

TASK #1

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Airport/postgres@PostgreSQL 17

Query History

```
1 CREATE VIEW v_flights AS
2   SELECT flight_id,
3         sch_departure_time,
4         sch_arrival_time,
5         departing_airport_id,
6         arriving_airport_id,
7         departing_gate,
8         arriving_gate,
9         airline_id,
10        act_departure_time,
11        act_arrival_time,
12        created_at,
13        updated_at,
14        flight_no
15   FROM flights
16 WHERE DATE(sch_departure_time) = '2024-12-03';
```

Scratch Pad

Data Output Messages Notifications

CREATE VIEW

Query returned successfully in 49 msec.

Total rows: Query complete 00:00:00.049

✓ Query returned successfully in 49 msec.

CRLF Ln 7, Col 16

6°C Partly cloudy

Поиск

19:26 16.11.2025

The screenshot shows the pgAdmin 4 interface. On the left is the Object Explorer pane, which lists various database objects like sequences, tables, and triggers. The 'Tables' section is expanded, showing 10 tables including 'airline', 'airport', 'baggage', etc., and their 13 columns. The main pane contains a query editor with the SQL code for creating a view named 'v_flights'. The code selects multiple columns from the 'flights' table where the scheduled departure time is '2024-12-03'. Below the query, the 'Data Output' tab shows the message 'CREATE VIEW' and 'Query returned successfully in 49 msec.'. A green status bar at the bottom right indicates the query was successful. The system tray at the bottom shows the weather as 6°C and partly cloudy, along with other icons.

TASK #2

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- > Procedures
- > 1.. Sequences
- < Tables(10)
 - > airline
 - > airport
 - > baggage
 - > baggage_check
 - > boarding_pass
 - < booking
 - Columns(9)
 - booking_id
 - flight_id
 - passenger_id
 - booking_platform
 - created_at
 - updated_at
 - status
 - ticket_price
 - ticket_discount
 - > Constraints
 - > Indexes
 - > RLS Policies
 - > Rules
 - > Triggers
 - > booking_flight
 - < flights
 - Trigger Functions
 - Types
 - Views
 - > passengers
 - > security_check
 - > Trigger Functions
 - > Types
 - > Views
 - > Subscriptions
 - > postgres
- > Login/Group Roles
- > Tablespaces

Airport/postgres@... Lab3.sql Lab-4.sql Lab6.sql Airport/postgres@... Lab-7.sql Airport/postgres@PostgreSQL 17*

Airport/postgres@PostgreSQL 17

No limit

Query History

```
18
19 CREATE VIEW v_next_week_bookings AS
20 SELECT b.booking_id
21 FROM booking b
22 JOIN flights f ON b.flight_id = f.flight_id
23 WHERE DATE(f.sch_departure_time) BETWEEN CURRENT_DATE AND CURRENT_DATE + INTERVAL '7 day'
```

Scratch Pad

Data Output Messages Notifications

CREATE VIEW

Query returned successfully in 82 msec.

Total rows: Query complete 00:00:00.082

6°C Partly cloudy

Пойск

CRLF Ln 21, Col 9

19:35 16.11.2025

TASK #3

The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** On the left, under the "Tables (10)" section, the "flights" table is currently selected.
- Query Editor:** The main window contains the following SQL code:

```
26 CREATE VIEW v_top5_routes AS
27   SELECT f.departing_airport_id,
28         f.arriving_airport_id,
29         COUNT(b.booking_id) AS bookings
30   FROM booking b
31   JOIN flights f ON b.flight_id = f.flight_id
32   GROUP BY f.departing_airport_id, f.arriving_airport_id
33   ORDER BY bookings DESC
34
35   LIMIT 5;
```
- Data Output:** Below the query editor, it shows the message: "CREATE VIEW". Underneath, it says "Query returned successfully in 58 msec."
- Status Bar:** At the bottom, it displays "Total rows: 0" and "Query complete 00:00:00.058".
- System Icons:** The bottom bar also includes icons for weather (6°C Partly cloudy), search, file, folder, and various system notifications.

