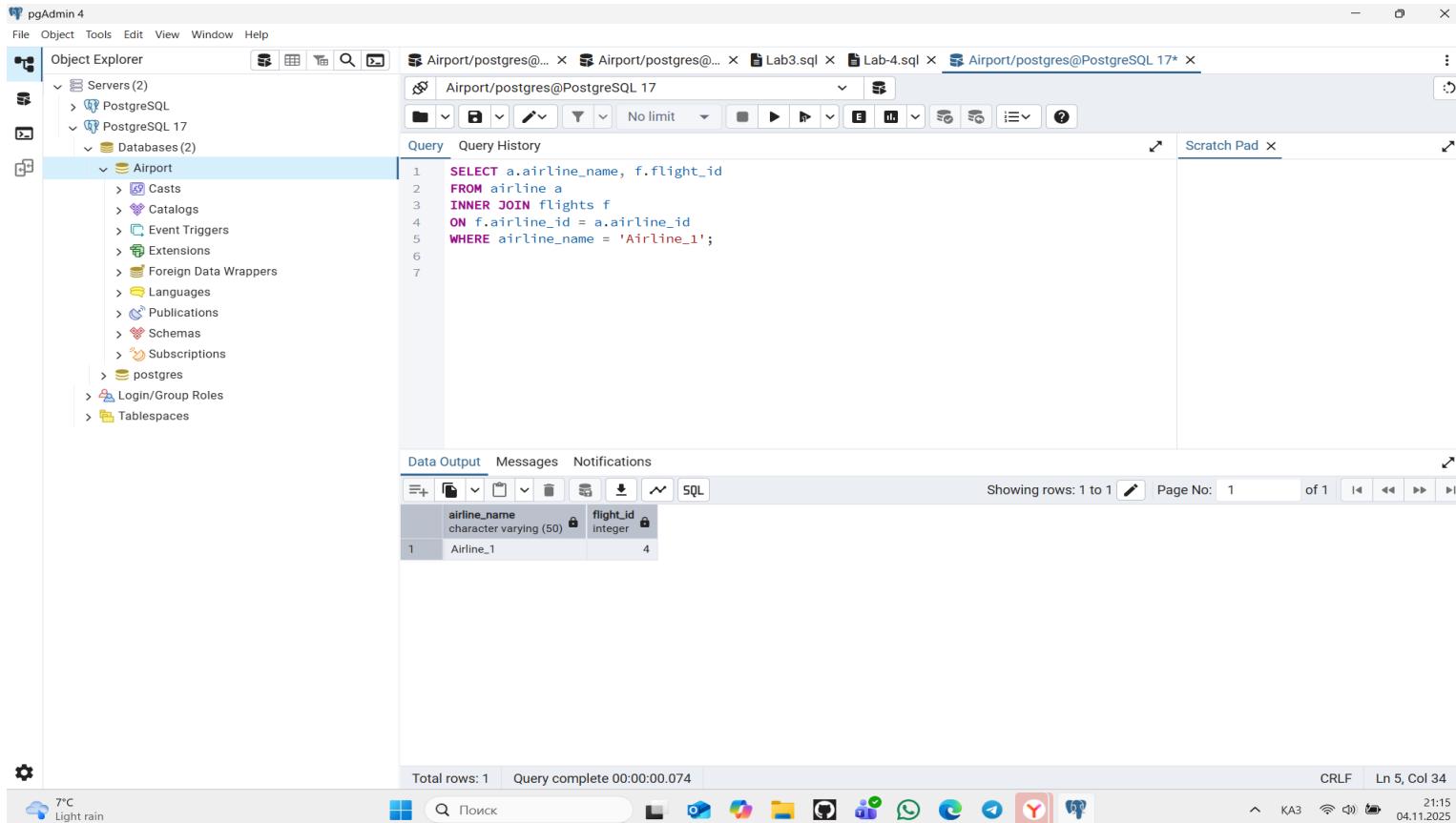


Lab-6

TASK #1



The screenshot shows the pgAdmin 4 interface. The left sidebar is the Object Explorer, displaying the database structure under the 'Airport' database. The main area is a query editor window titled 'Airport/postgres@PostgreSQL 17'. It contains the following SQL query:

```
1 SELECT a.airline_name, f.flight_id
2 FROM airline a
3 INNER JOIN flights f
4 ON f.fairline_id = a.airline_id
5 WHERE airline_name = 'Airline_1';
```

The results pane at the bottom shows one row of data:

	airline_name	flight_id
1	Airline_1	4

At the bottom of the pgAdmin window, there is a status bar with the following information: Total rows: 1, Query complete 00:00:00.074, CRLF, Ln 5, Col 34. Below the pgAdmin window, the Windows taskbar is visible, showing the date (04.11.2025), time (21:15), and system icons.

