

## Lab work 6

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer    Processes    suppliers/postgres@PostgreSQL 17\*    public.booking/su...   

Query    Execute script    Scratch Pad

```

1 SELECT * FROM flights f JOIN airline a ON f.airline_id = a.airline_id
2 WHERE a.airline_id = 1;
3
4 --2
5 SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
6
7 --3
8 SELECT a.* FROM airline a LEFT JOIN flights f ON a.airline_id = f.airline_id AND f.scheduled_de
9 WHERE f.flight_id IS NULL;
10
11 --4
12 SELECT * FROM passengers p
13 JOIN booking b ON p.passenger_id = b.passenger_id
14 JOIN booking_flight bk ON bk.booking_id = b.booking_id
15 JOIN flights f ON f.flight_id = bk.flight_id
16 WHERE f.flight_id = 1;

```

Data Output    Messages    Notifications

	flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	departing_gate	arriving_gate	airline_id
1	13	BR-PE	2024-01-16	2023-06-02	13	20	1891	5429	1
2	33	MZ-G	2023-09-21	2023-11-29	4	19	[null]	9380	1
3	36	AU-NT	2023-03-29	2023-05-06	12	14	[null]	13	1
4	73	FR-K	2023-12-26	2023-04-30	18	9	144	23	1
5	78	US-VT	2023-08-28	2023-08-02	20	11	335	515	1
6	143	PH-BUK	2023-08-20	2023-10-24	12	9	919	1330	1
7	170	SD-01	2023-12-02	2023-12-17	3	20	897	1147	1
8	175	PA-8	2023-03-19	2023-08-21	19	19	150	38	1
9	185	NA-KU	2023-06-26	2023-12-04	6	5	2000	996	1
10	221	US-CT	2023-11-07	2023-05-03	20				

Total rows: 32    Query complete 00:00:00.077

Successfully run. Total query runtime: 77 msec. 32 rows affected.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer    Processes    suppliers/postgres@PostgreSQL 17\*    public.booking/su...   

Query    Execute script    Scratch Pad

```

1 SELECT * FROM flights f JOIN airline a ON f.airline_id = a.airline_id
2 WHERE a.airline_id = 1;
3
4 --2
5 SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
6
7 --3
8 SELECT a.* FROM airline a LEFT JOIN flights f ON a.airline_id = f.airline_id AND f.scheduled_de
9 WHERE f.flight_id IS NULL;
10
11 --4
12 SELECT * FROM passengers p
13 JOIN booking b ON p.passenger_id = b.passenger_id
14 JOIN booking_flight bk ON bk.booking_id = b.booking_id
15 JOIN flights f ON f.flight_id = bk.flight_id
16 WHERE f.flight_id = 1;

```

Data Output    Messages    Notifications

	flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	departing_gate	arriving_gate	airline_id
1	1	US-CT	2024-01-22	2023-09-08	12	15	9	649	39
2	2	US-NM	2023-07-21	2023-09-17	13	16	4216	90	34
3	3	FI-OL	2023-03-29	2023-08-01	18	12	47	9	34
4	4	RU-KR	2024-01-02	2023-03-18	3	19	151	66	33
5	5	RO-DJ	2023-07-03	2023-11-28	6	2	626	171	14
6	6	CA-SK	2023-07-07	2023-09-11	18	1	1576	72	34
7	7	AU-TAS	2023-10-12	2024-02-24	15	18	867	15	10
8	8	US-AZ	2023-07-29	2023-04-08	13	6	5045	1985	12
9	9	IN-OR	2023-05-18	2023-09-09	6	9	659	621	13
10	10	AU-NT	2023-11-25	2023-07-26	19				

Total rows: 1000    Query complete 00:00:00.158

Successfully run. Total query runtime: 158 msec. 1000 rows affected.