TASK #4

The screenshot shows the pgAdmin 4 interface for PostgreSQL 17. The left sidebar is the Object Explorer, displaying the database structure. The main area has a tab bar with multiple tabs, the active one being 'Airport/postgres@PostgreSQL 17'. Below the tabs is a toolbar with various icons. The central part contains a 'Query' tab with a code editor and a 'Messages' tab below it. The code editor shows the following SQL query:

```
CREATE VIEW v_airline AS
SELECT f.flight_id,
       a.airline_name
  FROM flights f
 JOIN airline a ON f.airline_id = a.airline_id
 WHERE a.airline_name = 'KAZ';
```

The 'Messages' tab displays the message: "Query returned successfully in 52 msec." At the bottom, status bars show "Total rows: 0" and "Query complete 00:00:00.052". The bottom right corner shows system status icons and the date/time: "19:46 16.11.2025".

TASK #5

The screenshot shows the pgAdmin 4 interface with the following details:

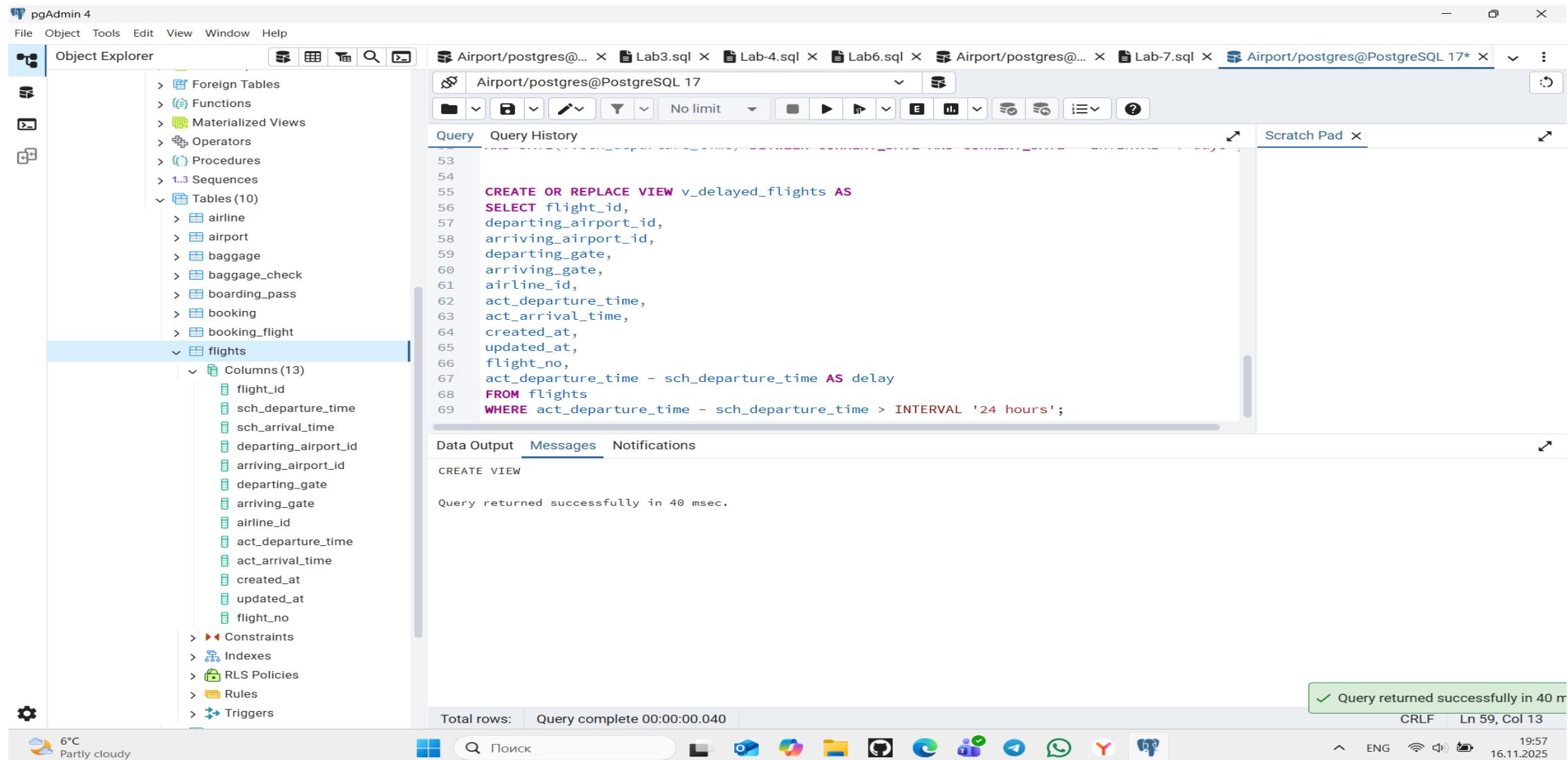
- Object Explorer:** Shows the database structure. Under the "public" schema, there are 10 tables, one of which is "airline". The "Columns(6)" section for the "airline" table is currently selected, displaying columns: airline_id, airline_code, airline_name, airline_country, created_at, and updated_at.
- Query Editor:** Contains the SQL code for creating a view:

```
45 CREATE OR REPLACE VIEW v_airline AS
46   SELECT f.flight_id,
47     a.airline_name
48   FROM flights f
49   JOIN airline a ON f.airline_id = a.airline_id
50   WHERE a.airline_name = 'KAZ'
51   AND DATE(f.sch_departure_time) BETWEEN CURRENT_DATE AND CURRENT_DATE + INTERVAL '7 days'
```
- Data Output:** Displays the result of the query creation:

