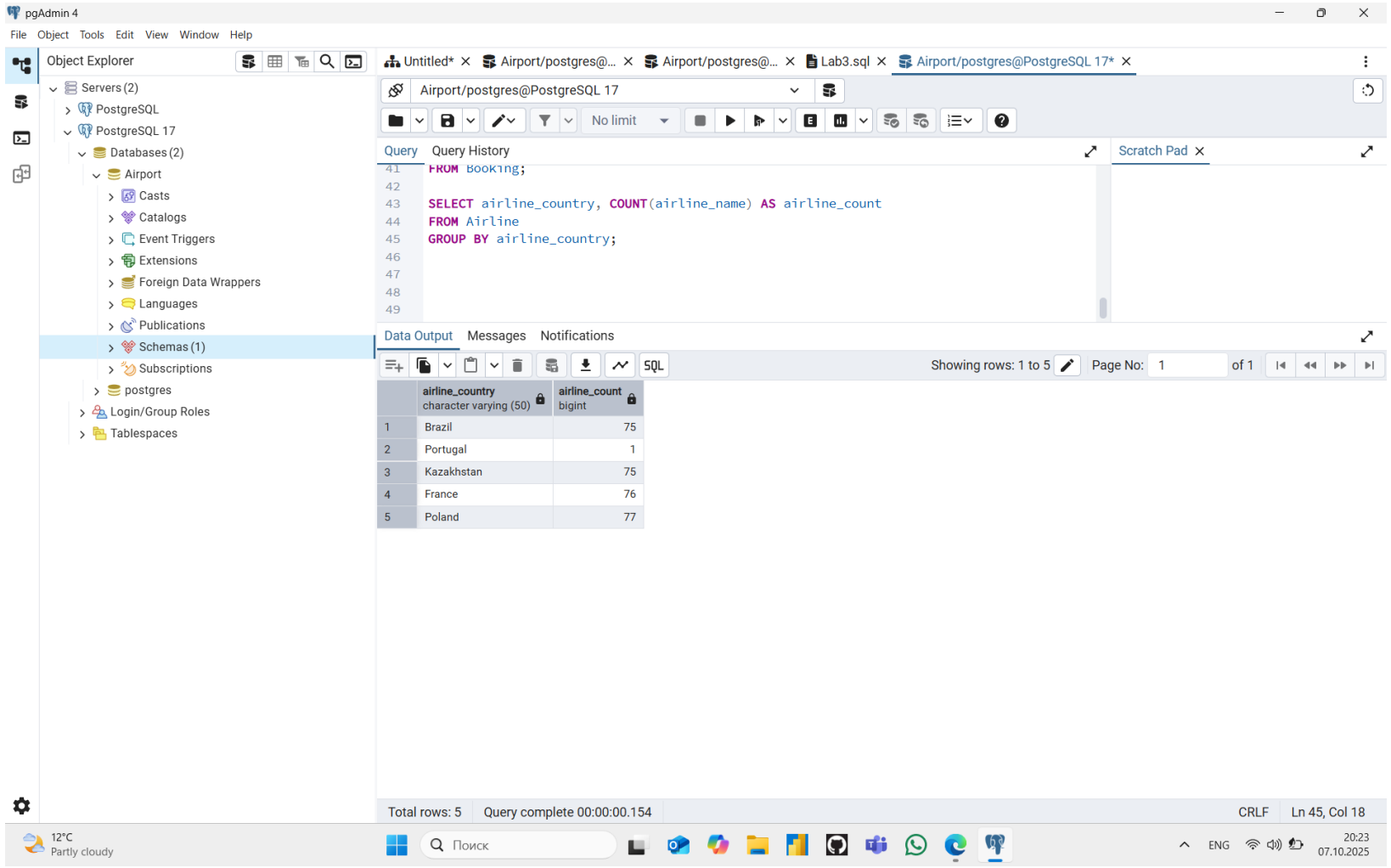
TASK #7


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
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
airport
baggage
baggage_check
boarding_pass
booking
booking_flight
flights
passengers
security_check
Trigger Functions
Types
Untitled*
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
WHERE act_arrival_time > sch_arrival_time;
SELECT first_name,
CASE
WHEN AGE(date_of_birth) BETWEEN INTERVAL '18 years' AND INTERVAL '35 years' THEN 'Young'
WHEN AGE(date_of_birth) BETWEEN INTERVAL '36 years' AND INTERVAL '55 years' THEN 'Adult'
ELSE 'Other'
END AS age_group
FROM Passengers;
Data Output
Messages
Notifications
Showing rows: 1 to 300
Page No: 1 of 1
first_name character varying (50)
age_group text
1 Aidos Adult
2 Dana Adult
3 Aruzhan Adult
4 Miras Adult
5 Alina Adult
6 Serik Adult
7 Aigerim Adult
8 Rustem Adult
9 Madina Adult
10 Asan Adult
11 Aidos Adult
12 Dana Adult
13 Aruzhan Adult
14 Miras Adult
15 Alina Adult
16 Serik Adult
17 Aigerim Adult
Total rows: 300
Query complete 00:00:00.097
CRLF
Ln 33, Col 17
12°C
Partly cloudy
Поиск
ENG
20:12
07.10.2025