TASK #2

The screenshot shows the pgAdmin 4 interface. The left sidebar is the Object Explorer, displaying a tree structure of servers, databases, and objects. The current node selected is 'Airport' under 'Databases (2)'. The main pane shows a query editor with a SQL query and its results.

```
8 SELECT a.airport_name AS departing_airport_name, f.flight_id
9 FROM airport a
10 INNER JOIN
11 flights f
12 ON f.departing_airport_id = a.airport_id
```

The results table has two columns: 'departing_airport_name' and 'flight_id'. The data shows 301 rows, all originating from the 'AlmatyKzhKZ' airport, with flight IDs ranging from 1 to 20.

departing_airport_name	flight_id
AlmatyKzhKZ	1
AlmatyKzhKZ	2
AlmatyKzhKZ	3
AlmatyKzhKZ	4
AlmatyKzhKZ	5
AlmatyKzhKZ	6
AlmatyKzhKZ	7
AlmatyKzhKZ	8
Airport_10	9
Airport_11	10
Airport_12	11
Airport_13	12
Airport_14	13
Airport_15	14
Airport_16	15
Airport_17	16
Airport_18	17
Airport_19	18
Airport_20	19
Airport_21	20

Total rows: 301 Query complete 00:00:00.089

7°C Light rain

Пойск

21:19 04.11.2025

TASK #3

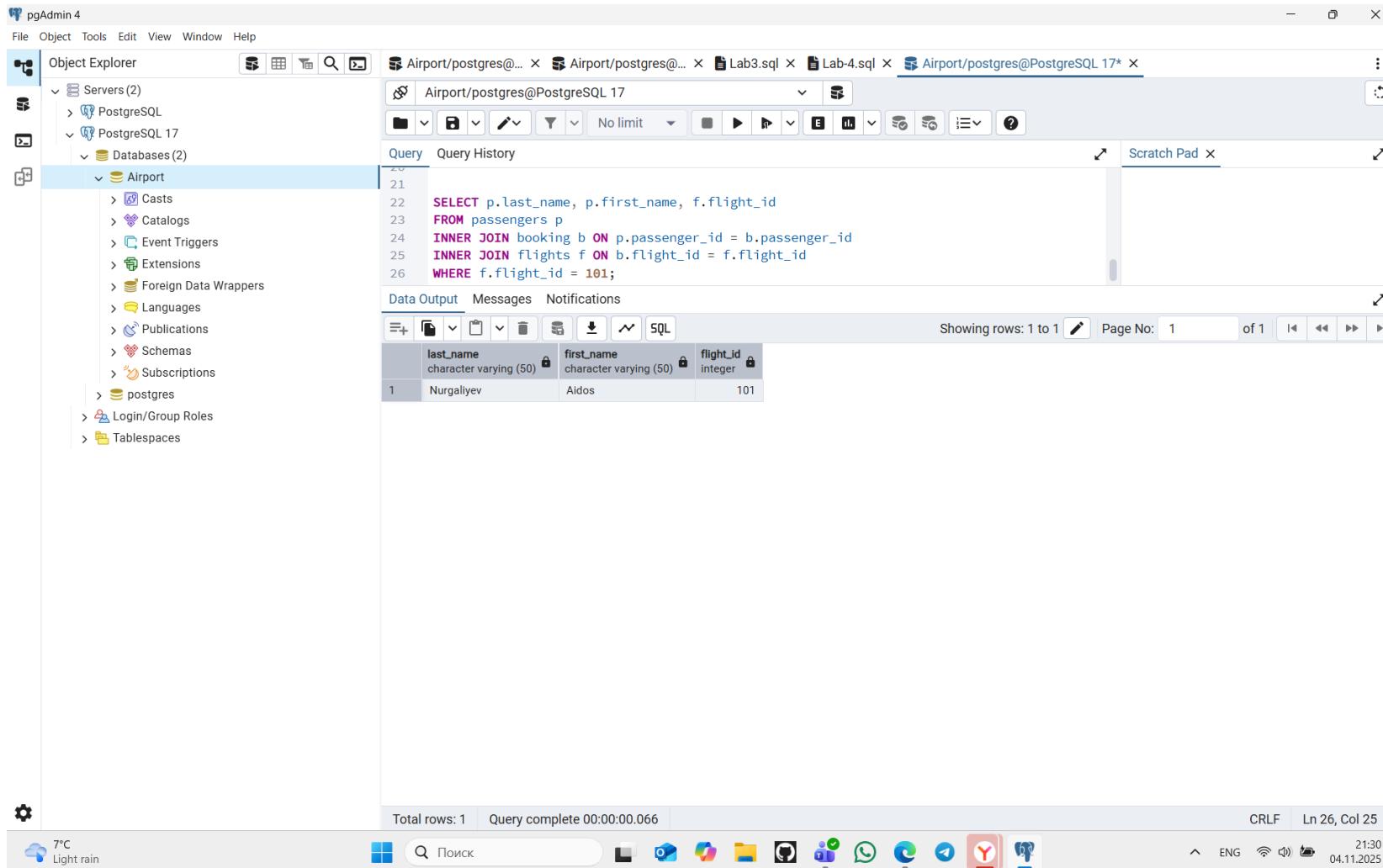
The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows a tree structure of databases. The **Airport** database is selected.
- Query Tab:** Contains the following SQL query:

```
13
14 SELECT a.airline_name
15   FROM airline a
16  LEFT JOIN flights f
17    ON f.airline_id = a.airline_id
18   AND f.sch_departure_time BETWEEN '2025-11-01' AND '2025-11-30'
19  WHERE f.flight_id IS NULL;
```
- Data Output Tab:** Displays the results of the query, showing 304 rows. The first few rows are:

