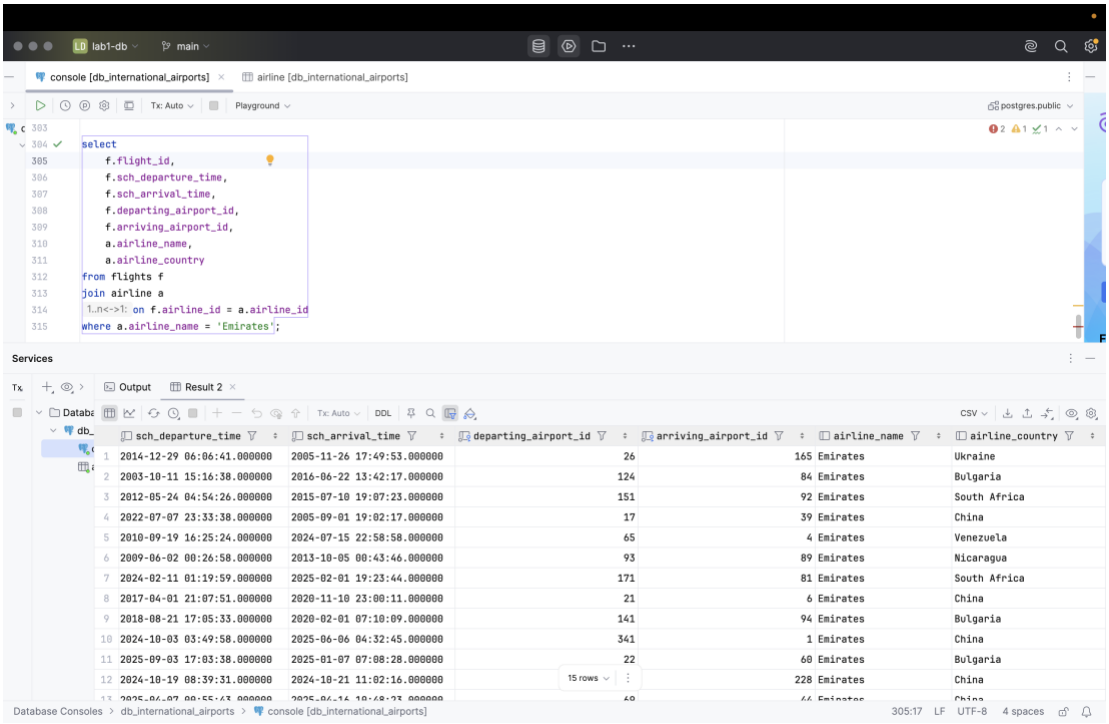
JOIN operations tasks

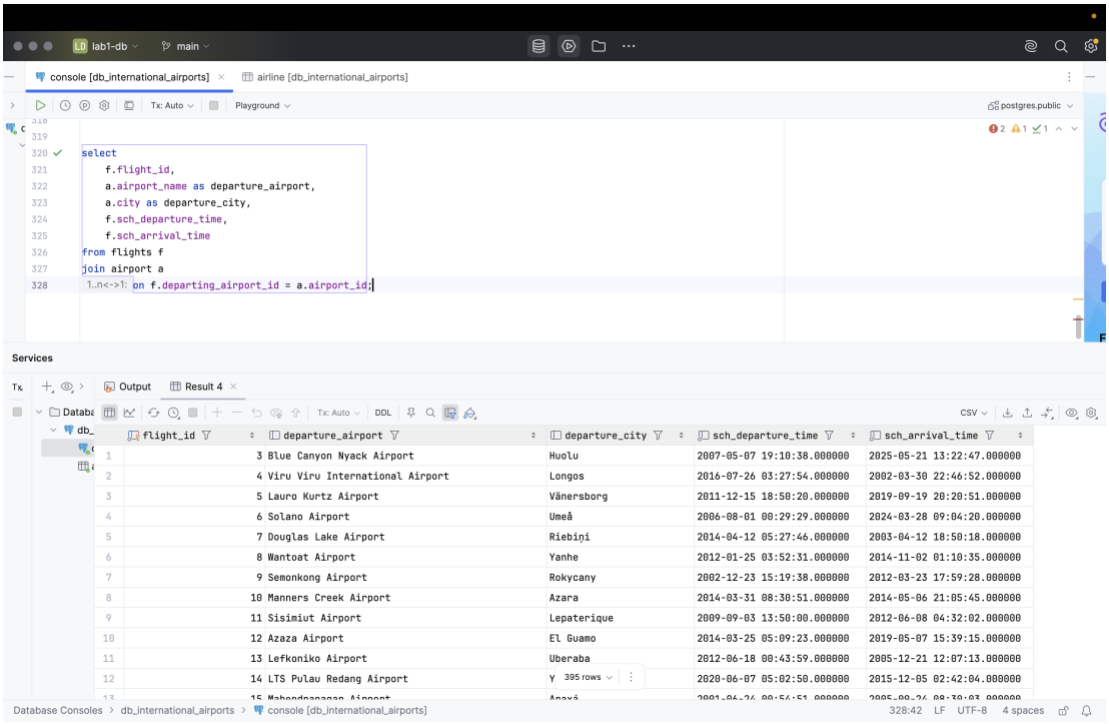
1. Write a query that displays all flights of a specific airline.



```
select
    f.flight_id,
    f.sch_departure_time,
    f.sch_arrival_time,
    f.departing_airport_id,
    f.arriving_airport_id,
    a.airline_name,
    a.airline_country
from flights f
join airline a
 1..n<->1: on f.airline_id = a.airline_id
where a.airline_name = 'Emirates';
```

	sch_departure_time	sch_arrival_time	departing_airport_id	arriving_airport_id	airline_name	airline_country
1	2014-12-29 06:06:41.000000	2005-11-26 17:49:53.000000	26	165	Emirates	Ukraine
2	2003-10-11 15:16:38.000000	2016-06-22 13:42:17.000000	124	84	Emirates	Bulgaria
3	2012-05-24 04:54:26.000000	2015-07-10 19:07:23.000000	151	92	Emirates	South Africa
4	2022-07-07 23:33:38.000000	2005-09-01 19:02:17.000000	17	39	Emirates	China
5	2010-09-19 16:25:24.000000	2024-07-15 22:58:58.000000	65	4	Emirates	Venezuela
6	2009-06-02 00:26:58.000000	2013-10-05 00:43:46.000000	93	89	Emirates	Nicaragua
7	2024-02-11 01:19:59.000000	2025-02-01 19:23:44.000000	171	81	Emirates	South Africa
8	2017-04-01 21:07:51.000000	2020-11-10 23:00:11.000000	21	6	Emirates	China
9	2018-08-21 17:05:33.000000	2020-02-01 07:10:09.000000	141	94	Emirates	Bulgaria
10	2024-10-03 03:49:58.000000	2025-06-06 04:32:45.000000	341	1	Emirates	China
11	2025-09-03 17:03:38.000000	2025-01-07 07:08:28.000000	22	60	Emirates	Bulgaria
12	2024-10-19 08:39:31.000000	2024-10-21 11:02:16.000000	15 rows	228	Emirates	China

