

LAB-5

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TASK #1

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' are listed, with 'Airport' selected. The 'Airport' database contains several objects: Casts, Catalogs, Event Triggers, Extensions, Foreign Data Wrappers, Languages, Publications, Schemas, Subscriptions, postgres, Login/Group Roles, and Tablespaces.

The main pane shows the 'Query' editor for the 'Airport/postgres@PostgreSQL 17' connection. The query being executed is:

```
5  
6 ALTER TABLE Passengers  
7 ADD CONSTRAINT check_passenger_age  
8 CHECK(  
9 EXTRACT (YEAR FROM AGE(CURRENT_DATE, date_of_birth)) >= 10  
10 );  
11  
12
```

Below the query editor, the 'Messages' tab shows the execution result:

```
ALTER TABLE  
  
Query returned successfully in 185 msec.
```

The status bar at the bottom indicates 'Total rows: Query complete 00:00:00.185', 'CRLF', and 'Ln 12, Col 1'. The Windows taskbar at the very bottom shows the system clock as 14:23 on 12.10.2025, along with various application icons and network status.

TASK#2

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' are listed, with 'Airport' selected. The 'Airport' database contains several objects: Casts, Catalogs, Event Triggers, Extensions, Foreign Data Wrappers, Languages, Publications, Schemas, Subscriptions, postgres, Login/Group Roles, and Tablespaces.

The main pane shows the 'Query' editor for the 'Airport/postgres@PostgreSQL 17' connection. The query text is as follows:

```
12 SELECT * FROM booking;  
13  
14 ALTER TABLE booking  
15 ADD CONSTRAINT check_booking_price  
16 CHECK (ticket_price >= 0 AND ticket_price <= 50000);  
17
```

Below the query editor, the 'Messages' tab is active, showing the execution result: 'ALTER TABLE' and 'Query returned successfully in 58 msec.'.

The bottom status bar indicates 'Total rows: Query complete 00:00:00.058' and 'CRLF Ln 17, Col 1'. The Windows taskbar at the bottom shows the time as 14:35 on 12.10.2025.

TASK #3

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' are listed, with 'Airport' selected. The 'Query' pane on the right shows a SQL script being executed on the 'Airport/postgres@PostgreSQL 17' connection. The script consists of three lines: `ALTER TABLE Baggage`, `ADD CONSTRAINT check_baggage_weight`, and `CHECK (weight_in_kg BETWEEN 1 AND 23);`. Below the script, the 'Messages' tab shows the output: 'ALTER TABLE' followed by 'Query returned successfully in 110 msec.'. The status bar at the bottom indicates 'Total rows: Query complete 00:00:00.110' and 'Ln 25, Col 18'. The Windows taskbar at the very bottom shows the system clock as 14:41 on 12.10.2025.

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

Airport/postgres@PostgreSQL 17

Query Query History

```
22
23 ALTER TABLE Baggage
24 ADD CONSTRAINT check_baggage_weight
25 CHECK (weight_in_kg BETWEEN 1 AND 23);
26
```

Data Output Messages Notifications

ALTER TABLE

Query returned successfully in 110 msec.

Total rows: Query complete 00:00:00.110 CRLF Ln 25, Col 18

24°C Cloudy Поиск ENG 14:41 12.10.2025

TASK #4

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' are listed, including 'Airport' and 'postgres'. The 'Airport' database is selected. The main pane shows the 'Query' editor with the following SQL code:

```
34 ALTER TABLE Airport
35 ADD CONSTRAINT check_airport_name
36 CHECK(LENGTH(airport_name)>= 10);
```

The 'Messages' tab is active, showing the execution result:

```
ALTER TABLE
Query returned successfully in 52 msec.
```

The status bar at the bottom indicates 'Total rows: Query complete 00:00:00.052' and 'Ln 34, Col 15'. The Windows taskbar at the very bottom shows the system clock as 14:54 on 12.10.2025.