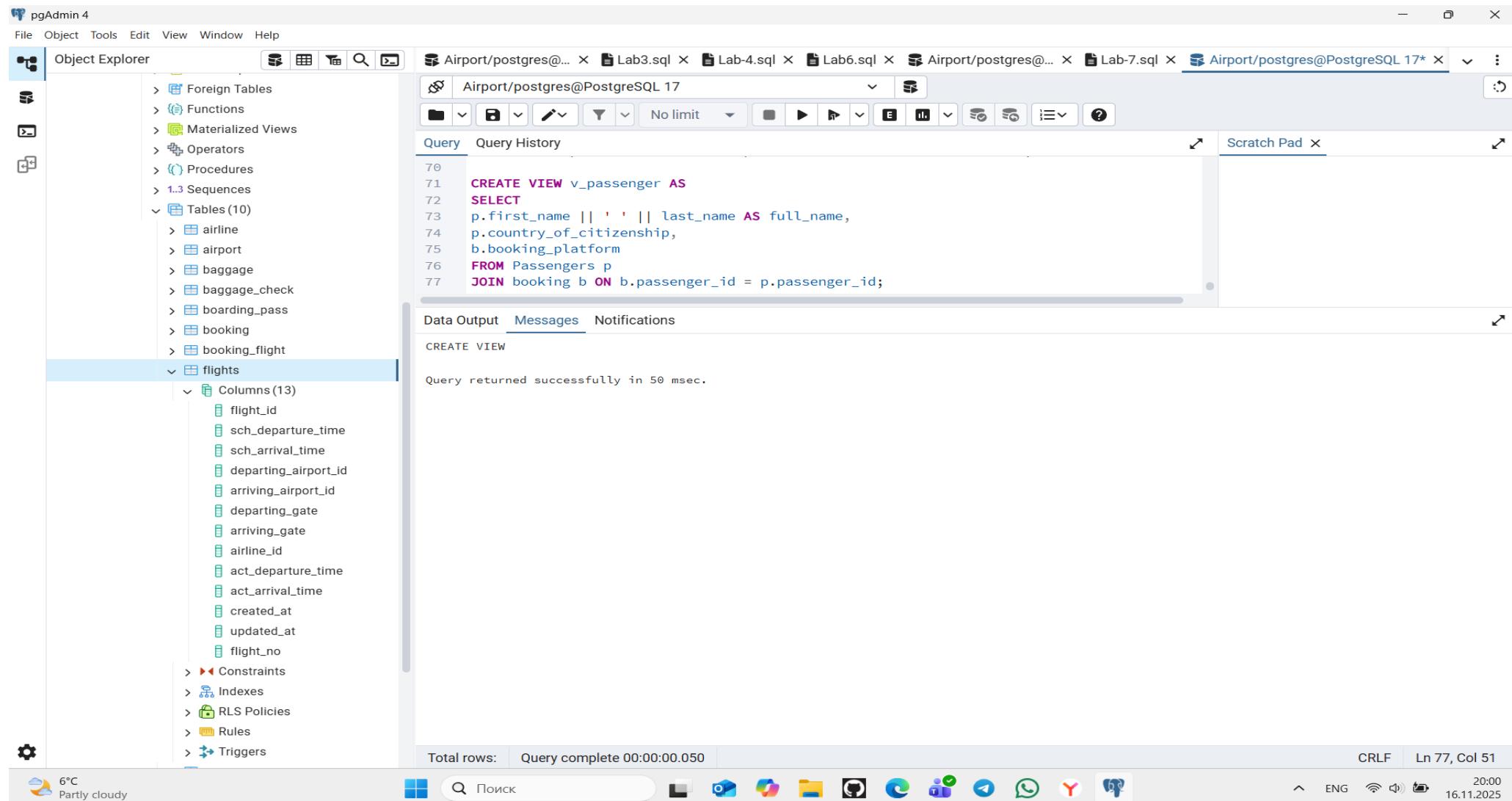
CREATE VIEW

Query returned successfully in 46 msec.
- Status Bar:** Shows "Query returned successfully in 46 msec." and "CRLF Ln 49, Col 15".
- System Tray:** Shows the weather as "6°C Partly cloudy".
- Taskbar:** Shows various application icons and the date/time "16.11.2025 19:50".

TASK #6



TASK #7



TASK #8

The screenshot shows the pgAdmin 4 interface with the following details:

- Title Bar:** pgAdmin 4
- File Menu:** File, Object, Tools, Edit, View, Window, Help
- Object Explorer:** Shows the database schema with the following structure:
 - Foreign Tables
 - Functions
 - Materialized Views
 - Operators
 - Procedures
 - Sequences
 - Tables (10)
 - airline
 - airport
 - baggage
 - baggage_check
 - boarding_pass
 - booking
 - booking_flight
 - flights
 - Columns (13)
 - flight_id
 - sch_departure_time
 - sch_arrival_time
 - departing_airport_id
 - arriving_airport_id
 - departing_gate
 - arriving_gate
 - airline_id
 - act_departure_time
 - act_arrival_time
 - created_at
 - updated_at
 - flight_no
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers
- Query Editor:** Contains the following SQL code:

```
78
79
80 CREATE VIEW v_top_10_visited_country AS
81 SELECT
82     a.country,
83     COUNT(b.booking_id) AS number_of_visits
84     FROM flights f
85     JOIN booking b ON b.flight_id = f.flight_id
86     JOIN airport a ON f.arriving_airport_id = a.airport_id
87     GROUP BY a.country
88     ORDER BY number_of_visits DESC
89     LIMIT 10;
```
- Data Output:** Shows the result of the query: "CREATE VIEW".

Query returned successfully in 45 msec.
- Status Bar:** Total rows: 0, Query complete 00:00:00.045, CRLF, Ln 85, Col 41, 5°C Mostly cloudy, 20:05, 16.11.2025

TASK #9

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (10)
 - airline
 - airport
 - baggage
 - baggage_check
 - boarding_pass
 - booking
 - booking_flight
 - flights
 - Columns (13)
 - flight_id
 - sch_departure_time
 - sch_arrival_time
 - departing_airport_id
 - arriving_airport_id
 - departing_gate
 - arriving_gate
 - airline_id
 - act_departure_time
 - act_arrival_time
 - created_at
 - updated_at
 - flight_no
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers

