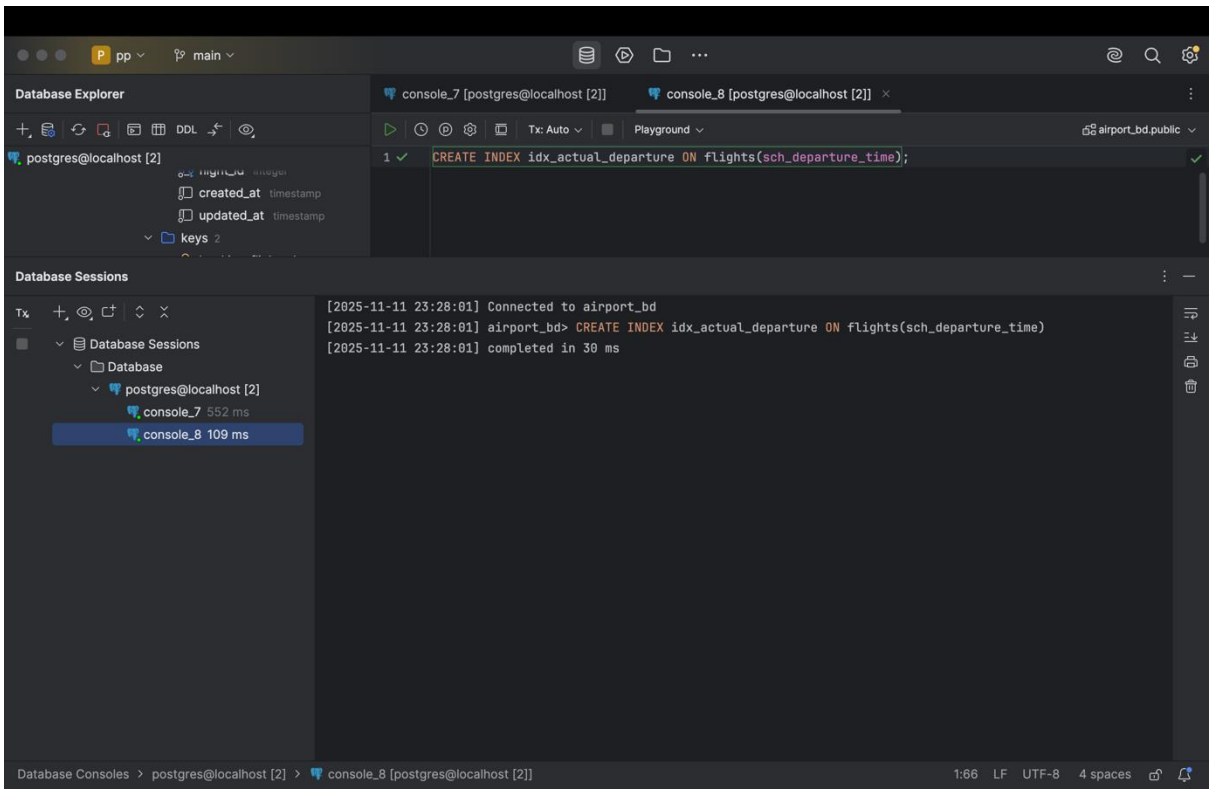
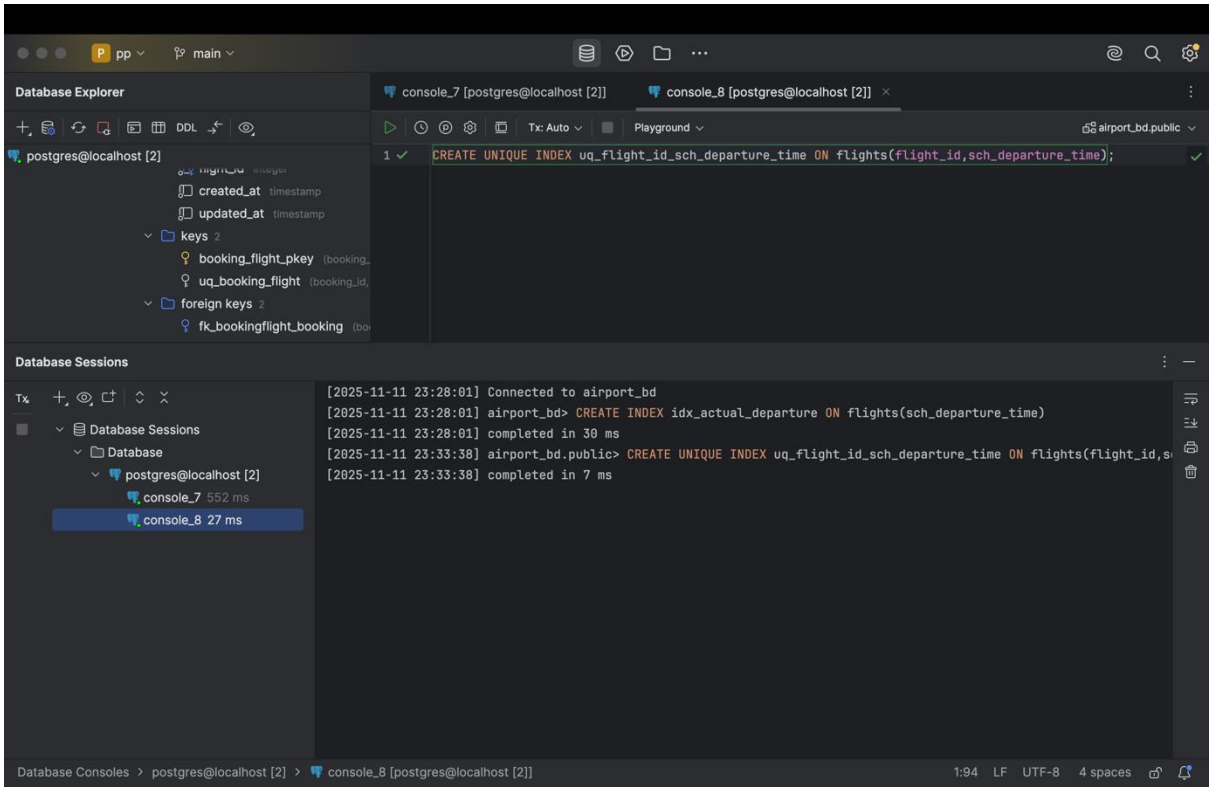
Laboratory work 7

