

## LAB WORK 6. Nurlan Olzhas.

1.

The screenshot shows the pgAdmin 4 interface. In the top-left corner, there's a tree view labeled 'Object Explorer' under 'Servers'. The main area has a 'Query' tab where the following SQL code is written:

```
1  SELECT
2      F.flight_no,
3      A.airline_name,
4      F.scheduled_departure,
5      F.scheduled_arrival,
6      F.status
7  FROM
8      flights F
9  JOIN
10     airline A ON F.airline_id = A.airline_id
11  WHERE
12      A.airline_name = 'IPC';
```

Below the query, the 'Data Output' tab displays the results of the query. The table has columns: flight\_no, airline\_name, scheduled\_departure, scheduled\_arrival, and status. There are 12 rows of data, all with 'IPC' in the airline\_name column and 'Delayed' in the status column. The status column is highlighted in blue.

	flight_no	airline_name	scheduled_departure	scheduled_arrival	status
1	BR-PE	IPC	2024-01-16	2023-06-02	Delayed
2	BR-PE	IPC	2024-01-16	2023-06-02	Delayed
3	MZ-G	IPC	2023-09-21	2023-11-29	Delayed
4	MZ-G	IPC	2023-09-21	2023-11-29	Delayed
5	AU-NT	IPC	2023-03-29	2023-05-06	Delayed
6	AU-NT	IPC	2023-03-29	2023-05-06	Delayed
7	FR-K	IPC	2023-12-26	2023-04-30	Delayed
8	FR-K	IPC	2023-12-26	2023-04-30	Delayed
9	US-VT	IPC	2023-08-28	2023-08-02	Delayed
10	US-VT	IPC	2023-08-28	2023-08-02	Delayed
11	PH-BUK	IPC	2023-08-20	2023-10-24	Delayed
12	PH-BUK	IPC	2023-08-20	2023-10-24	Delayed

Total rows: 64 Query complete 00:00:00.091

2.

The screenshot shows the pgAdmin 4 interface. In the top-left corner, there's a tree view labeled 'Object Explorer' under 'Servers'. The main area has a 'Query' tab where the following SQL code is written:

```
6  F.status
7  FROM
8      flights F
9  JOIN
10     airline A ON F.airline_id = A.airline_id
11  WHERE
12      A.airline_name = 'IPC';
13
14  SELECT
15      F.flight_no,
16      F.scheduled_departure,
17      AP.airport_name AS departure_airport_name,
18      AP.city AS departure_city,
19      AP.country AS departure_country
20  FROM
21      flights F
22  JOIN
23      airport AP ON F.departure_airport_id = AP.airport_id;
```

Below the query, the 'Data Output' tab displays the results of the query. The table has columns: flight\_no, scheduled\_departure, departure\_airport\_name, departure\_city, and departure\_country. There are 12 rows of data, all with 'IPC' in the airline\_name column and 'Delayed' in the status column. The status column is highlighted in blue.

	flight_no	scheduled_departure	departure_airport_name	departure_city	departure_country
1	US-CT	2024-01-22	Elorza Airport	Shuting	China
2	US-CT	2024-01-22	Elorza Airport	Shuting	China
3	US-NM	2023-07-21	Figan Sud-Corse Airport	Itapetinga	Brazil
4	US-NM	2023-07-21	Figan Sud-Corse Airport	Itapetinga	Brazil
5	FI-OL	2023-03-29	Darchula Airport	Hilotongan	Philippines
6	FI-OL	2023-03-29	Darchula Airport	Hilotongan	Philippines
7	RU-KR	2024-01-02	Lime Acres Finsch Mine Airport	Tielu	China
8	RU-KR	2024-01-02	Lime Acres Finsch Mine Airport	Tielu	China
9	RO-DJ	2023-07-03	Hana Airport	Wilmington	United States
10	RO-DJ	2023-07-03	Hana Airport	Wilmington	United States
11	CA-SK	2023-07-07	Darchula Airport	Hilotongan	Philippines
12	CA-SK	2023-07-07	Darchula Airport	Hilotongan	Philippines

Total rows: 2000 Query complete 00:00:00.164

### 3.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Servers

Query History

```
24
25
26
27 WITH NextMonth AS (
28     SELECT DATE('2025-12-01') AS start_date, DATE('2026-01-01') AS end_date
29 )
30
31 SELECT
32     A.airline_name
33 FROM
34     airline A
35 LEFT JOIN
36     flights F ON A.airline_id = F.airline_id
37         AND F.scheduled_departure >= (SELECT start_date FROM NextMonth)
38         AND F.scheduled_departure < (SELECT end_date FROM NextMonth)
39 GROUP BY
40     A.airline_name
41 HAVING
42     COUNT(F.flight_id) = 0;
```

Data Output Messages Notifications

airline_name
KMA
YLP
HOU
HYL
CSC
KOQ
PQS
NHT
BLD
RUG
YHB
SJS

Showing rows: 1 to 50 | Page No: 1 | of 1 | << >> >>> | Total rows: 50 | Query complete 00:00:01.398 | CRLF | Ln 41, Col 28

