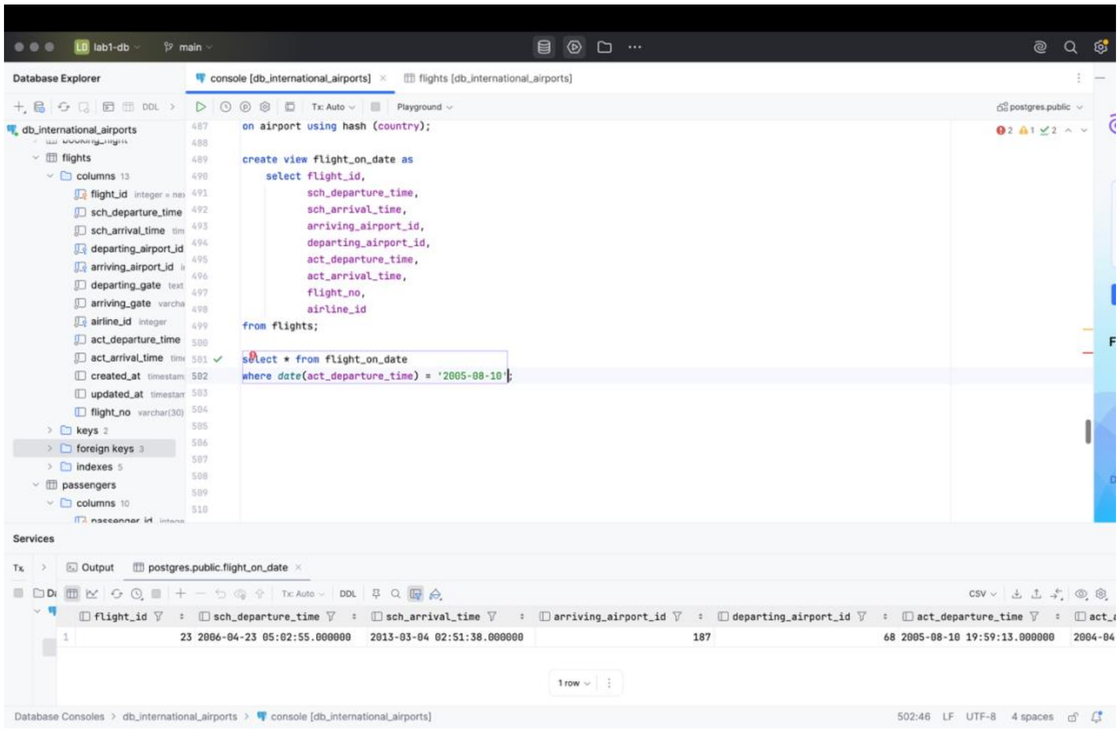
LAB 8

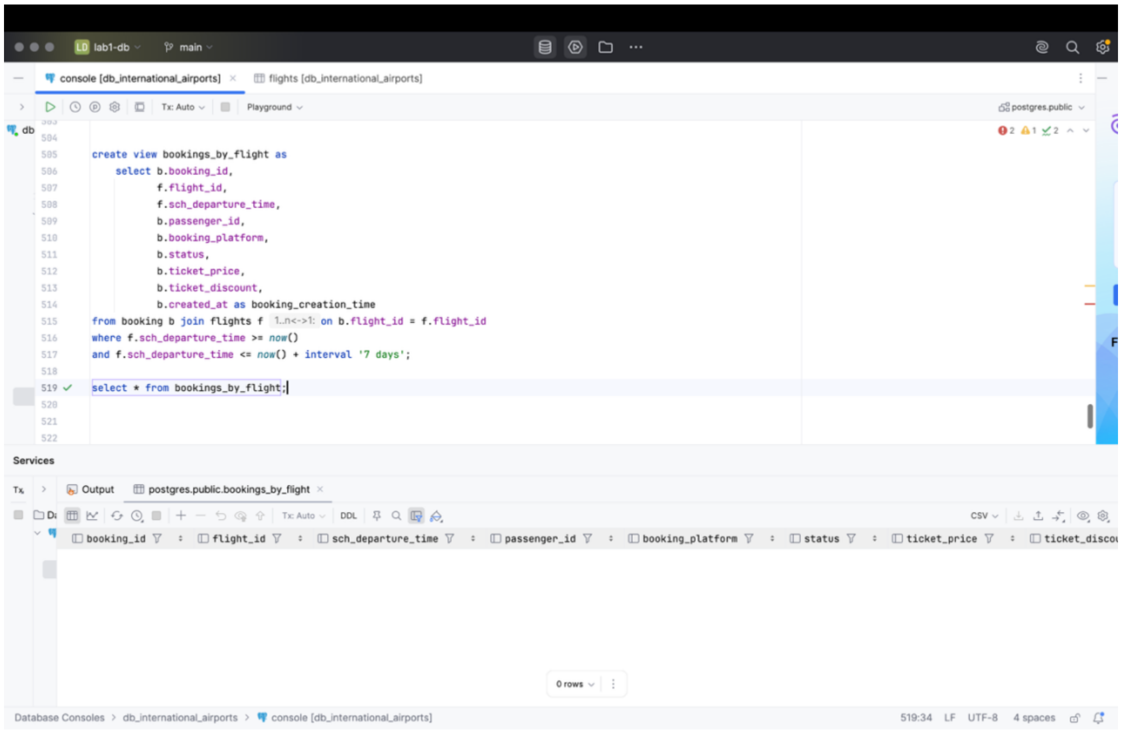
1. Create a view to show details of all flights that are departing on a specific date.



```sql
on airport using hash (country);

create view flight_on_date as
    select flight_id,
           sch_departure_time,
           sch_arrival_time,
           arriving_airport_id,
           departing_airport_id,
           act_departure_time,
           act_arrival_time,
           flight_no,
           airline_id
from flights;

select * from flight_on_date
where date(act_departure_time) = '2005-08-10';
```

```
postgres.public.flight_on_date
  flight_id   sch_departure_time           sch_arrival_time             arriving_airport_id   departing_airport_id   act_departure_time           act_
1        23   2006-04-23 05:02:55.000000   2013-03-04 02:51:38.000000                   187                     68   2005-08-10 19:59:13.000000   2004-04
1 row
```