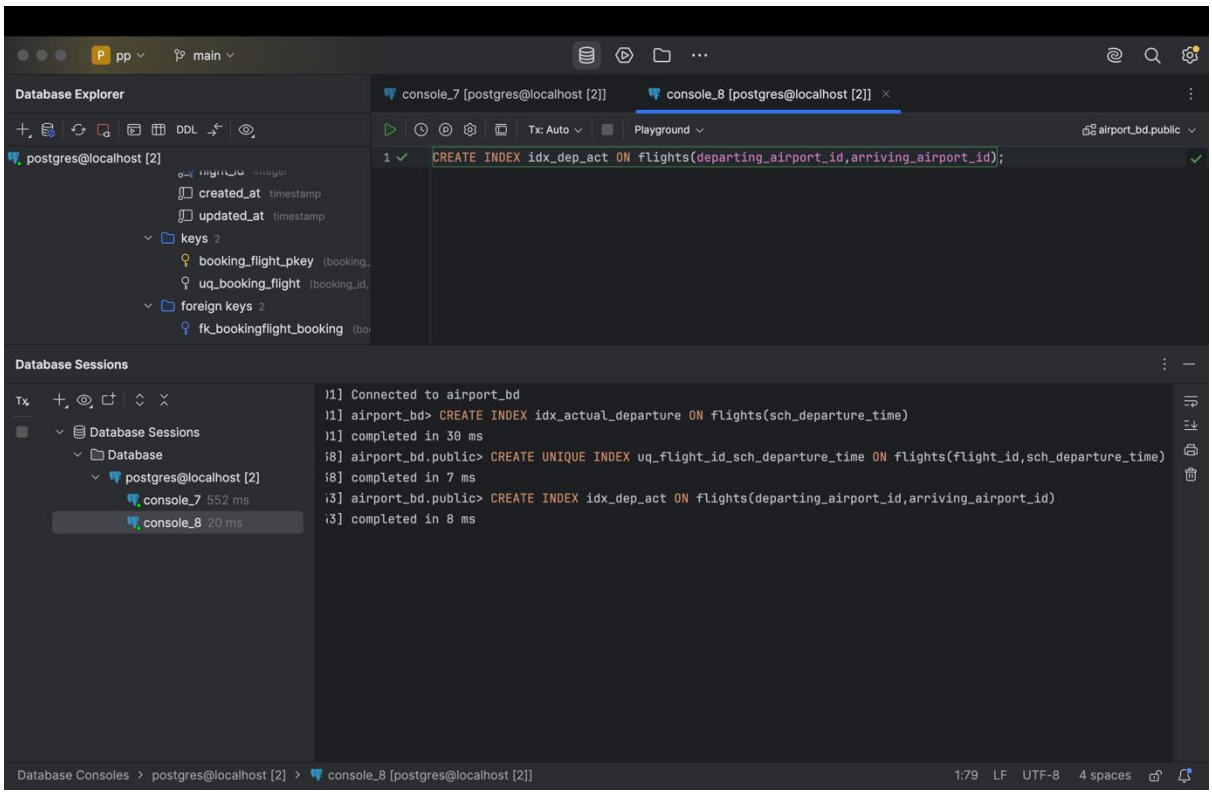
1. Create an index on the actual_departure column in the flights table.



2. Create a unique