11°C Clear Помощь ENG 19:01 02.11.2025

### 4.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Servers

Query History

```
42
43
44 SELECT
45     P.first_name,
46     P.last_name,
47     F.flight_no,
48     BP.seat
49 FROM
50     passengers P
51 JOIN
52     booking B ON P.passenger_id = B.passenger_id
53 JOIN
54     boarding_pass BP ON B.booking_id = BP.booking_id
55 JOIN
56     booking_flight BF ON B.booking_id = BF.booking_id
57 JOIN
58     flights F ON BF.flight_id = F.flight_id
59 WHERE
60     F.flight_no = 'US-AK';
```

Data Output Messages Notifications

first_name	last_name	flight_no	seat
------------	-----------	-----------	------

Total rows: 0 | Query complete 00:00:00.047 | CRLF | Ln 60, Col 27

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## 5.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Servers

airport\_db@postgres@PostgreSQL 17\*

Query History

```

61
62
63     SELECT
64         F.flight_no,
65         COUNT(BF.booking_id) AS total_bookings,
66         AVG(B.price) AS average_price,
67         SUM(B.price) AS total_revenue,
68         MAX(B.price) AS maximum_price,
69         MIN(B.price) AS minimum_price
70
71     FROM
72         flights F
73     JOIN
74         booking_flight BF ON F.flight_id = BF.flight_id
75     JOIN
76         booking B ON BF.booking_id = B.booking_id
77     GROUP BY
78         F.flight_no
79     ORDER BY
80         total_revenue DESC;
  
```

Data Output Messages Notifications

	flight_no	total_bookings	average_price	total_revenue	maximum_price	minimum_price
1	US-AK	22	5304.880000000000000000	116707.36	9976.50	445.92
2	AU-NT	18	5510.85666666666666667	99195.42	9977.57	149.52
3	US-TX	15	5923.04866666666666667	88845.73	9266.00	980.80
4	US-CA	16	5383.9943750000000000	86143.91	9693.81	143.78
5	US-AZ	11	5519.105454545454545	71710.16	9849.54	2847.84
6	GB-ENG	14	4968.5378571428571429	69559.53	9293.16	277.29
7	CA-BC	11	5872.1072727272727273	64593.18	9693.81	696.00
8	CA-ON	11	5784.5018181818181818	63629.52	9932.12	373.11
9	CA-NU	11	4838.33990909090909091	53221.73	9520.76	473.95
10	US-IA	11	4551.4527272727272727	50065.98	9932.12	521.06
11	US-KS	10	4887.254000000000000000	48872.54	9702.57	156.83
12	AU-WA	10	4714.856000000000000000	47148.56	8929.20	917.99

Total rows: 384 Query complete 00:00:153 CRLF Ln 79, Col 24

11°C Clear Помощь ENG 19:06 02.11.2025

## 6.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Servers

airport\_db@postgres@PostgreSQL 17\*

Query History

```

81
82     SELECT
83         F.flight_no,
84         A.airline_name,
85         AP.Dep.city AS departure_city,
86         AP.Arr.city AS arrival_city,
87         AP.Arr.country AS arrival_country
88
89     FROM
90         flights F
91     JOIN
92         airline A ON F.airline_id = A.airline_id
93     JOIN
94         airport AP_Arr ON F.arrival_airport_id = AP_Arr.airport_id
95     JOIN
96         airport AP_Dep ON F.departure_airport_id = AP_Dep.airport_id
97     WHERE
98         AP.Arr.country = 'China'
99     ORDER BY
100        F.scheduled_departure;
  
```

Data Output Messages Notifications

	flight_no	airline_name	departure_city	arrival_city	arrival_country
1	FR-V	NGL	New Sibonga	Luodian	China
2	FR-V	NGL	New Sibonga	Luodian	China
3	FR-V	NGL	New Sibonga	Luodian	China
4	FR-V	NGL	New Sibonga	Luodian	China
5	FR-V	NGL	New Sibonga	Luodian	China
6	FR-V	NGL	New Sibonga	Luodian	China
7	FR-V	NGL	New Sibonga	Luodian	China
8	FR-V	NGL	New Sibonga	Luodian	China
9	CN-44	GYA	Cankova	Linfen	China
10	CN-44	GYA	Cankova	Linfen	China
11	CN-44	GYA	Cankova	Linfen	China
12	CN-44	GYA	Cankova	Linfen	China

Total rows: 1904 Query complete 00:00:121 CRLF Ln 98, Col 1

11°C Clear Помощь ENG 19:08 02.11.2025

7.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Servers

Query History

```
185     P.date_of_birth,
186     AP.city AS arrival_city,
187     AP.country AS arrival_country
188   FROM
189   passengers P
190   JOIN
191   booking B ON P.passenger_id = B.passenger_id
192   JOIN
193   booking_flight BF ON B.booking_id = BF.booking_id
194   JOIN
195   flights F ON BF.flight_id = F.flight_id
196   JOIN
197   airport AP ON F.arrival_airport_id = AP.airport_id
198 WHERE
199     P.date_of_birth > DATE('2007-11-02')
200 GROUP BY
201     P.first_name, P.last_name, P.date_of_birth, AP.city, AP.country
202 ORDER BY
203     P.date_of_birth DESC;
```