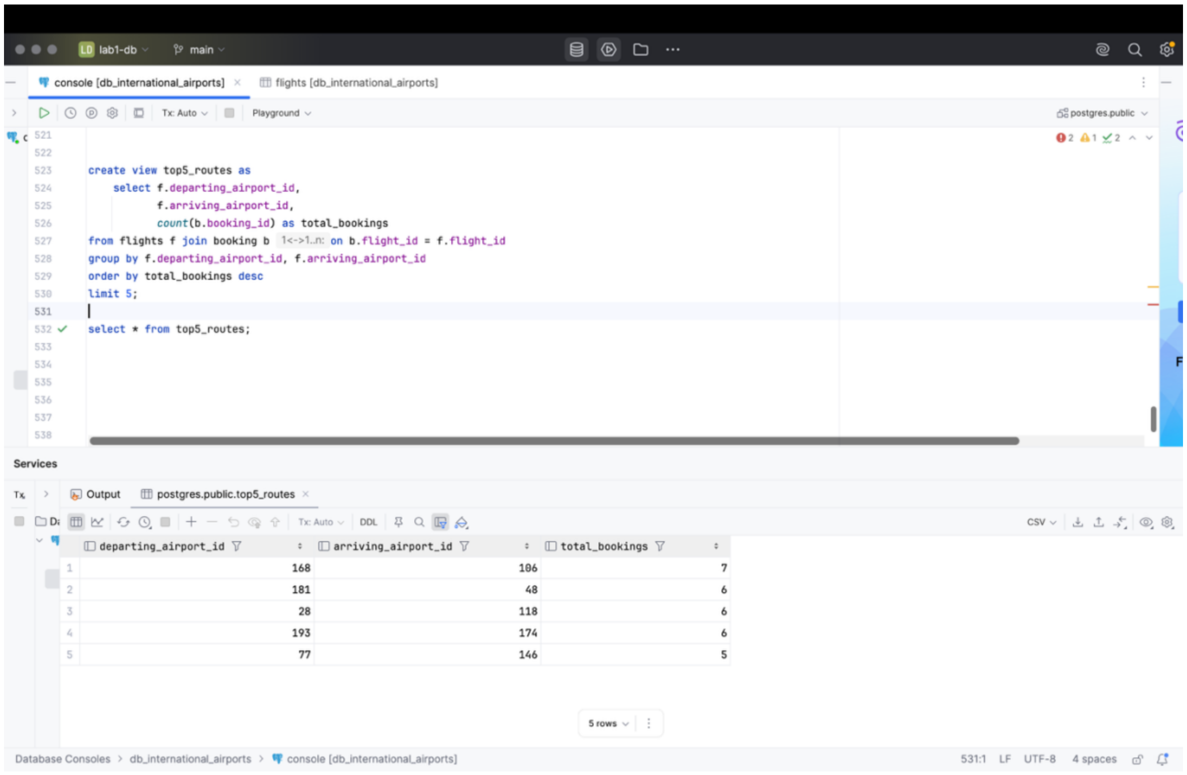
2. Create a view that shows bookings for flights scheduled to depart within the next week.



```sql
create view bookings_by_flight as
    select b.booking_id,
           f.flight_id,
           f.sch_departure_time,
           b.passenger_id,
           b.booking_platform,
           b.status,
           b.ticket_price,
           b.ticket_discount,
           b.created_at as booking_creation_time
from booking b join flights f on b.flight_id = f.flight_id
where f.sch_departure_time >= now()
and f.sch_departure_time <= now() + interval '7 days';

select * from bookings_by_flight;
```

```
postgres.public.bookings_by_flight
booking_id   flight_id   sch_departure_time   passenger_id   booking_platform   status   ticket_price   ticket_disco
0 rows
```