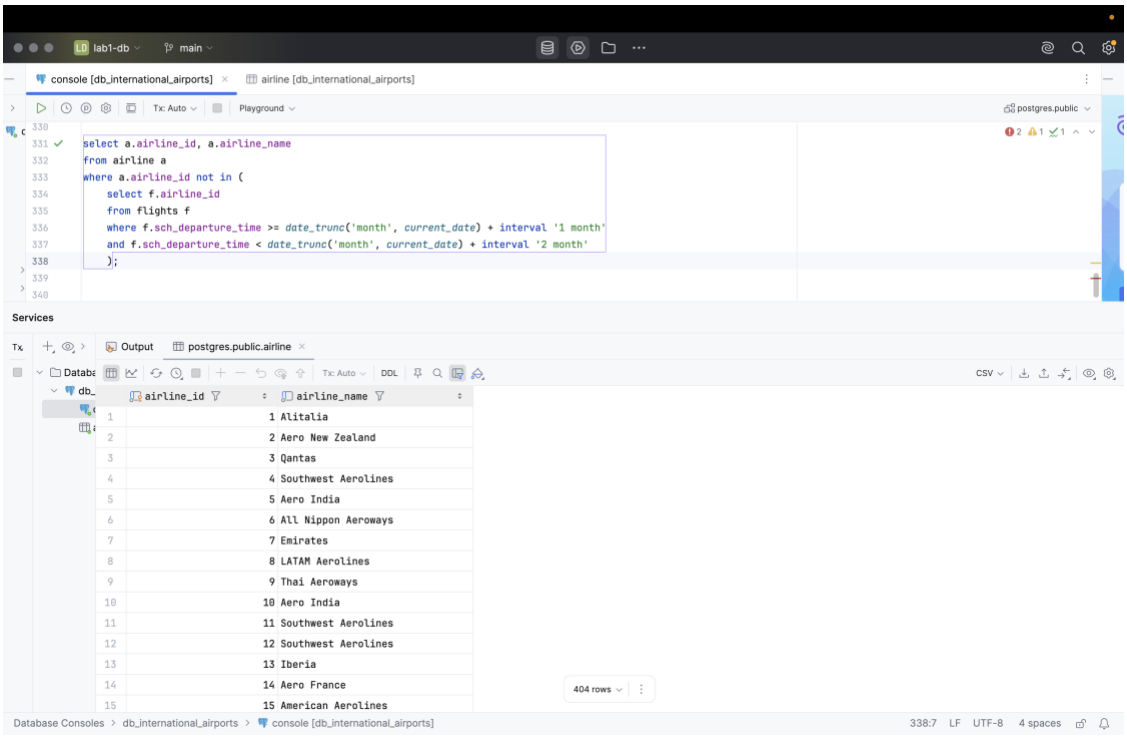
2. Compose a query to obtain a list of all flights with the names of departure airports.



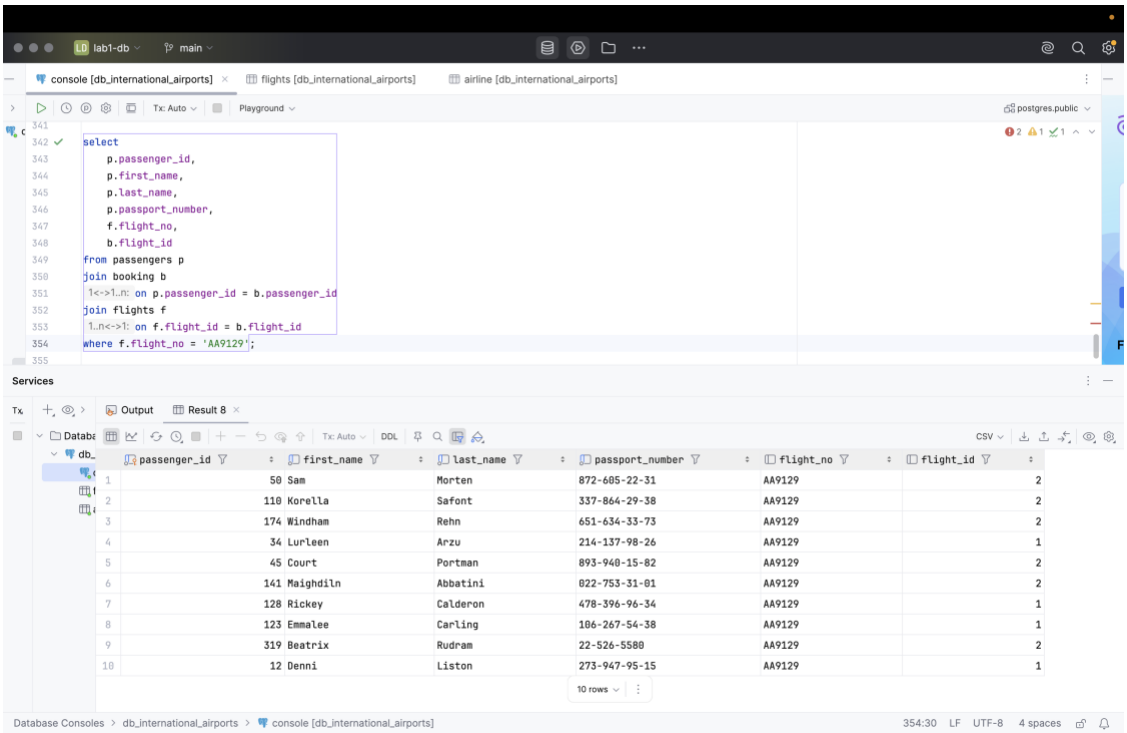
```
select
    f.flight_id,
    a.airport_name as departure_airport,
    a.city as departure_city,
    f.sch_departure_time,
    f.sch_arrival_time
from flights f
join airport a
 1..n<->1: on f.departing_airport_id = a.airport_id;
```