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Processes x suppliers/postgres@PostgreSQL 17\* public.booking/su... x

Query History

```

1 SELECT * FROM flights f JOIN airline a ON f.airline_id = a.airline_id
2 WHERE a.airline_id = 1;
3
4 --2
5 SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
6
7 --3
8 SELECT a.* FROM airline a LEFT JOIN flights f
9 ON a.airline_id = f.airline_id AND f.scheduled_departure BETWEEN '2023-11-01' AND '2023-11-30'
10 WHERE f.flight_id IS NULL;
11
12 --4
13 SELECT * FROM passengers p
14 JOIN booking b ON p.passenger_id = b.passenger_id
15 JOIN booking_flight bk ON bk.booking_id = b.booking_id
16 JOIN flights f ON f.flight_id = bk.flight_id

```

Data Output Messages Notifications

	airline_id	airline_code	airline_name	airline_country	created_at	update_at
1	20	SKSL	SSL	China	2024-02-15	2023-06-16
2	25	LFKC	CLY	France	2023-09-04	2023-06-19
3	27	KKL	KKL	Georgia	2024-02-02	2023-08-25
4	33	KBVU	BLD	Russia	2023-03-31	2023-05-26
5	10	LFKS	SZ	Indonesia	2023-07-10	2023-09-20
6	18	AYRA	KIQ	China	2024-01-13	2023-07-17
7	5	CYLO	YLQ	Kazakhstan	2023-03-23	2023-07-26
8	24	ZSRG	RUG	Portugal	2024-03-11	2023-08-24
9	28	RKPD	JDG	Poland	2023-11-03	2023-12-06
10	49	[null]	POS	Poland	2023-04-21	2023-07-18
11	45	WCMV	RIN	Sweden	2024-07-18	2024-07-18

Total rows: 12 Query complete 00:00:00.054

Scratch Pad

Successfully run. Total query runtime: 54 msec. 12 rows affected.

19:47 PYC 30.10.2025

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Processes x suppliers/postgres@PostgreSQL 17\* public.booking/su... x

Query History

```

3
4 --2
5 SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
6
7 --3
8 SELECT a.* FROM airline a LEFT JOIN flights f
9 ON a.airline_id = f.airline_id AND f.scheduled_departure BETWEEN '2023-11-01' AND '2023-11-30'
10 WHERE f.flight_id IS NULL;
11
12 --4
13 SELECT * FROM passengers p
14 JOIN booking b ON p.passenger_id = b.passenger_id
15 JOIN booking_flight bk ON bk.booking_id = b.booking_id
16 JOIN flights f ON f.flight_id = bk.flight_id
17 WHERE f.flight_id = 1;
18

```

Data Output Messages Notifications

	passenger_id	first_name	last_name	date_of_birth	gender	country_of_citizenship	country_of_residence	passport_number	create_date
1	32	Elfride	Schukert	1991-03-18	Female	Peru	Russia	561518934-7	2023-

Total rows: 1 Query complete 00:00:00.049

Scratch Pad

19:48 PYC 30.10.2025

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer    Processes    suppliers/postgres@PostgreSQL 17\*    public.booking/su...

Query History

```

18
19 --5
20 SELECT f.flight_id, AVG(b.price), SUM(b.price), MAX(b.price), MIN(b.price), COUNT(b.booking_id) FRC
21 JOIN booking_flight bf ON f.flight_id = bf.flight_id
22 JOIN booking b ON b.booking_id = bf.booking_id
23 GROUP BY f.flight_id;
24
25 --6
26 SELECT * FROM flights f
27 JOIN airline a ON a.airline_id = f.airline_id
28 JOIN airport ai ON ai.airport_id = f.arrival_airport_id
29 WHERE ai.country LIKE '%a';
30
31 --7
32 SELECT DISTINCT p.passenger_id, p.first_name, p.last_name, p.date_of_birth, p.gender, FORMAT('%s, %s', p.first_name, p.last_name)
33 JOIN booking b ON p.passenger_id = b.passenger_id
34 JOIN hooking_flight hk ON hk.hooking_id = b.booking_id

```

Data Output    Messages    Notifications

flight_id	avg	sum	max	min	count
1	273	8929.200000000000	8929.20	8929.20	1
2	951	3034.540000000000	6069.08	5888.12	180.96
3	70	683.270000000000	683.27	683.27	1
4	350	5936.768000000000	29683.84	9792.28	2520.04
5	539	5874.090000000000	17622.27	7927.75	3116.63
6	874	4901.886666666666	14705.66	7822.69	1839.80
7	176	6895.950000000000	13791.90	9849.54	3942.36
8	292	4500.880000000000	4500.88	4500.88	1
9	663	4316.520000000000	4316.52	4316.52	1
10	770	1486.590000000000	2973.18	2104.71	868.47
11	417	2410.000000000000	2410.00	2410.00	1

Total rows: 614    Query complete 00:00:00.151

Successfully run. Total query runtime: 151 msec. 614 rows affected.

CRLF Ln 23, Col 22

19:48 30.10.2025

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer    Processes    suppliers/postgres@PostgreSQL 17\*    public.booking/su...