3. Create a view to show the top 5 most popular flight routes based on the number of bookings.



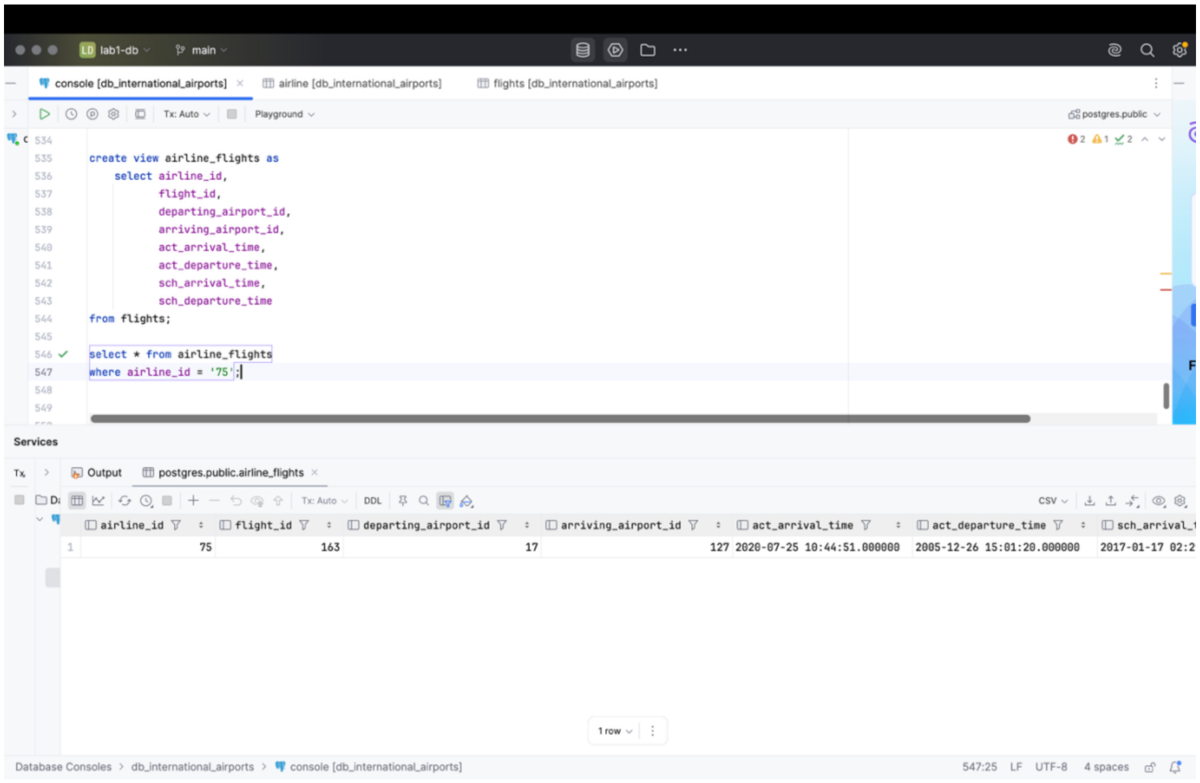
```sql
create view top5_routes as
    select f.departing_airport_id,
           f.arriving_airport_id,
           count(b.booking_id) as total_bookings
from flights f join booking b on b.flight_id = f.flight_id
group by f.departing_airport_id, f.arriving_airport_id
order by total_bookings desc
limit 5;

select * from top5_routes;
```

postgres.public.top5_routes

	departing_airport_id	arriving_airport_id	total_bookings
1	168	106	7
2	181	48	6
3	28	118	6
4	193	174	6
5	77	146	5