	airline_name
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
11	Airline_7
12	Airline_8
13	Airline_9
14	Airline_10
15	Airline_11
16	Airline_12
17	Airline_13
18	Airline_14
- Bottom Status Bar:** Shows "Total rows: 304" and "Query complete 00:00:00.147".
- System Tray:** Shows weather (7°C, Light rain), search bar, taskbar icons (File Explorer, Edge, etc.), and system status (21:24, ENG, battery level, date/time).

TASK #4



TASK #5

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 Tablespace

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

Query History Scratch Pad

Query

```
27
28   SELECT f.flight_id,
29     AVG(b.ticket_price),
30     SUM(b.ticket_price),
31     MAX(b.ticket_price),
32     MIN(b.ticket_price)
33   FROM booking b
34   INNER JOIN flights f ON b.flight_id = f.flight_id
35   GROUP BY f.flight_id;
```

Data Output Messages Notifications

Showing rows: 1 to 300 Page No: 1 of 1

flight_id [PK] integer	avg numeric	sum numeric	max numeric	min numeric
1	184	14164.7700000000000000	14164.77	14164.77
2	116	19501.0700000000000000	19501.07	19501.07
3	87	14738.7600000000000000	14738.76	14738.76
4	273	14804.6000000000000000	14804.60	14804.60
5	51	16722.5000000000000000	16722.50	16722.50
6	272	17824.5800000000000000	17824.58	17824.58
7	70	24312.8700000000000000	24312.87	24312.87
8	190	6982.9500000000000000	6982.95	6982.95
9	278	20677.2900000000000000	20677.29	20677.29
10	299	19853.1700000000000000	19853.17	19853.17
11	176	18380.4200000000000000	18380.42	18380.42
12	169	5550.1100000000000000	5550.11	5550.11
13	92	7169.9200000000000000	7169.92	7169.92
14	180	20394.6900000000000000	20394.69	20394.69
15	292	20621.8400000000000000	20621.84	20621.84
16	236	12071.2000000000000000	12071.20	12071.20
17	271	18079.9000000000000000	18079.90	18079.90

Total rows: 300 Query complete 00:00:00.104 CRLF Ln 35, Col 22

7°C Light rain

Поиск

21:36 04.11.2025

TASK #6

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Servers (2)
PostgreSQL
PostgreSQL 17