index to ensure flight_no and scheduled_departure combinations are unique.

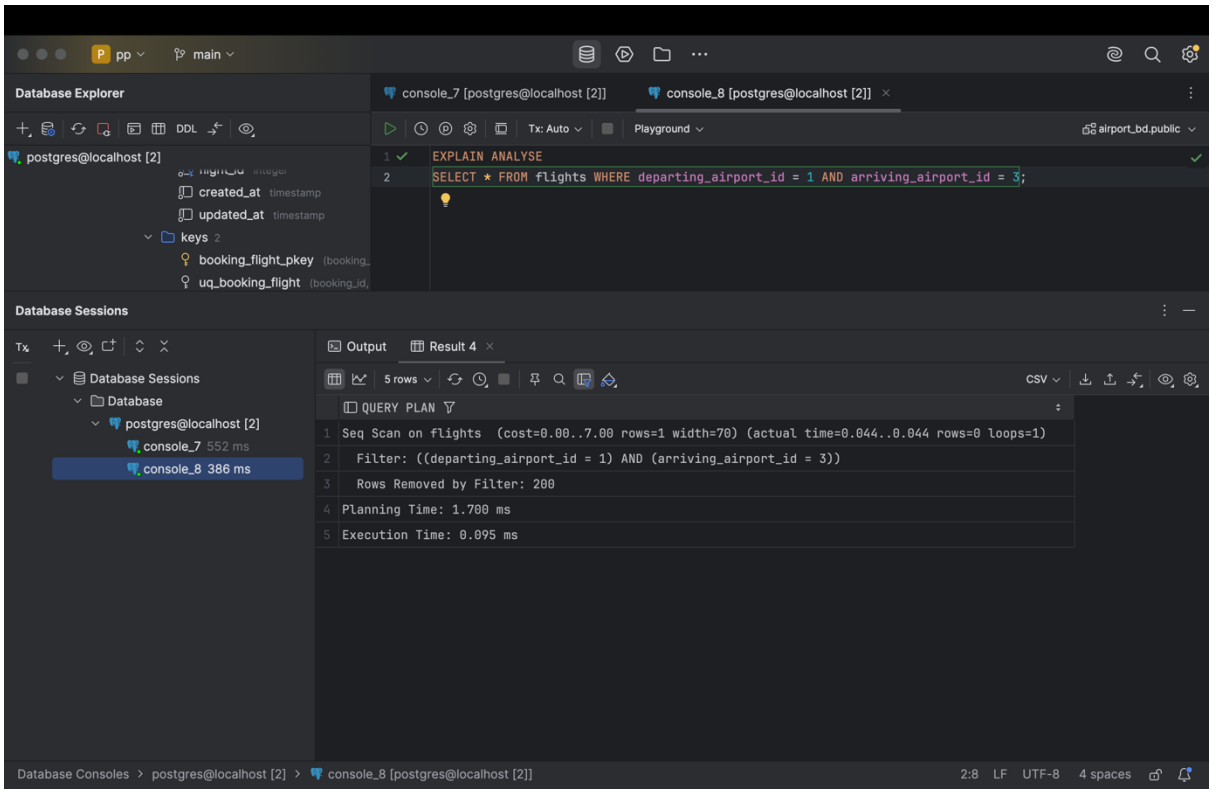