5 rows

4. Create a view that lists all flights for a specific airline



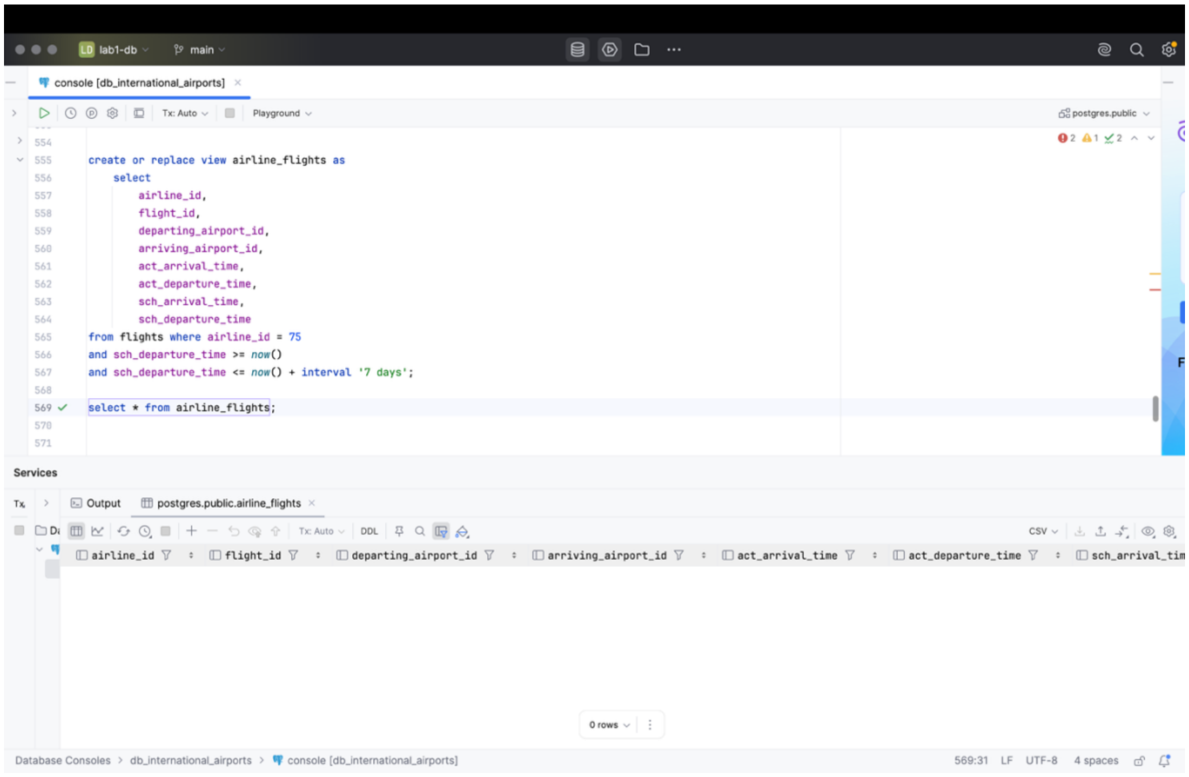
```sql
create view airline_flights as
    select airline_id,
           flight_id,
           departing_airport_id,
           arriving_airport_id,
           act_arrival_time,
           act_departure_time,
           sch_arrival_time,
           sch_departure_time
from flights;

select * from airline_flights
where airline_id = '75';
```

postgres.public.airline_flights

	airline_id	flight_id	departing_airport_id	arriving_airport_id	act_arrival_time	act_departure_time	sch_arrival_
1	75	163	17	127	2020-07-25 10:44:51.000000	2005-12-26 15:01:20.000000	2017-01-17 02:2