Databases (2)
Airport
postgres

Airport (2)
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Publications
Schemas
Subscriptions

country character varying (50) flight_id integer airline_name character varying (50)

Total rows: 0 Query complete 00:00:00.094 CRLF Ln 41, Col 28

7°C Light rain

Помощь

Scratch Pad

Query History

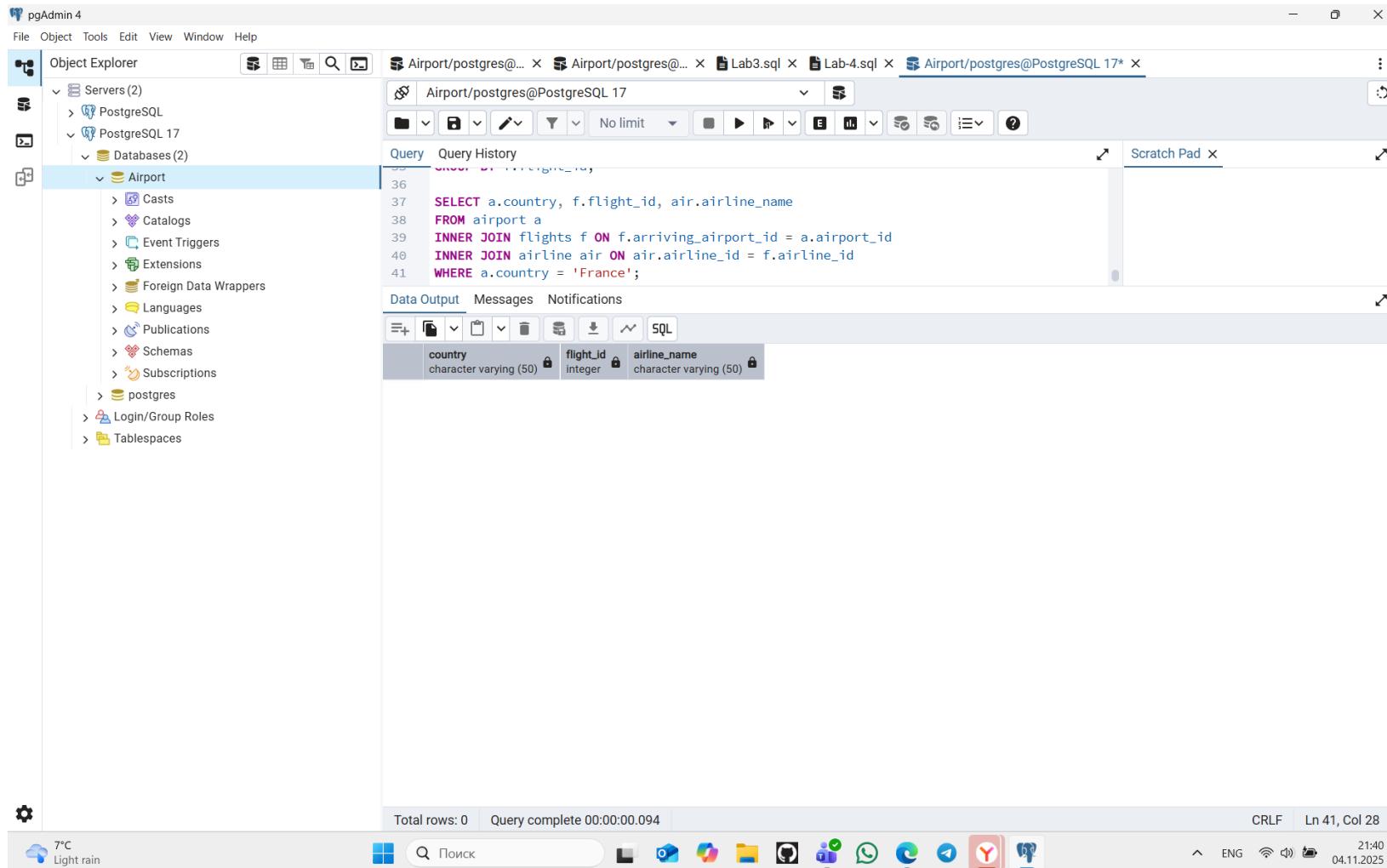
36
37
38
39
40
41

```
SELECT a.country, f.flight_id, air.airline_name
FROM airport a
INNER JOIN flights f ON f.arriving_airport_id = a.airport_id
INNER JOIN airline air ON air.airline_id = f.airline_id
WHERE a.country = 'France';
```