	flight_id	departure_airport	departure_city	sch_departure_time	sch_arrival_time
1	3	Blue Canyon Nyack Airport	Huolu	2007-05-07 19:10:38.000000	2025-05-21 13:22:47.000000
2	4	Viru Viru International Airport	Longos	2016-07-26 03:27:54.000000	2002-03-30 22:46:52.000000
3	5	Lauro Kurtz Airport	Vänersborg	2011-12-15 18:50:20.000000	2019-09-19 20:20:51.000000
4	6	Solano Airport	Umeå	2006-08-01 00:29:29.000000	2024-03-28 09:04:20.000000
5	7	Douglas Lake Airport	Riebiņi	2014-04-12 05:27:46.000000	2003-04-12 18:50:18.000000
6	8	Wantoat Airport	Yanhe	2012-01-25 03:52:31.000000	2014-11-02 01:10:35.000000
7	9	Semonkong Airport	Rokycany	2002-12-23 15:19:38.000000	2012-03-23 17:59:28.000000
8	10	Manners Creek Airport	Azara	2014-03-31 08:30:51.000000	2014-05-06 21:05:45.000000
9	11	Sisimiut Airport	Lepaterique	2009-09-03 13:50:00.000000	2012-06-08 04:32:02.000000
10	12	Azaza Airport	El Guamo	2014-03-25 05:09:23.000000	2019-05-07 15:39:15.000000
11	13	Lefkoniko Airport	Uberaba	2012-06-18 00:43:59.000000	2005-12-21 12:07:13.000000
12	14	LTS Pulau Redang Airport	Y 395 rows	2020-06-07 05:02:50.000000	2015-12-05 02:42:04.000000