1 row

5. Modify the view created in task 4 to show only flights departing within the next 7 days for a specific airline.

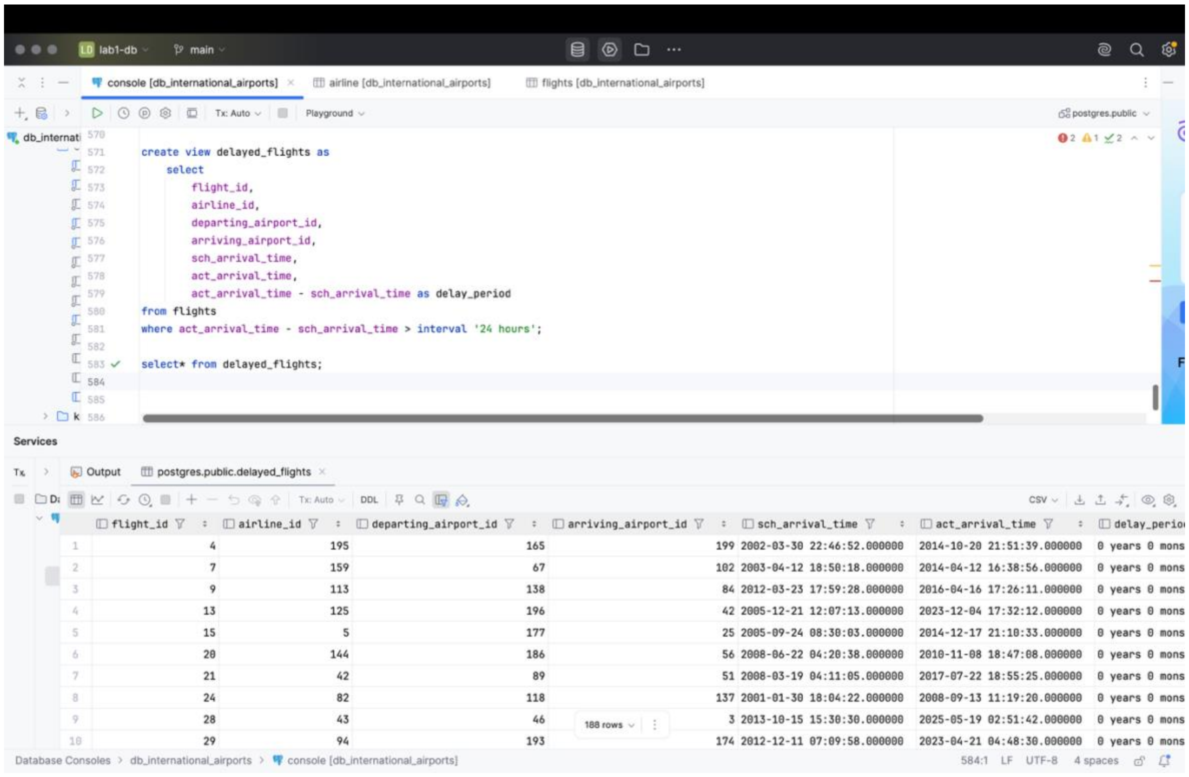


```sql
create or replace view airline_flights as
    select
        airline_id,
        flight_id,
        departing_airport_id,
        arriving_airport_id,
        act_arrival_time,
        act_departure_time,
        sch_arrival_time,
        sch_departure_time
from flights where airline_id = 75
and sch_departure_time >= now()
and sch_departure_time <= now() + interval '7 days';

select * from airline_flights;
```

airline_id	flight_id	departing_airport_id	arriving_airport_id	act_arrival_time	act_departure_time	sch_arrival_tim

0 rows

6. Create a view to show flights that are delayed by more than 24 hours.

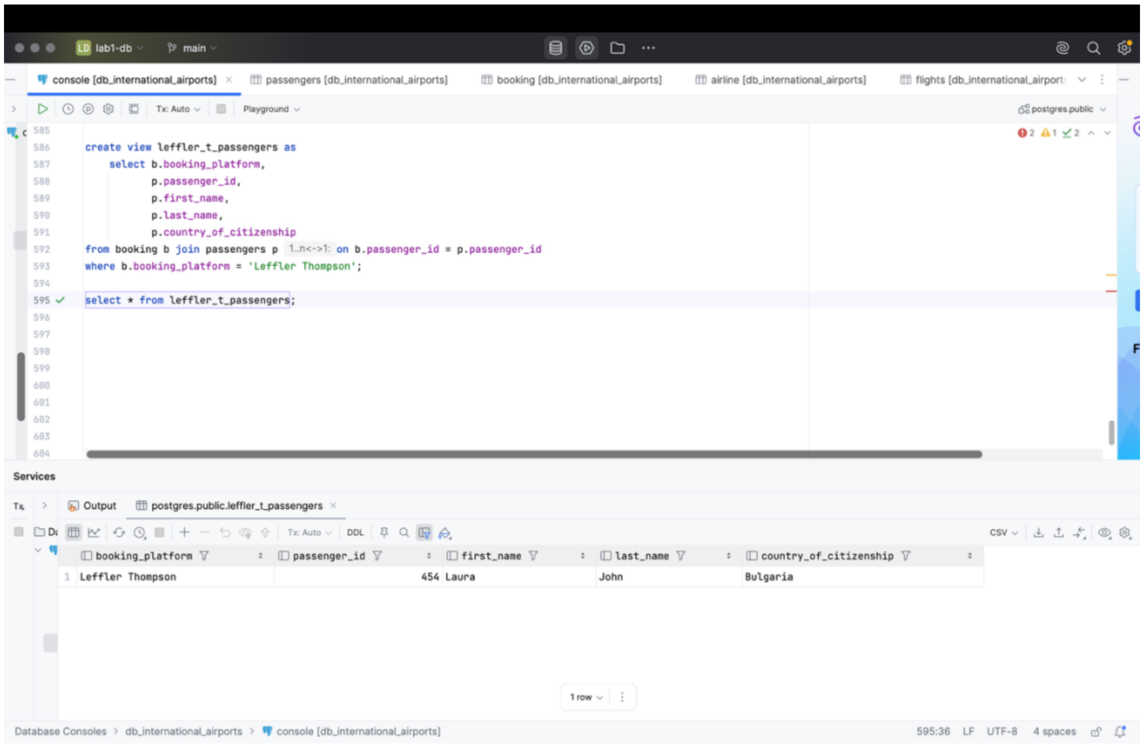


```sql
create view delayed_flights as
    select
        flight_id,
        airline_id,
        departing_airport_id,
        arriving_airport_id,
        sch_arrival_time,
        act_arrival_time,
        act_arrival_time - sch_arrival_time as delay_period
from flights
where act_arrival_time - sch_arrival_time > interval '24 hours';

select* from delayed_flights;
```

