

LAB WORK 6. Nurlan Olzhas.

1.

The screenshot shows the pgAdmin 4 interface. The query editor contains the following SQL code:

```
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';
13
```

The Data Output pane shows the results of the query, displaying 12 rows of data. The columns are: flight_no, airline_name, scheduled_departure, scheduled_arrival, and status. The status column is truncated to 50 characters.

flight_no	airline_name	scheduled_departure	scheduled_arrival	status
BR-PE	IPC	2024-01-16	2023-06-02	Delayed
BR-PE	IPC	2024-01-16	2023-06-02	Delayed
MZ-G	IPC	2023-09-21	2023-11-29	Delayed
MZ-G	IPC	2023-09-21	2023-11-29	Delayed
AU-NT	IPC	2023-03-29	2023-05-06	Delayed
AU-NT	IPC	2023-03-29	2023-05-06	Delayed
FR-K	IPC	2023-12-26	2023-04-30	Delayed
FR-K	IPC	2023-12-26	2023-04-30	Delayed
US-VT	IPC	2023-08-28	2023-08-02	Delayed
US-VT	IPC	2023-08-28	2023-08-02	Delayed
PH-BUK	IPC	2023-08-20	2023-10-24	Delayed
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. The query editor contains the following SQL code:

```
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;
24
```

The Data Output pane shows the results of the query, displaying 12 rows of data. The columns are: flight_no, scheduled_departure, departure_airport_name, departure_city, and departure_country. The status column is truncated to 50 characters.

flight_no	scheduled_departure	departure_airport_name	departure_city	departure_country
US-CT	2024-01-22	Elorza Airport	Shutting	China
US-CT	2024-01-22	Elorza Airport	Shutting	China
US-NM	2023-07-21	Figari Sud-Corse Airport	Itapetinga	Brazil
US-NM	2023-07-21	Figari Sud-Corse Airport	Itapetinga	Brazil
FI-OL	2023-03-29	Darchula Airport	Hilotongan	Philippines
FI-OL	2023-03-29	Darchula Airport	Hilotongan	Philippines
RU-KR	2024-01-02	Lime Acres Finsch Mine Airport	Tielu	China
RU-KR	2024-01-02	Lime Acres Finsch Mine Airport	Tielu	China
RO-DJ	2023-07-03	Hana Airport	Wilmington	United States
RO-DJ	2023-07-03	Hana Airport	Wilmington	United States
CA-SK	2023-07-07	Darchula Airport	Hilotongan	Philippines
CA-SK	2023-07-07	Darchula Airport	Hilotongan	Philippines

Total rows: 2000 Query complete 00:00:00.164

Successfully run. Total query runtime: 164 msec. 2000 rows affected.

3.

The screenshot shows the pgAdmin 4 interface with a SQL query executed in the 'Query' tab. The query is a complex SELECT statement with a subquery and a HAVING clause. The results are displayed in the 'Data Output' tab, showing a list of airline names.

```

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 SELECT
31     A.airline_name
32 FROM
33     airline A
34 LEFT JOIN
35     flights F ON A.airline_id = F.airline_id
36                AND F.scheduled_departure >= (SELECT start_date FROM NextMonth)
37                AND F.scheduled_departure < (SELECT end_date FROM NextMonth)
38 GROUP BY
39     A.airline_name
40 HAVING
41     COUNT(F.flight_id) = 0;
42

```

The 'Data Output' tab shows the following results:

airline_name
1
2
3
4
5
6
7
8
9
10
11
12

Successfully run. Total query runtime: 1 secs 398 msec. 50 rows affected. CRLF Ln 41, Col 28

4.

The screenshot shows the pgAdmin 4 interface with a SQL query executed in the 'Query' tab. The query is a complex SELECT statement with multiple JOINs and a WHERE clause. The results are displayed in the 'Data Output' tab, showing a list of passenger information.

```

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';

```

The 'Data Output' tab shows the following results:

first_name	last_name	flight_no	seat
character varying (50)			
character varying (50)			
character varying (50)			
character varying (50)			

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

5.