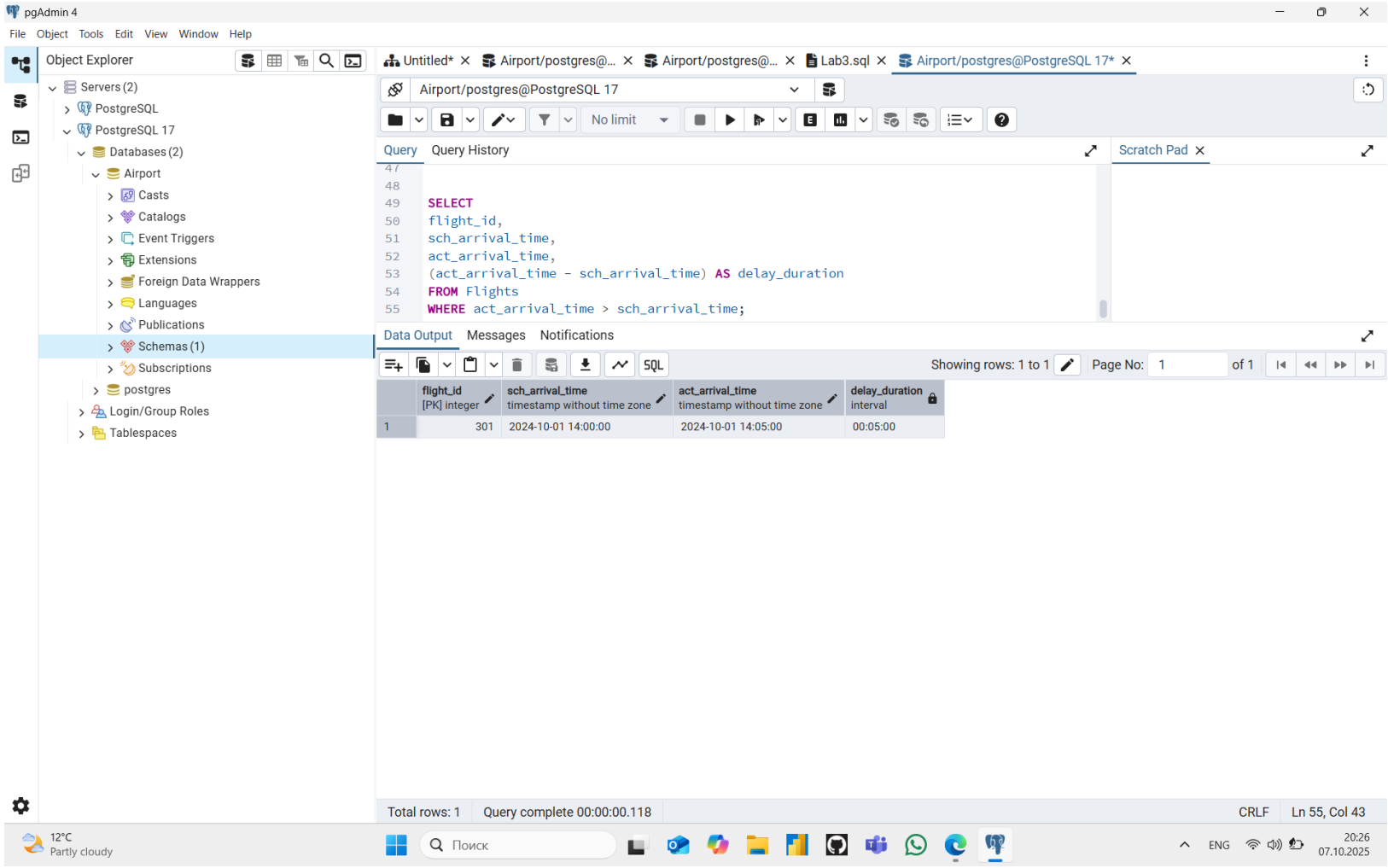
TASK #8


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
updated_at
almaty
Constraints
Indexes
RLS Policies
Rules
Triggers
baggage
baggage_check
boarding_pass
booking
Columns (8)
booking_id
flight_id
passenger_id
booking_platform
created_at
updated_at
status
ticket_price
Constraints
Indexes
RLS Policies
Rules
Triggers
booking_flight
Columns (5)
booking_flight_id
booking_id
flight_id
created_at
updated_at
Constraints
Indexes
Untitled*
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
FROM Passengers;
SELECT booking_id, ticket_price,
CASE
WHEN ticket_price < 100 THEN 'Cheap'
WHEN ticket_price BETWEEN 100 AND 300 THEN 'Medium'
ELSE 'Expensive'
END AS price_category
FROM Booking;
Data Output
Messages
Notifications
Showing rows: 1 to 300
Page No: 1 of 1
booking_id [PK] integer
ticket_price numeric (7,2)
price_category text
1 1 6444.45 Expensive
2 2 7900.90 Expensive
3 3 5814.15 Expensive
4 4 11198.36 Expensive
5 5 9581.20 Expensive
6 6 23525.70 Expensive
7 7 20508.76 Expensive
8 8 11483.78 Expensive
9 9 20914.35 Expensive
10 10 8866.93 Expensive
11 11 19445.76 Expensive
12 12 12063.83 Expensive
13 13 10290.52 Expensive
14 14 9978.13 Expensive
15 15 10655.14 Expensive
16 16 24940.36 Expensive
17 17 17810.28 Expensive
Total rows: 300
Query complete 00:00:00.125
CRLF
Ln 38, Col 14
12°C
Partly cloudy
Поиск
ENG
20:18
07.10.2025

TASK #9


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
Servers (2)
PostgreSQL
PostgreSQL 17
Databases (2)
Airport