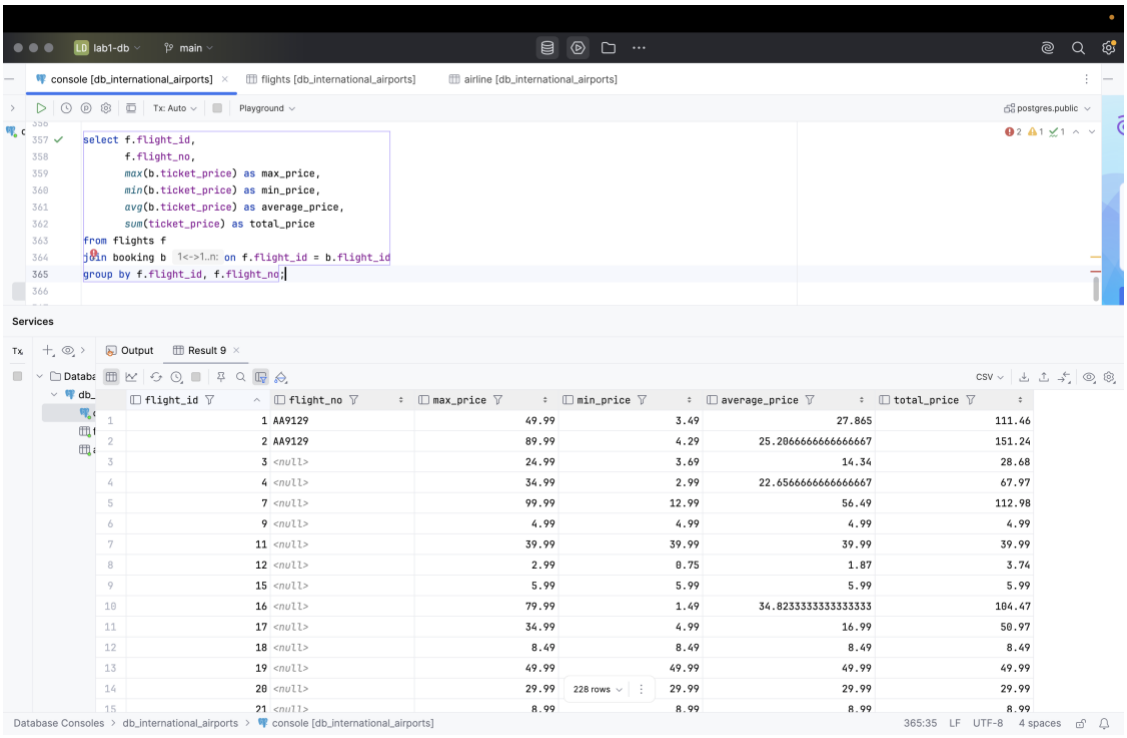
3. Create a query that finds all airlines that have no flights scheduled for the next month.



4. Create a query to display a list of passengers on a specific flight.



5. Write a query that calculates the average, total, maximum and minimum price of tickets for each flight.

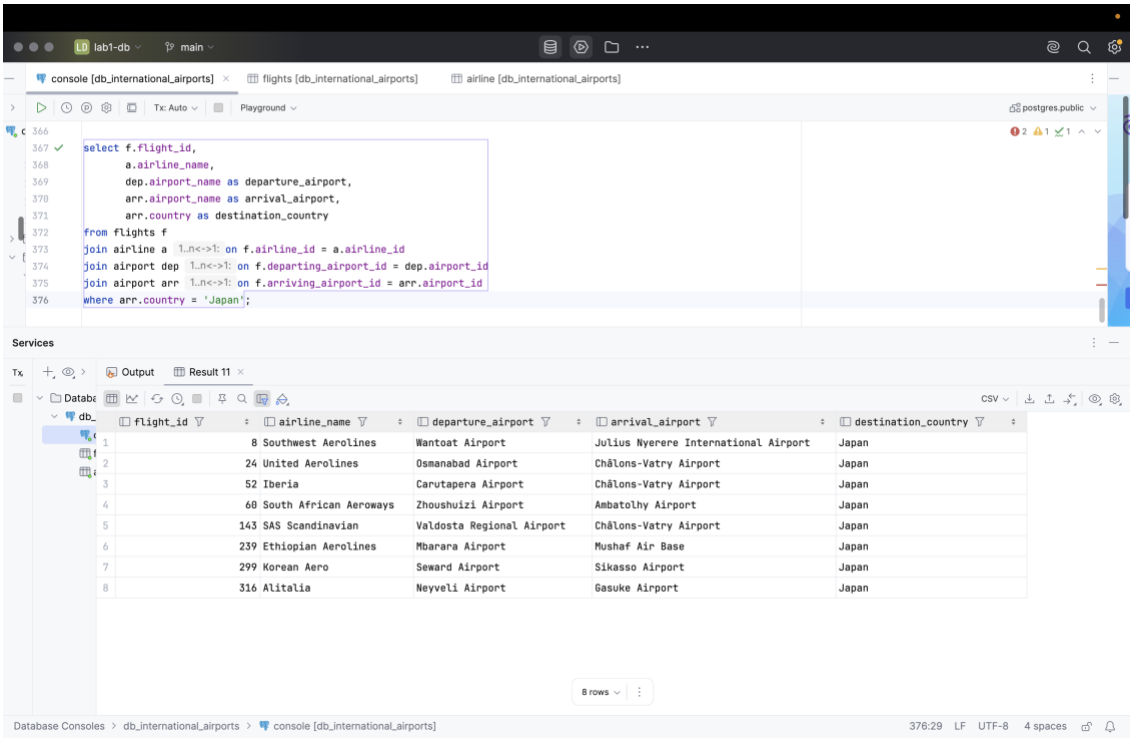


```
select f.flight_id,
       f.flight_no,
       max(b.ticket_price) as max_price,
       min(b.ticket_price) as min_price,
       avg(b.ticket_price) as average_price,
       sum(ticket_price) as total_price
from flights f
join booking b on f.flight_id = b.flight_id
group by f.flight_id, f.flight_no;
```