Query History

```

23 GROUP BY f.flight_id;
24
25 --6
26 SELECT * FROM flights f
27 JOIN airline a ON a.airline_id = f.airline_id
28 JOIN airport ai ON ai.airport_id = f.arrival_airport_id
29 WHERE ai.country LIKE '%a';
30
31 --7
32 SELECT DISTINCT p.passenger_id, p.first_name, p.last_name, p.date_of_birth, p.gender, FORMAT('%s, %s', p.first_name, p.last_name)
33 JOIN booking b ON p.passenger_id = b.passenger_id
34 JOIN booking_flight bk ON bk.booking_id = b.booking_id
35 JOIN flights f ON f.flight_id = bk.flight_id
36 JOIN airport ai ON ai.airport_id = f.arrival_airport_id
37 WHERE EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_birth)) < 18;
38
39 --8

```

Data Output    Messages    Notifications

flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	departing_gate	arriving_gate	airline_id
1	2	US-NM	2023-07-21	2023-09-17	13	16	4216	90
2	3	FI-OL	2023-03-29	2023-08-01	18	12	47	9
3	5	RO-DJ	2023-07-03	2023-11-28	6	2	626	171
4	6	CA-SK	2023-07-07	2023-09-11	18	1	1576	72
5	9	IN-OR	2023-05-18	2023-09-19	6	9	659	621
6	10	AU-NT	2023-11-25	2023-07-26	19	16	593	555
7	13	BR-PE	2024-01-16	2023-06-02	13	20	1891	5429
8	14	US-IN	2023-07-24	2024-02-27	18	3	973	297
9	20	US-MS	2024-02-06	2024-01-22	10	1	346	56
10	21	EE-39	2023-10-12	2024-01-04	17			38

Total rows: 598    Query complete 00:00:00.087

Successfully run. Total query runtime: 87 msec. 598 rows affected.

CRLF Ln 30, Col 1

19:49 30.10.2025

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Processors x suppliers/postgres@PostgreSQL 17\* x public.booking/su... x

Query History

```

20
21 --> SELECT p.passenger_id, p.first_name, p.last_name, p.date_of_birth, p.gender, FORMAT('%s, %s', p.first_name, p.last_name) AS full_name, p.passport_number
22 FROM passengers p
23 JOIN booking b ON b.passenger_id = p.passenger_id
24 JOIN booking_flight bk ON bk.booking_id = b.booking_id
25 JOIN flights f ON f.flight_id = bk.flight_id
26 JOIN airport ai ON ai.airport_id = f.arrival_airport_id
27 WHERE EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_birth)) < 18;
28
29 --8
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44

```

Data Output Messages Notifications

SQL

passenger_id	first_name	last_name	date_of_birth	gender	arrival_place
1	70	Lester	Blades	2008-07-04	Male
2	80	Bradley	Grolle	2008-01-02	Male
3	41	Clev	Edgeler	2009-04-20	Male
4	70	Lester	Blades	2008-07-04	Male
5	70	Lester	Blades	2008-07-04	Male
6	41	Clev	Edgeler	2009-04-20	Male
7	34	Gwenne	Chimney	2008-06-30	Female
8	184	Ronni	Laybourn	2009-03-06	Female
9	184	Ronni	Laybourn	2009-03-06	Female
10	67	Bernie	Michal	2009-11-03	Male
11	184	Ronni	Laybourn	2009-03-06	Female

Total rows: 30 Query complete 00:00:00.158

Successfully run. Total query runtime: 158 msec. 30 rows affected.

CRLF Ln 37, Col 64

19:49 30.10.2025

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

Processors x suppliers/postgres@PostgreSQL 17\* x public.booking/su... x

Query History

```

37 WHERE EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_birth)) < 18;
38
39 --8
40
41
42
43
44
45
46
47
48
49
50
51
52

```

Data Output Messages Notifications

SQL

passenger_id	full_name	passport_number	arrival_time
1	Muhammad, Fass	109932770-9	2023-10-18
2	Trevor, Brou	788025864-7	2023-05-08
3	Auria, Breffit	570937341-4	2023-11-03
4	Archie, Toffel	677556708-1	2023-05-18
5	Sanders, Biddles	51454605-3	2023-05-24
6	Sanders, Biddles	51454605-3	2023-11-08
7	Remington, Piggot	470074456-1	2023-06-28
8	Glynis, Marle	209933120-0	2023-10-17
9	Cesario, McGennis	364900190-X	2023-08-22
10	Con, Borrel	837859465-3	2024-01-23
11	Invanna, Rhinie	436254197-3	2023-11-20

Total rows: 1000 Query complete 00:00:00.053

Successfully run. Total query runtime: 53 msec. 1000 rows affected.