	flight_id	airline_id	departing_airport_id	arriving_airport_id	sch_arrival_time	act_arrival_time	delay_perio
1	4	195	165	199	2002-03-30 22:46:52.000000	2014-10-20 21:51:39.000000	0 years 0 mons
2	7	159	67	102	2003-04-12 18:50:18.000000	2014-04-12 16:38:56.000000	0 years 0 mons
3	9	113	138	84	2012-03-23 17:59:28.000000	2016-04-16 17:26:11.000000	0 years 0 mons
4	13	125	196	42	2005-12-21 12:07:13.000000	2023-12-04 17:32:12.000000	0 years 0 mons
5	15	5	177	25	2005-09-24 08:30:03.000000	2014-12-17 21:10:33.000000	0 years 0 mons
6	20	144	186	56	2008-06-22 04:20:38.000000	2010-11-08 18:47:08.000000	0 years 0 mons
7	21	42	89	51	2008-03-19 04:11:05.000000	2017-07-22 18:55:25.000000	0 years 0 mons
8	24	82	118	137	2001-01-30 18:04:22.000000	2008-09-13 11:19:20.000000	0 years 0 mons
9	28	43	46	3	2013-10-15 15:30:30.000000	2025-05-19 02:51:42.000000	0 years 0 mons
10	29	94	193	174	2012-12-11 07:09:58.000000	2023-04-21 04:48:30.000000	0 years 0 mons

188 rows

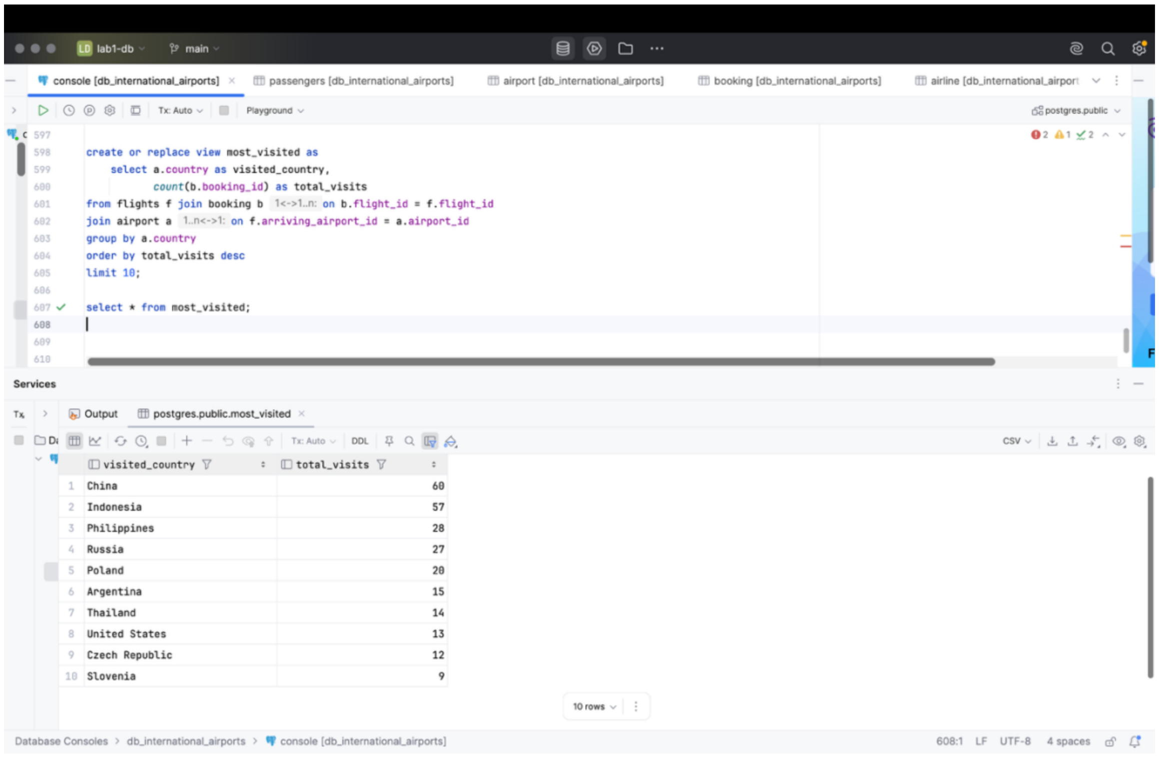
7. Create a view in which you can display the full name and country of origin of passengers who made bookings on Leffler-Thompson platform. Then show the list of that passengers.



```sql
create view leffler_t_passengers as
    select b.booking_platform,
           p.passenger_id,
           p.first_name,
           p.last_name,
           p.country_of_citizenship
from booking b join passengers p on b.passenger_id = p.passenger_id
where b.booking_platform = 'Leffler Thompson';

select * from leffler_t_passengers;
```

```
  booking_platform   passenger_id  first_name  last_name  country_of_citizenship
1 Leffler Thompson            454  Laura       John       Bulgaria
```