3. Create a composite index on the departure_airport_id and arrival_airport_id columns.

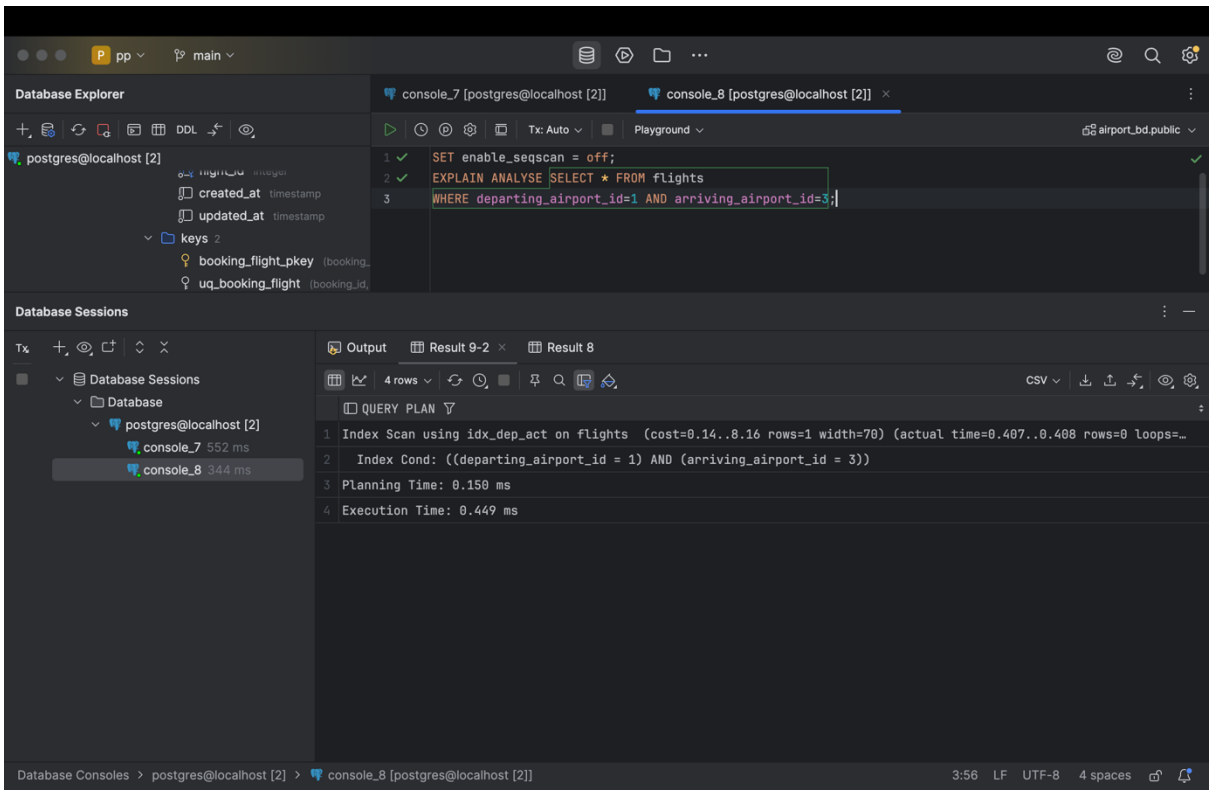