Data Output Messages Notifications

SQL

21:40 04.11.2025



TASK #7

The screenshot shows the pgAdmin 4 interface. The left sidebar is the Object Explorer, displaying the database structure under 'PostgreSQL 17' and 'Airport'. The main area is the Query Editor, which contains the following SQL code:

```
42
43 SELECT
44     a.country AS arrival_destination,
45     p.last_name,
46     p.first_name,
47     EXTRACT(YEAR FROM AGE(CURRENT_DATE, p.date_of_birth)) AS age
48 FROM passengers p
49 INNER JOIN booking b ON p.passenger_id = b.passenger_id
50 INNER JOIN flights f ON f.flight_id = b.flight_id
51 INNER JOIN airport a ON f.arriving_airport_id = a.airport_id
52 WHERE EXTRACT(YEAR FROM AGE(CURRENT_DATE, p.date_of_birth)) < 18;
```

The Data Output tab shows the schema for the results:

arrival_destination	last_name	first_name	age
character varying (50)	character varying (50)	character varying (50)	numeric

At the bottom, the status bar shows: Total rows: 0 | Query complete 00:00:00.081 | CRLF | Ln 52, Col 66. The system tray indicates it's 7°C and Light rain.

TASK #8

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 Tablespace

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

Query Query History

```
53
54     SELECT
55         p.last_name || ' ' || p.last_name AS full_name,
56         p.passport_number,
57         f.act_arrival_time
58     FROM passengers p
59     INNER JOIN booking b ON p.passenger_id = b.passenger_id
60     INNER JOIN flights f ON f.flight_id = b.flight_id;
```

Data Output Messages Notifications

Showing rows: 1 to 300 Page No: 1 of 1

full_name	passport_number	act_arrival_time
Nurgaliyev Nurgaliyev	P1	2025-09-28 13:06:57.024355
Sadykova Sadykova	P2	2025-09-28 14:06:57.024355
Iskakov Iskakov	P3	2025-09-28 15:06:57.024355
Tulegenova Tulegenova	P4	2025-09-28 16:06:57.024355
Abayuly Abayuly	P5	2025-09-28 17:06:57.024355
Saparova Saparova	P6	2025-09-28 18:06:57.024355
Omarova Omarova	P7	2025-09-28 19:06:57.024355
Yesenov Yesenov	P8	2025-09-28 20:06:57.024355
Zhakanova Zhakanova	P9	2025-09-28 21:06:57.024355
Sembayev Sembayev	P10	2025-09-28 22:06:57.024355
Nurgaliyev Nurgaliyev	P11	2025-09-28 23:06:57.024355
Sadykova Sadykova	P12	2025-09-29 00:06:57.024355
Iskakov Iskakov	P13	2025-09-29 01:06:57.024355
Tulegenova Tulegenova	P14	2025-09-29 02:06:57.024355
Abayuly Abayuly	P15	2025-09-29 03:06:57.024355
Saparova Saparova	P16	2025-09-29 04:06:57.024355
Omarova Omarova	P17	2025-09-29 05:06:57.024355
Yesenov Yesenov	P18	2025-09-29 06:06:57.024355

Total rows: 300 Query complete 00:00:00.085 CRLF Ln 60, Col 51

7°C Cloudy Пойск 22:00 ENG 04.11.2025

TASK #9

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer pane displays a tree structure of databases, servers, and other PostgreSQL objects. The 'Airport' database is selected. In the center, the main window contains a SQL editor tab with the following query:

```
64 SELECT
65   a.country,
66   COUNT(f.flight_id) AS number_of_flights
67   FROM flights f
68   INNER JOIN airline air ON f.airline_id = air.airline_id
69   INNER JOIN airport a ON f.departing_airport_id = a.airport_id
70   WHERE air.airline_country = a.country
71   GROUP BY a.country;
```

The Data Output tab below the query shows the schema of the result:

country	number_of_flights
character varying (50)	bigint

At the bottom of the pgAdmin window, there is a system tray with icons for weather (7°C Cloudy), search, file operations, and communication (WhatsApp, Telegram, etc.). The status bar at the bottom right shows the date (04.11.2025), time (22:11), and keyboard layout (ENG).