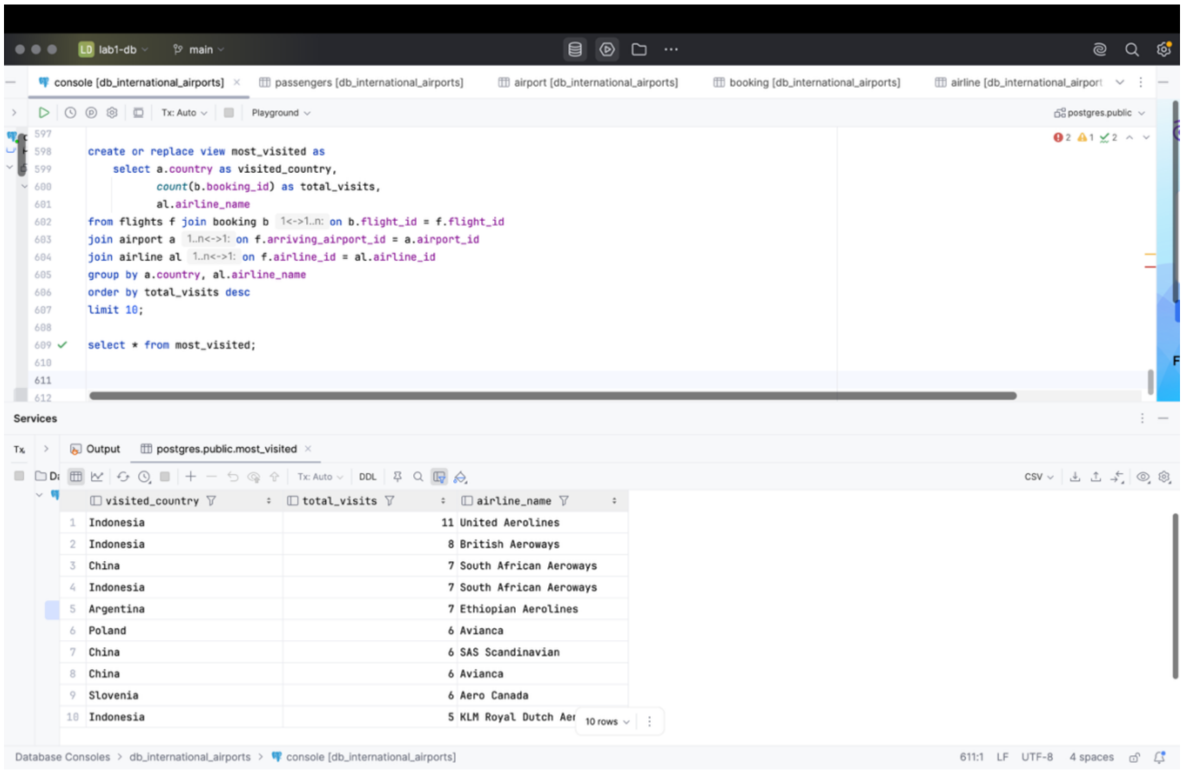
8. Create a view that shows top 10 most visited countries.



```sql
create or replace view most_visited as
    select a.country as visited_country,
           count(b.booking_id) as total_visits
from flights f join booking b on b.flight_id = f.flight_id
join airport a on f.arriving_airport_id = a.airport_id
group by a.country
order by total_visits desc
limit 10;

select * from most_visited;
```

```
   visited_country  total_visits
1  China                      60
2  Indonesia                  57
3  Philippines                28
4  Russia                     27
5  Poland                     20
6  Argentina                  15
7  Thailand                   14
8  United States              13
9  Czech Republic             12
10 Slovenia                    9
```