4. Evaluate the difference in query performance with and without indexes. Measure performance differences.

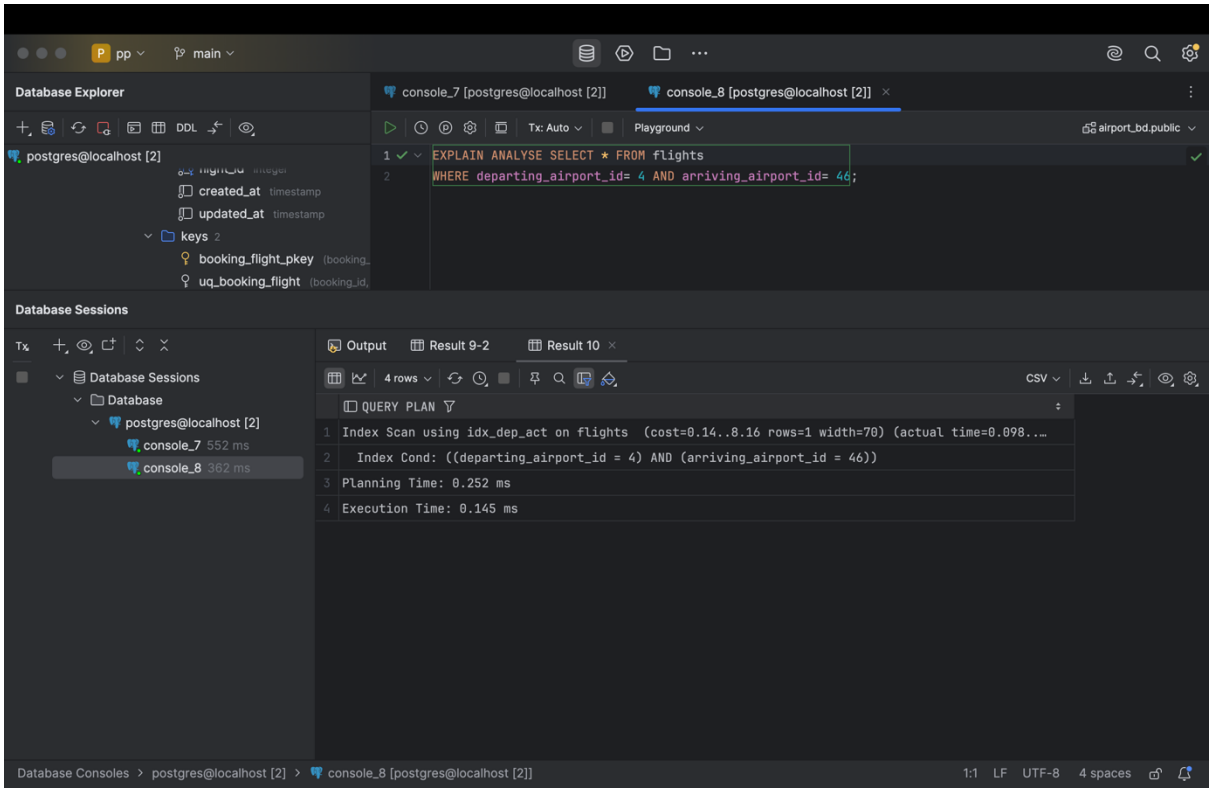
Without:



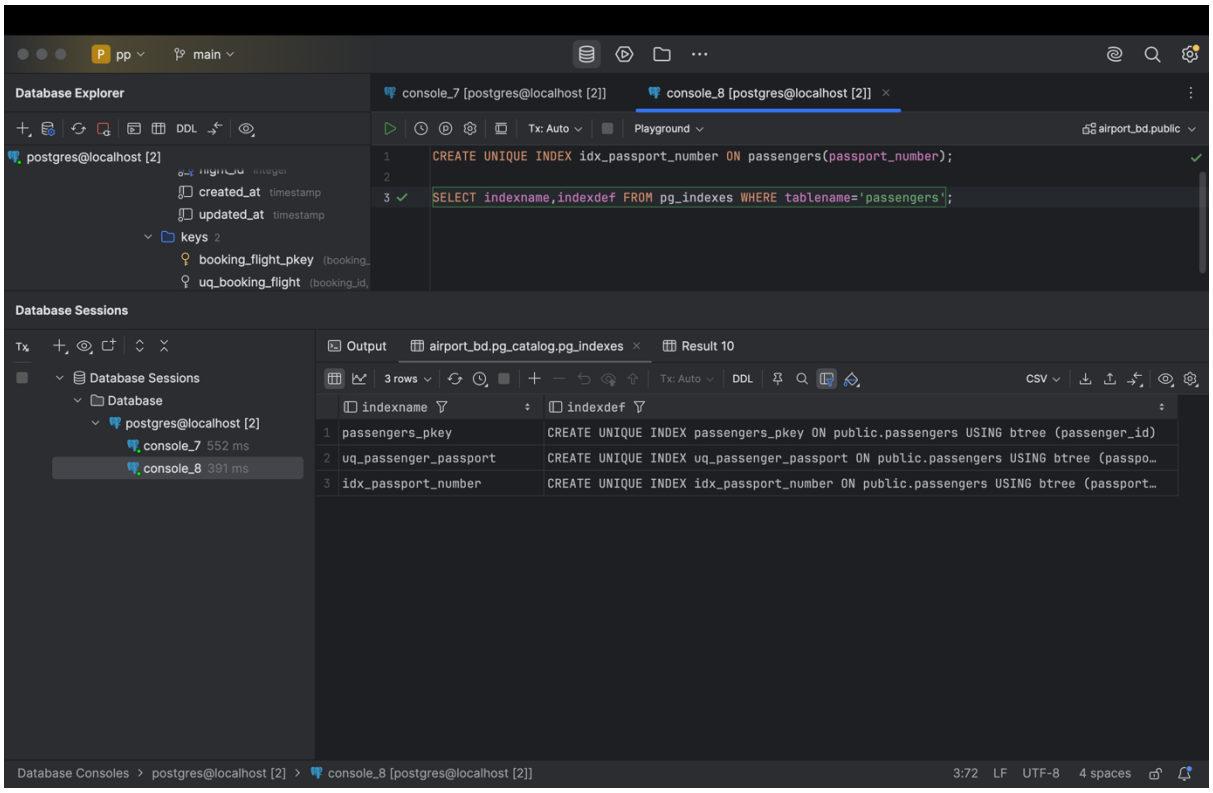
With:

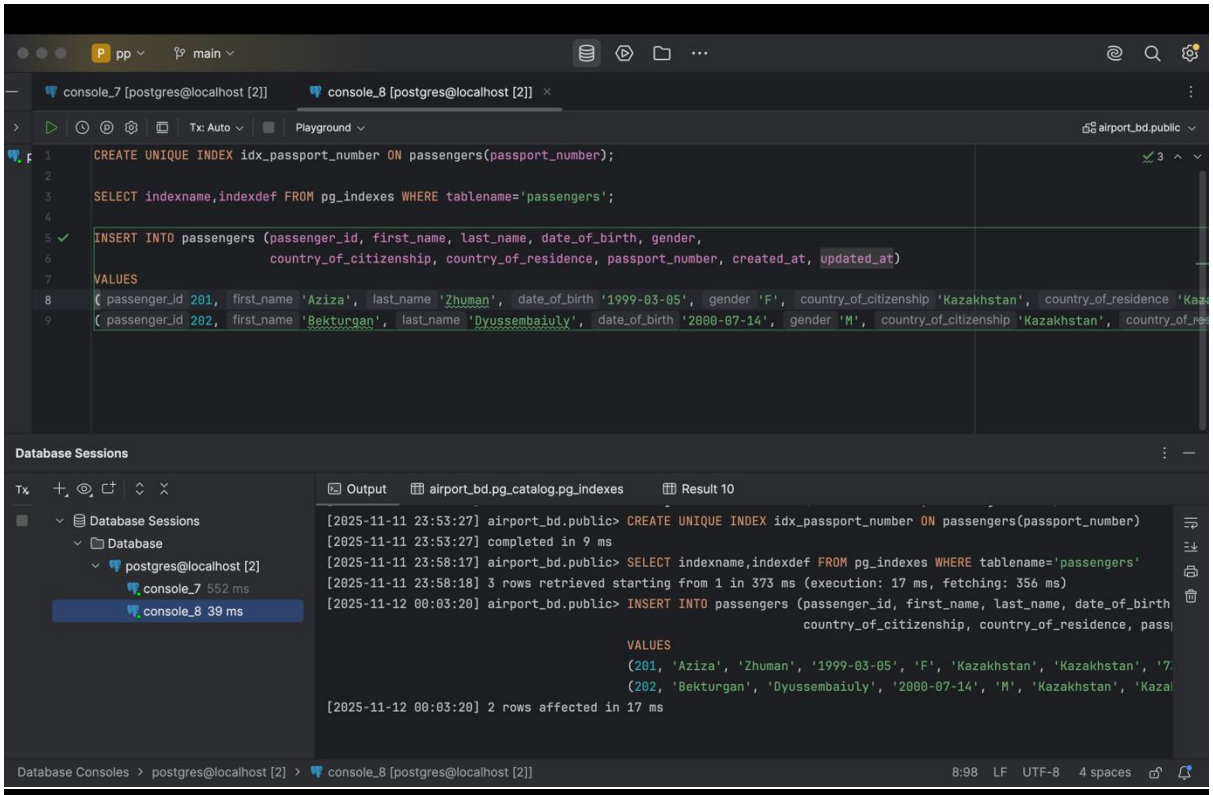