flight_id	flight_no	max_price	min_price	average_price	total_price
1	AA9129	49.99	3.49	27.865	111.46
2	AA9129	89.99	4.29	25.2066666666666667	151.24
3	<null>	24.99	3.69	14.34	28.68
4	<null>	34.99	2.99	22.6566666666666667	67.97
7	<null>	99.99	12.99	56.49	112.98
9	<null>	4.99	4.99	4.99	4.99
11	<null>	39.99	39.99	39.99	39.99
12	<null>	2.99	0.75	1.87	3.74
15	<null>	5.99	5.99	5.99	5.99
16	<null>	79.99	1.49	34.8233333333333333	104.47
17	<null>	34.99	4.99	16.99	50.97
18	<null>	8.49	8.49	8.49	8.49
19	<null>	49.99	49.99	49.99	49.99
20	<null>	29.99	29.99	29.99	29.99
21	<null>	8.99	8.99	8.99	8.99

228 rows

6. Create a query that shows all flights flying to a specific country by combining flights, airports and airline, and using the condition on the country name.

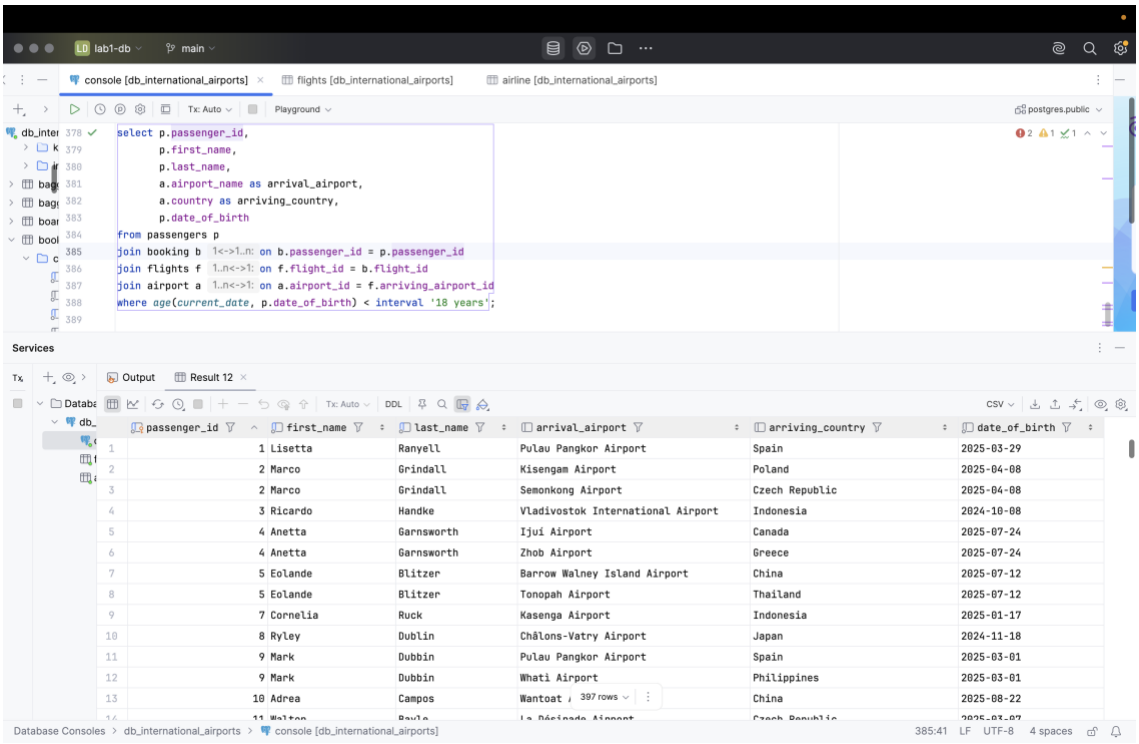


```
select f.flight_id,
       a.airline_name,
       dep.airport_name as departure_airport,
       arr.airport_name as arrival_airport,
       arr.country as destination_country
from flights f
join airline a on f.airline_id = a.airline_id
join airport dep on f.departing_airport_id = dep.airport_id
join airport arr on f.arriving_airport_id = arr.airport_id
where arr.country = 'Japan';
```