Airport/postgres@PostgreSQL 17

Query History

```
90
91
92
93
94 SELECT * FROM v_passenger;
```

Scratch Pad

Data Output Messages Notifications

SQL

full_name	country_of_citizenship	booking_platform
Aidos Nurgaliyev	Country_1	MobileApp
Dana Sadykova	Country_2	Agent
Aruzhan Iskakov	Country_3	Web
Miras Tulegenova	Country_4	MobileApp
Alina Abayuly	Country_5	Agent
Serik Saparova	Country_6	Web
Aigerim Omarova	Country_7	MobileApp
Rustem Yesenov	Country_8	Agent
Madina Zhakanova	Country_9	Web
Asan Sembayev	Country_0	MobileApp
Aidos Nurgaliyev	Country_1	Agent
Dana Sadykova	Country_2	Web
Aruzhan Iskakov	Country_3	MobileApp
Miras Tulegenova	Country_4	Agent
Alina Abayuly	Country_5	Web
Serik Saparova	Country_6	MobileApp
Aigerim Omarova	Country_7	Agent
Rustem Yesenov	Country_8	Web
Madina Zhakanova	Country_9	MobileApp

Total rows: 300 Query complete 00:00:220

CRLF Ln 94, Col 27

5°C Mostly cloudy

Q Поиск

2008 16.11.2025

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- 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
 - Columns (11)
 - passenger_id
 - first_name
 - last_name
 - date_of_birth
 - gender
 - country_of_citizenship
 - country_of_residence
 - passport_number
 - created_at
 - updated_at
 - email
 - passengers
- Constraints

Airport/postgres@PostgreSQL 17

Query History

```
98 LIMIT 10;
99
100
101
102
103 SELECT * FROM v_passenger;
```

Scratch Pad

Data Output Messages Notifications

SQL

full_name	country_of_citizenship	passport_number	booking_platform
Aidos Nurgaliyev	Country_1	P1	MobileApp
Dana Sadykova	Country_2	P2	Agent
Aruzhan Iskakov	Country_3	P3	Web
Miras Tulegenova	Country_4	P4	MobileApp
Alina Abayuly	Country_5	P5	Agent
Serik Saparova	Country_6	P6	Web
Aigerim Omarova	Country_7	P7	MobileApp
Rustem Yesenov	Country_8	P8	Agent
Madina Zhakanova	Country_9	P9	Web
Asan Sembayev	Country_0	P10	MobileApp
Aidos Nurgaliyev	Country_1	P11	Agent
Dana Sadykova	Country_2	P12	Web
Aruzhan Iskakov	Country_3	P13	MobileApp
Miras Tulegenova	Country_4	P14	Agent
Alina Abayuly	Country_5	P15	Web
Serik Saparova	Country_6	P16	MobileApp
Aigerim Omarova	Country_7	P17	Agent
Rustem Yesenov	Country_8	P18	Web
Madina Zhakanova	Country_9	P19	MobileApp
Asan Sembayev	Country_0	P20	Agent

Total rows: 300 Query complete 00:00:14.7

CRLF Ln 92, Col 1

5°C Partly cloudy

Q Поиск

2036 16.11.2025

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)

- > public
 - > Aggregates
 - > Collations
 - > Domains
 - > FTS Configurations
 - > FTS Dictionaries
 - > FTS Parsers
 - > FTS Templates
 - > Foreign Tables
 - > Functions
 - > Materialized Views
 - > Operators
 - > Procedures
 - > Sequences
 - > Tables (10)
 - > Trigger Functions
 - > Types
 - > Views
 - > Subscriptions
- > postgres
- > Login/Group Roles
- > Tablespaces

Airport/postgres@PostgreSQL 17

No limit

Query History

```
91
92
93 SELECT * FROM v_passenger;
94
95
96 DROP VIEW IF EXISTS v_flights;
97 DROP VIEW IF EXISTS v_next_week_bookings;
98 DROP VIEW IF EXISTS v_top5_routes;
99 DROP VIEW IF EXISTS v_airline;
100 DROP VIEW IF EXISTS v_delayed_flights;
101 DROP VIEW IF EXISTS v_passenger;
102 DROP VIEW IF EXISTS v_top_10_visited_country;
```

Scratch Pad

Data Output Messages Notifications

DROP VIEW

Query returned successfully in 49 msec.

Total rows: Query complete 00:00:00.049 CRLF Ln 102, Col 30

5°C Partly cloudy

Поиск

20:40 16.11.2025