The screenshot shows the pgAdmin 4 interface with a SQL query executed against the 'airport_db' database. The query calculates various statistics for flights, grouped by flight number. The results are displayed in a table with 6 columns: flight_no, total_bookings, average_price, total_revenue, maximum_price, and minimum_price. The data is sorted by total_revenue in descending order.

```

SELECT
    F.flight_no,
    COUNT(BF.booking_id) AS total_bookings,
    AVG(B.price) AS average_price,
    SUM(B.price) AS total_revenue,
    MAX(B.price) AS maximum_price,
    MIN(B.price) AS minimum_price
FROM
    flights F
JOIN
    booking_flight BF ON F.flight_id = BF.flight_id
JOIN
    booking B ON BF.booking_id = B.booking_id
GROUP BY
    F.flight_no
ORDER BY
    total_revenue DESC;

```

flight_no	total_bookings	average_price	total_revenue	maximum_price	minimum_price
US-AK	22	5304.8800000000000000	116707.36	9976.50	445.82
AU-NT	18	5510.8566666666666667	99195.42	9977.57	149.52
US-TX	15	5923.0486666666666667	88845.73	9266.00	980.80
US-CA	16	5383.9943750000000000	86143.91	9693.81	143.78
US-AZ	11	6519.1054545454545455	71710.16	9849.54	2847.84
GB-ENG	14	4968.5378571428571429	69559.53	9293.16	277.29
CA-BC	11	5872.1072727272727273	64593.18	9693.81	696.00
CA-ON	11	5784.5018181818181818	63629.52	9932.12	373.11
CA-NU	11	4838.3390909090909091	53221.73	9520.76	473.95
US-IA	11	4551.4527272727272727	50065.98	9932.12	521.06
US-KS	10	4887.2540000000000000	48872.54	9702.57	156.83
AU-WA	10	4714.8560000000000000	47148.56	8929.20	917.99

Total rows: 384 Query complete 00:00:00.153

6.

The screenshot shows the pgAdmin 4 interface with a SQL query executed against the 'airport_db' database. The query filters flights where the arrival country is 'China' and orders them by scheduled departure time. The results are displayed in a table with 5 columns: flight_no, airline_name, departure_city, arrival_city, and arrival_country.

```

SELECT
    F.flight_no,
    A.airline_name,
    AP_Dep.city AS departure_city,
    AP_Arr.city AS arrival_city,
    AP_Arr.country AS arrival_country
FROM
    flights F
JOIN
    airline A ON F.airline_id = A.airline_id
JOIN
    airport AP_Arr ON F.arrival_airport_id = AP_Arr.airport_id
JOIN
    airport AP_Dep ON F.departure_airport_id = AP_Dep.airport_id
WHERE
    AP_Arr.country = 'China'
ORDER BY
    F.scheduled_departure;

```

flight_no	airline_name	departure_city	arrival_city	arrival_country
FR-V	NGL	New Sibonga	Luodian	China
FR-V	NGL	New Sibonga	Luodian	China
FR-V	NGL	New Sibonga	Luodian	China
FR-V	NGL	New Sibonga	Luodian	China
FR-V	NGL	New Sibonga	Luodian	China
FR-V	NGL	New Sibonga	Luodian	China
FR-V	NGL	New Sibonga	Luodian	China
FR-V	NGL	New Sibonga	Luodian	China
CN-44	GYA	Cankova	Linfen	China
CN-44	GYA	Cankova	Linfen	China
CN-44	GYA	Cankova	Linfen	China
CN-44	GYA	Cankova	Linfen	China

Total rows: 1904 Query complete 00:00:00.121

7.

pgAdmin 4

Object Explorer

Query

```

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

	first_name character varying (50)	last_name character varying (30)	date_of_birth date	arrival_city character varying (50)	arrival_country character varying (50)
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	Hilotongan	Philippines
5	Vivyan	Mallabone	2009-11-01	Shutting	China
6	Vivyan	Mallabone	2009-11-01	Wilmington	United States
7	Ynez	Bortoloni	2009-10-01	Polykárpi	Greece
8	Cleve	Edgeler	2009-04-20	Dubrava	Croatia
9	Cleve	Edgeler	2009-04-20	Guthullgan	Philippines
10	Cleve	Edgeler	2009-04-20	Milawe	Indonesia
11	Cleve	Edgeler	2009-04-20	Rogózno	Poland
12	Cleve	Edgeler	2009-04-20	Tielu	China

Total rows: 30 Query complete 00:00:00.064

8.

pgAdmin 4

Object Explorer

Query

```

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

	full_name text	passport_number character varying (50)	arrival_airport character varying (50)	actual_arrival date
1	Quintina Werrett	980147004-6	Bermuda Dunes Airport	2024-03-17
2	Ninetta Musla	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 00:00:00.117

9.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Servers

airport_db/postgres@PostgreSQL 17

Query Query History

```

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

```

Data Output Messages Notifications

Showing rows: 1 to 296 Page No: 1 of 1

	airport_country character varying (50)	airline_home_country character varying (50)	flight_no character varying (50)	departure_airport character varying (50)
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 CRLF Ln 162, Col 29

11°C Clear

Поиск

19:12 02.11.2025