flight_id	airline_name	departure_airport	arrival_airport	destination_country
8	Southwest Aerolines	Wantoat Airport	Julius Nyerere International Airport	Japan
24	United Aerolines	Osmanabad Airport	Châlons-Vatry Airport	Japan
52	Iberia	Carutapera Airport	Châlons-Vatry Airport	Japan
60	South African Aeroways	Zhoushuizi Airport	Ambatolhy Airport	Japan
143	SAS Scandinavian	Valdosta Regional Airport	Châlons-Vatry Airport	Japan
239	Ethiopian Aerolines	Mbarara Airport	Mushaf Air Base	Japan
299	Korean Aero	Seward Airport	Sikasso Airport	Japan
316	Alitalia	Neyveli Airport	Gasuke Airport	Japan

8 rows

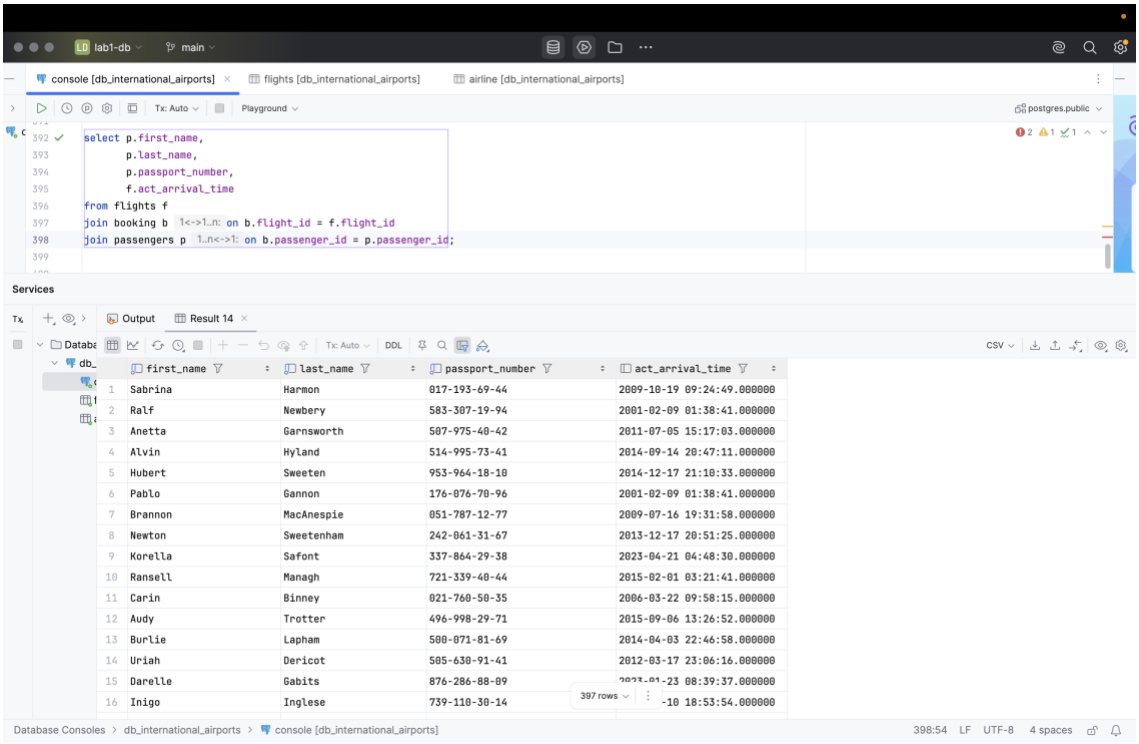
7. Display a list of minor passengers and their arrival destination.



```
select p.passenger_id,
       p.first_name,
       p.last_name,
       a.airport_name as arrival_airport,
       a.country as arriving_country,
       p.date_of_birth
from passengers p
join booking b on b.passenger_id = p.passenger_id
join flights f on f.flight_id = b.flight_id
join airport a on a.airport_id = f.arriving_airport_id
where age(current_date, p.date_of_birth) < interval '18 years';
```