TASK #5

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' is expanded, showing 'Airport' and 'postgres'. The 'Airport' database is selected. The main pane shows a SQL query editor with the following code:

```
47  
48 ALTER TABLE Passengers  
49 ADD CONSTRAINT unique_passenger_email UNIQUE(email);  
50  
51 SELECT * FROM Flights;  
52  
53 ALTER TABLE Flights  
54 ADD CONSTRAINT unique_flight_departing UNIQUE(departing_gate);  
55  
56 SELECT * FROM Airport;  
57  
58 ALTER TABLE Airport  
59 ADD CONSTRAINT unique_airport UNIQUE (Almaty);
```

Below the query editor, the 'Data Output' tab is active, showing the message: 'Query returned successfully in 80 msec.' The status bar at the bottom indicates 'Total rows: Query complete 00:00:00.080' and 'CRLF Ln 57, Col 1'. The Windows taskbar at the very bottom shows the system clock as 15:06 on 12.10.2025.

TASK#6

The screenshot displays the pgAdmin 4 web interface. On the left, the Object Explorer shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' are listed, with 'Airport' selected. The main pane shows the 'Query' editor for the 'Airport/postgres@PostgreSQL 17' connection. The query text is as follows:

```
60  
61 ALTER TABLE Passengers  
62 ADD CONSTRAINT check_gender_age  
63 CHECK(  
64 (gender = 'Male' AND EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_birth))>= 18)  
65 OR  
66 (gender = 'Female' AND EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_birth))>= 19)  
67 );
```

Below the query editor, the 'Data Output' tab is active, showing the message: 'ALTER TABLE' and 'Query returned successfully in 56 msec.' The status bar at the bottom indicates 'Total rows: Query complete 00:00:00.056' and 'CRLF Ln 63, Col 7'. The Windows taskbar at the very bottom shows the system clock as 15:26 on 12.10.2025.

TASK #7

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' is expanded, showing 'Airport' and 'postgres'. The 'Airport' database is selected. The main pane shows the 'Query' editor with the following SQL code:

```
71  
72 ALTER TABLE Passengers  
73 ADD CONSTRAINT check_country_age  
74 CHECK(  
75 (country_of_citizenship = 'Kazakhstan' AND EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_b  
76 (country_of_citizenship = 'France' AND EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_birtl  
77 (country_of_citizenship NOT IN ('Kazakhstan','France') AND EXTRACT(YEAR FROM AGE(CURRENT_  
78 );
```

Below the query editor, the 'Messages' tab is active, showing the message: 'ALTER TABLE' and 'Query returned successfully in 64 msec.' The status bar at the bottom indicates 'Total rows: Query complete 00:00:00.064', 'CRLF', and 'Ln 78, Col 3'. The Windows taskbar at the very bottom shows the date and time as 15:43 on 12.10.2025.

TASK#8

The screenshot displays the pgAdmin 4 web interface. On the left, the Object Explorer shows a tree structure with 'Servers (2)' expanded, containing 'PostgreSQL' and 'PostgreSQL 17'. Under 'PostgreSQL 17', 'Databases (2)' are listed: 'Airport' (selected) and 'postgres'. The 'Airport' database contains various objects like Casts, Catalogs, Event Triggers, Extensions, Foreign Data Wrappers, Languages, Publications, Schemas, and Subscriptions. The main pane shows the 'Query' editor with the following SQL code:

```
82  
83 ALTER TABLE Booking  
84 ADD CONSTRAINT check_ticket_dis  
85 CHECK(  
86 (created_at >= DATE '2024-01-01' AND ticket_discount = ticket_price * 0.05)  
87 OR  
88 (created_at < DATE '2024-01-01' AND ticket_discount = ticket_price * 0.05)  
89 );
```

Below the query editor, the 'Messages' tab shows the execution result: 'ALTER TABLE' and 'Query returned successfully in 51 msec.' The status bar at the bottom indicates 'Total rows: Query complete 00:00:00.051' and 'CRLF Ln 87, Col 3'. The Windows taskbar at the very bottom shows the date and time as 15:51 on 12.10.2025, along with weather information (23°C, Light rain) and various application icons.