Data Output Messages Notifications

	first_name	last_name	date_of_birth	arrival_city	arrival_country
1	Bernie	Michal	2009-11-03	Cankova	Slovenia
2	Vivyan	Mallabone	2009-11-01	Cankova	Slovenia
3	Vivyan	Mallabone	2009-11-01	Dubrava	Croatia
4	Vivyan	Mallabone	2009-11-01	Hilongtan	Philippines
5	Vivyan	Mallabone	2009-11-01	Shuting	China
6	Vivyan	Mallabone	2009-11-01	Wilmington	United States
7	Ynez	Bortoloni	2009-10-01	Polykarpı	Greece
8	Cleve	Edgeler	2009-04-20	Dubrava	Croatia
9	Cleve	Edgeler	2009-04-20	Guhuligan	Philippines
10	Cleve	Edgeler	2009-04-20	Miawé	Indonesia
11	Cleve	Edgeler	2009-04-20	Rogóźno	Poland
12	Cleve	Edgeler	2009-04-20	Tielu	China

Total rows: 30 Query complete 00:00:00.64 CRLF Ln 119, Col 42

8.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Servers

Query History

```
127   SELECT
128     P.first_name || ' ' || P.last_name AS full_name,
129     P.passport_number,
130     AP.airport_name AS arrival_airport,
131     F.actual_arrival
132   FROM
133   passengers P
134   JOIN
135   booking B ON P.passenger_id = B.passenger_id
136   JOIN
137   booking_flight BF ON B.booking_id = BF.booking_id
138   JOIN
139   flights F ON BF.flight_id = F.flight_id
140   JOIN
141   airport AP ON F.arrival_airport_id = AP.airport_id
142 WHERE
143     F.actual_arrival IS NOT NULL
144 ORDER BY
145     F.actual_arrival DESC;
```

Data Output Messages Notifications

	full_name	passport_number	arrival_airport	actual_arrival
1	Quintina Werrett	980147004-6	Bermuda Dunes Airport	2024-03-17
2	Ninetta Musli	923180864-8	Bermuda Dunes Airport	2024-03-17
3	Ferdinand Maxwell	273418310-2	Alert Bay Airport	2024-03-17
4	Ferdinand Maxwell	273418310-2	Alert Bay Airport	2024-03-17
5	Ferdinand Maxwell	273418310-2	Alert Bay Airport	2024-03-17
6	Ferdinand Maxwell	273418310-2	Alert Bay Airport	2024-03-17
7	Quintina Werrett	980147004-6	Bermuda Dunes Airport	2024-03-17
8	Quintina Werrett	980147004-6	Bermuda Dunes Airport	2024-03-17
9	Malynda Chapple	477941008-8	Longana Airport	2024-03-17
10	Malynda Chapple	477941008-8	Longana Airport	2024-03-17
11	Malynda Chapple	477941008-8	Longana Airport	2024-03-17
12	Malynda Chapple	477941008-8	Longana Airport	2024-03-17

Total rows: 4000 Query complete 00:00:00.11 CRLF Ln 145, Col 27

## 9.

The screenshot shows the pgAdmin 4 interface with a query window displaying a SQL SELECT statement and a results table.

```
144 ORDER BY
145     F.actual_arrival DESC;
146
147
148 SELECT
149     AP.country AS airport_country,
150     A.airline_country AS airline_home_country,
151     F.flight_no,
152     AP.airport_name AS departure_airport
153 FROM
154     flights F
155 JOIN
156     airline A ON F.airline_id = A.airline_id
157 JOIN
158     airport AP ON F.departure_airport_id = AP.airport_id
159 WHERE
160     A.airline_country = AP.country
161 ORDER BY
162     AP.country, F.flight_no;
```

The results table shows the following data:

	airport_country	airline_home_country	flight_no	departure_airport
1	Brazil	Brazil	CL-AR	Figari Sud-Corse Airport
2	Brazil	Brazil	CL-AR	Figari Sud-Corse Airport
3	Brazil	Brazil	CL-AR	Figari Sud-Corse Airport
4	Brazil	Brazil	CL-AR	Figari Sud-Corse Airport
5	Brazil	Brazil	IT-45	Figari Sud-Corse Airport
6	Brazil	Brazil	IT-45	Figari Sud-Corse Airport
7	Brazil	Brazil	IT-45	Figari Sud-Corse Airport
8	Brazil	Brazil	IT-45	Figari Sud-Corse Airport
9	Brazil	Brazil	PG-WPD	Figari Sud-Corse Airport
10	Brazil	Brazil	PG-WPD	Figari Sud-Corse Airport
11	Brazil	Brazil	PG-WPD	Figari Sud-Corse Airport
12	Brazil	Brazil	PG-WPD	Figari Sud-Corse Airport

Total rows: 296    Query complete 00:00:00.074