	passenger_id	first_name	last_name	arrival_airport	arriving_country	date_of_birth
1	1	Lisetta	Ranyell	Pulau Pangkor Airport	Spain	2025-03-29
2	2	Marco	Grindall	Kisengam Airport	Poland	2025-04-08
3	2	Marco	Grindall	Semonkong Airport	Czech Republic	2025-04-08
4	3	Ricardo	Handke	Vladivostok International Airport	Indonesia	2024-10-08
5	4	Anetta	Garnsworth	Ijui Airport	Canada	2025-07-24
6	4	Anetta	Garnsworth	Zhob Airport	Greece	2025-07-24
7	5	Eolande	Blitzer	Barrow Walney Island Airport	China	2025-07-12
8	5	Eolande	Blitzer	Tonopah Airport	Thailand	2025-07-12
9	7	Cornelia	Ruck	Kasenga Airport	Indonesia	2025-01-17
10	8	Ryley	Dublin	Châlons-Vatry Airport	Japan	2024-11-18
11	9	Mark	Dubbin	Pulau Pangkor Airport	Spain	2025-03-01
12	9	Mark	Dubbin	Whati Airport	Philippines	2025-03-01
13	10	Adrea	Campos	Wantoat	China	2025-08-22

8. Display the passenger's full name, passport number, and the passenger's current time of arrival at the destination.



```
select p.first_name,
       p.last_name,
       p.passport_number,
       f.act_arrival_time
from flights f
join booking b on b.flight_id = f.flight_id
join passengers p on b.passenger_id = p.passenger_id;
```

	first_name	last_name	passport_number	act_arrival_time
1	Sabrina	Harmon	017-193-69-44	2009-10-19 09:24:49.000000
2	Ralf	Newbery	583-307-19-94	2001-02-09 01:38:41.000000
3	Anetta	Garnsworth	507-975-40-42	2011-07-05 15:17:03.000000
4	Alvin	Hyland	514-995-73-41	2014-09-14 20:47:11.000000
5	Hubert	Sweeten	953-964-18-10	2014-12-17 21:10:33.000000
6	Pablo	Gannon	176-076-70-96	2001-02-09 01:38:41.000000
7	Brannon	MacAnespie	051-787-12-77	2009-07-16 19:31:58.000000
8	Newton	Sweetenham	242-061-31-67	2013-12-17 20:51:25.000000
9	Korella	Safont	337-864-29-38	2023-04-21 04:48:30.000000
10	Ransell	Managh	721-339-40-44	2015-02-01 03:21:41.000000
11	Carin	Binney	021-760-50-35	2006-03-22 09:58:15.000000
12	Audy	Trotter	496-998-29-71	2015-09-06 13:26:52.000000
13	Burlie	Lapham	500-071-81-69	2014-04-03 22:46:58.000000
14	Uriah	Dericot	505-630-91-41	2012-03-17 23:06:16.000000
15	Darelle	Gabits	876-286-88-09	2021-01-23 08:39:37.000000
16	Inigo	Inglese	739-110-30-14	-10 18:53:54.000000

9. Print a list of flights where the airline's home country and origin country are the same. Group them by the airport country.