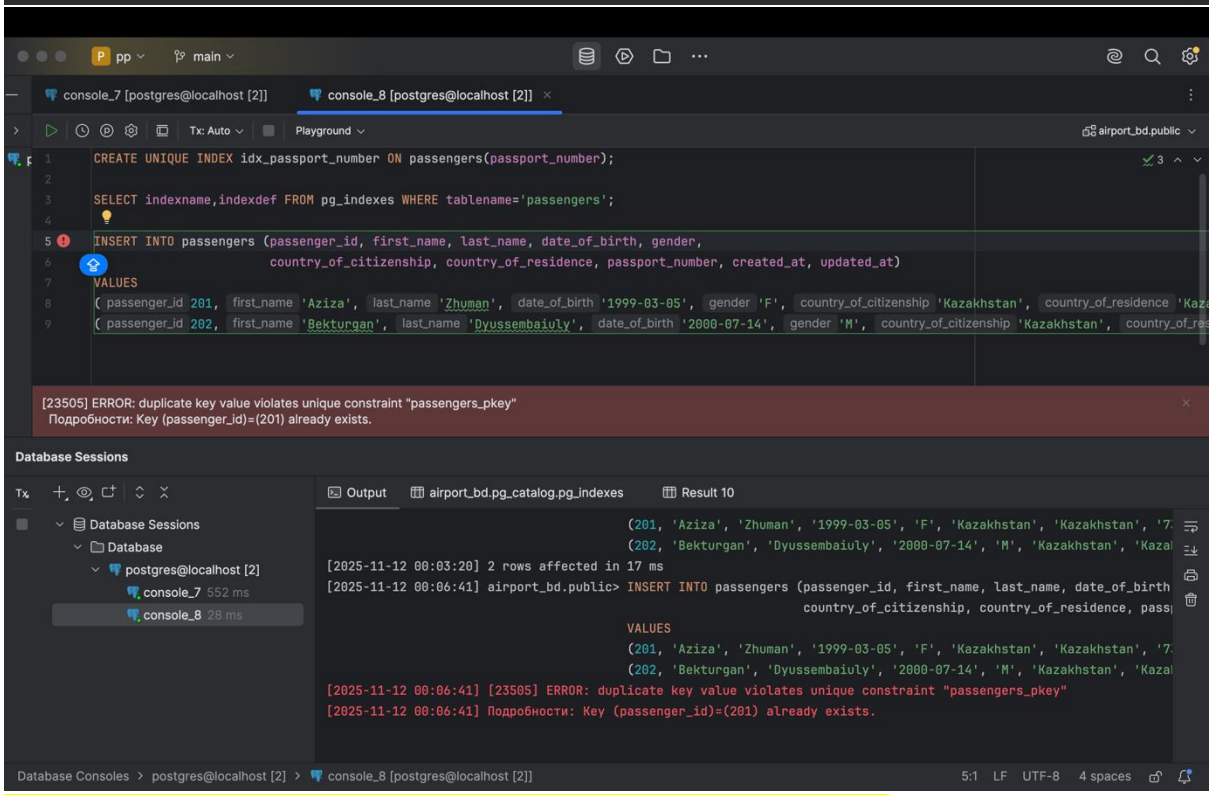
5. Use EXPLAIN ANALYZE to check index usage in a query filtering by departure_airport and arrival_airport.



6. Create a unique index for the passport_number of