CRLF Ln 44, Col 46

19:49 30.10.2025

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer    Processes    suppliers/postgres@PostgreSQL 17\*    public.booking/su...    Scratch Pad

Process: suppliers/postgres@PostgreSQL 17\*

Query History

```
37 WHERE EXTRACT(YEAR FROM AGE(CURRENT_DATE, date_of_birth)) < 18;
38
39 --8
40 SELECT p.passenger_id, FORMAT('%s, %s', p.first_name, p.last_name) AS full_name, p.passport_number
41 FROM passengers p
42 JOIN booking b ON b.passenger_id = p.passenger_id
43 JOIN booking_flight bk ON bk.booking_id = b.booking_id
44 JOIN flights f ON f.flight_id = bk.flight_id;
45
46 --9
47 SELECT a.country, COUNT(f.flight_id) AS total_flights FROM flights f
48 JOIN airline ai ON f.airline_id = ai.airline_id
49 JOIN airport a ON a.airport_id = f.departure_airport_id
50 WHERE ai.airline_country = a.country
51 GROUP BY a.country;
52
```

Data Output

country	total_flights
Indonesia	6
Slovenia	2
Greece	1
Russia	5
China	50
Brazil	5
Poland	2
Philippines	3

Total rows: 8    Query complete 00:00:00.082

Successfully run. Total query runtime: 82 msec. 8 rows affected.

CRLF Ln 51, Col 20

19:49 30.10.2025

```
SELECT * FROM flights f JOIN airline a ON f.airline_id = a.airline_id  
WHERE a.airline_id = 1;
```

--2

```
SELECT * FROM flights f JOIN airport a ON f.departure_airport_id = a.airport_id;
```

--3

```
SELECT a.* FROM airline a LEFT JOIN flights f  
ON a.airline_id = f.airline_id AND f.scheduled_departure BETWEEN '2023-11-01' AND '2023-11-30'  
WHERE f.flight_id IS NULL;
```

--4

```
SELECT * FROM passengers p  
JOIN booking b ON p.passenger_id = b.passenger_id  
JOIN booking_flight bk ON bk.booking_id = b.booking_id  
JOIN flights f ON f.flight_id = bk.flight_id  
WHERE f.flight_id = 1;
```

--5

```
SELECT f.flight_id, AVG(b.price), SUM(b.price), MAX(b.price), MIN(b.price), COUNT(b.booking_id) FROM  
flights f  
JOIN booking_flight bf ON f.flight_id = bf.flight_id  
JOIN booking b ON b.booking_id = bf.booking_id  
GROUP BY f.flight_id;
```

--6

```
SELECT * FROM flights f  
JOIN airline a ON a.airline_id = f.airline_id  
JOIN airport ai ON ai.airport_id = f.arrival_airport_id  
WHERE ai.country LIKE '%a';
```

--7

```
SELECT DISTINCT p.passenger_id, p.first_name, p.last_name, p.date_of_birth, p.gender, FORMAT('%s,%s',ai.country, ai.city) AS arrival_place FROM passengers p
JOIN booking b ON p.passenger_id = b.passenger_id
JOIN booking_flight bk ON bk.booking_id = b.booking_id
JOIN flights f ON f.flight_id = bk.flight_id
JOIN airport ai ON ai.airport_id = f.arrival_airport_id
WHERE EXTRACT(YEAR FROM AGE(CURRENT_date, date_of_birth)) < 18;
```

--8

```
SELECT p.passenger_id, FORMAT('%s, %s', p.first_name, p.last_name) AS full_name, p.passport_number
, f.scheduled_arrival as arrival_time
FROM passengers p
JOIN booking b ON b.passenger_id = p.passenger_id
JOIN booking_flight bk ON bk.booking_id = b.booking_id
JOIN flights f ON f.flight_id = bk.flight_id;
```

--9

```
SELECT a.country, COUNT(f.flight_id) as total_flights FROM flights f
JOIN airline ai ON f.airline_id = ai.airline_id
JOIN airport a ON a.airport_id = f.departure_airport_id
WHERE ai.airline_country = a.country
GROUP BY a.country;
```