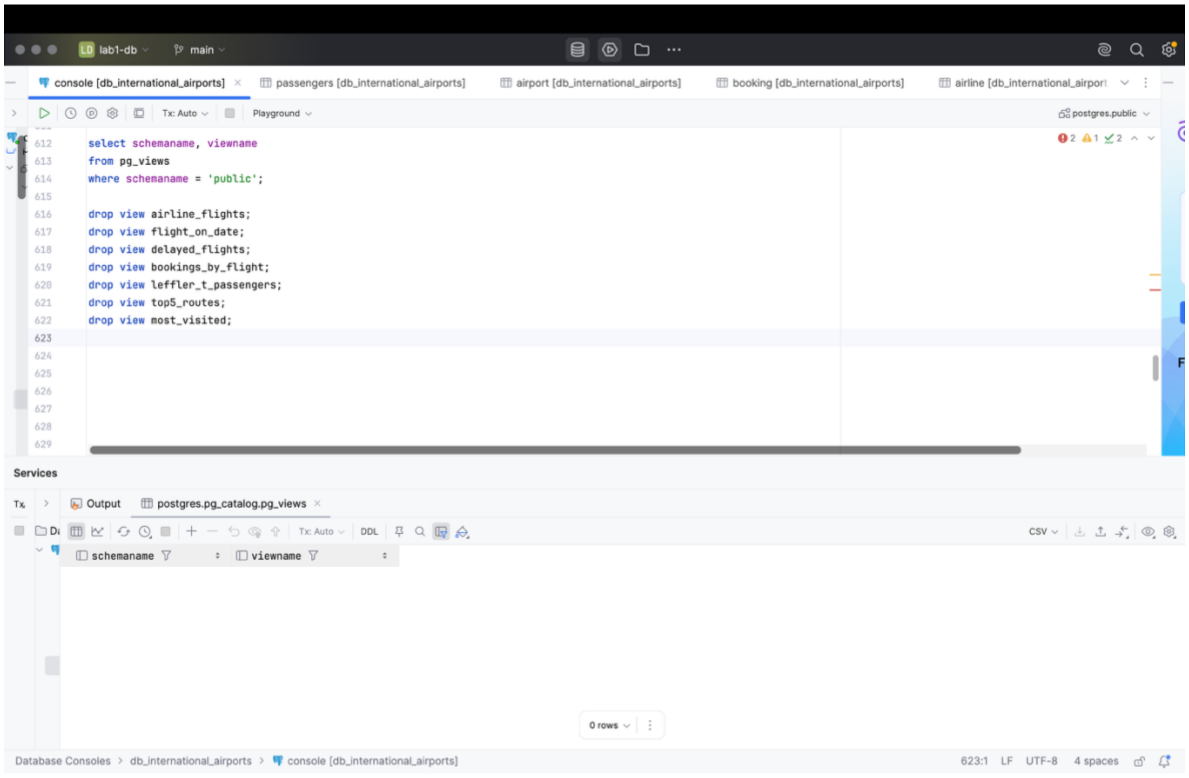
9. Update any of the created views by adding new information in the view table. Show results.



```sql
create or replace view most_visited as
    select a.country as visited_country,
           count(b.booking_id) as total_visits,
           al.airline_name
from flights f join booking b on b.flight_id = f.flight_id
join airport a on f.arriving_airport_id = a.airport_id
join airline al on f.airline_id = al.airline_id
group by a.country, al.airline_name
order by total_visits desc
limit 10;

select * from most_visited;
```

	visited_country	total_visits	airline_name
1	Indonesia	11	United Aerolines
2	Indonesia	8	British Aeroways
3	China	7	South African Aeroways
4	Indonesia	7	South African Aeroways
5	Argentina	7	Ethiopian Aerolines
6	Poland	6	Avianca
7	China	6	SAS Scandinavian
8	China	6	Avianca
9	Slovenia	6	Aero Canada
10	Indonesia	5	KLM Royal Dutch Aer

10. Drop all existing views.



```sql
select schemaname, viewname
from pg_views
where schemaname = 'public';

drop view airline_flights;
drop view flight_on_date;
drop view delayed_flights;
drop view bookings_by_flight;
drop view leffler_t_passengers;
drop view top5_routes;
drop view most_visited;
```

schemaname	viewname