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas (1)
Subscriptions
postgres
Login/Group Roles
Tablespaces
Untitled*
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
FROM Booking;
SELECT airline_country, COUNT(airline_name) AS airline_count
FROM Airline
GROUP BY airline_country;
Data Output
Messages
Notifications
SQL
Showing rows: 1 to 5
Page No: 1
of 1
airline_country character varying (50)
airline_count bigint
1 Brazil 75
2 Portugal 1
3 Kazakhstan 75
4 France 76
5 Poland 77
Total rows: 5
Query complete 00:00:00.154
CRLF
Ln 45, Col 18
12°C
Partly cloudy
Поиск
ENG
20:23
07.10.2025

TASK #10


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
Servers (2)
PostgreSQL
PostgreSQL 17
Databases (2)
Airport
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas (1)
Subscriptions
postgres
Login/Group Roles
Tablespaces
Untitled*
Airport/postgres@...
Airport/postgres@...
Lab3.sql
Airport/postgres@PostgreSQL 17*
Airport/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
47
48
49 SELECT
50 flight_id,
51 sch_arrival_time,
52 act_arrival_time,
53 (act_arrival_time - sch_arrival_time) AS delay_duration
54 FROM Flights
55 WHERE act_arrival_time > sch_arrival_time;
Data Output
Messages
Notifications
SQL
Showing rows: 1 to 1
Page No: 1
of 1
flight_id [PK] integer
sch_arrival_time timestamp without time zone
act_arrival_time timestamp without time zone
delay_duration interval
1
301
2024-10-01 14:00:00
2024-10-01 14:05:00
00:05:00
Total rows: 1
Query complete 00:00:00.118
CRLF
Ln 55, Col 43
12°C
Partly cloudy
Поиск
ENG
20:26
07.10.2025