the Passengers table. Check if the index was created or not. Insert into the table two new passengers.
Explain in your own words what is going on in the output?

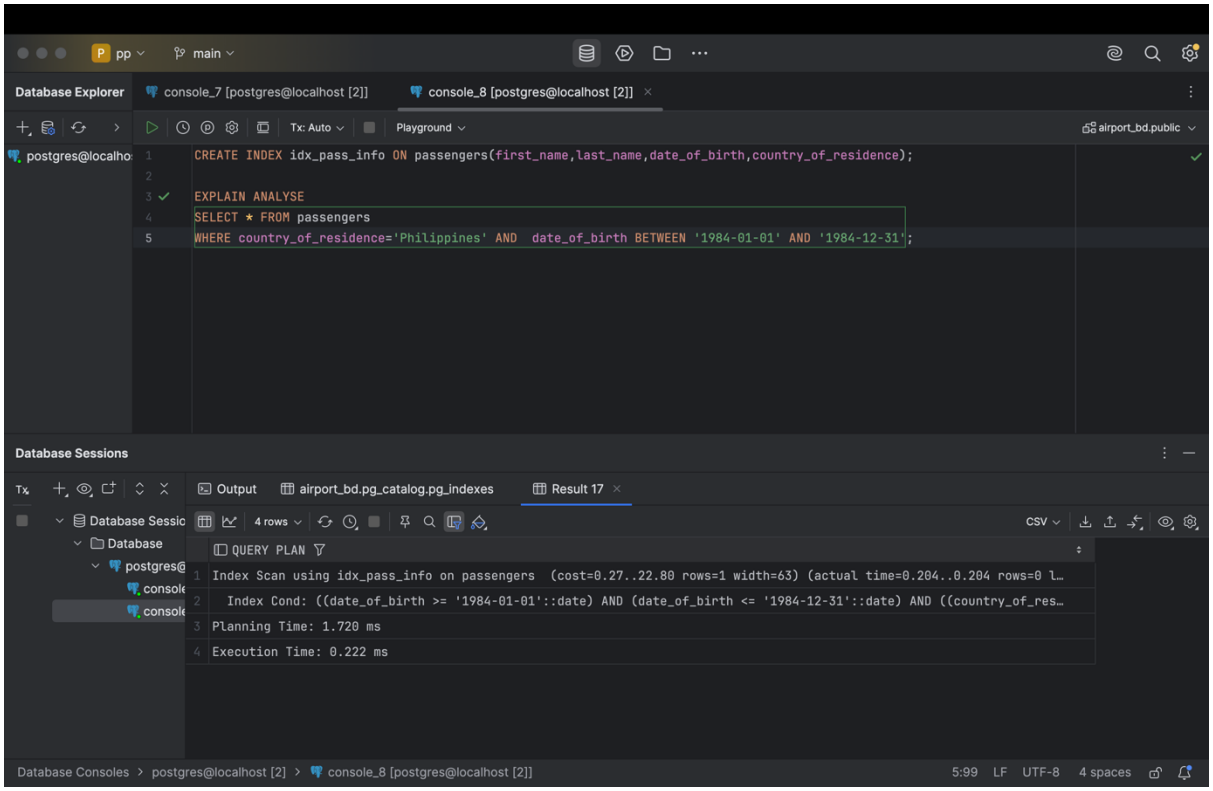


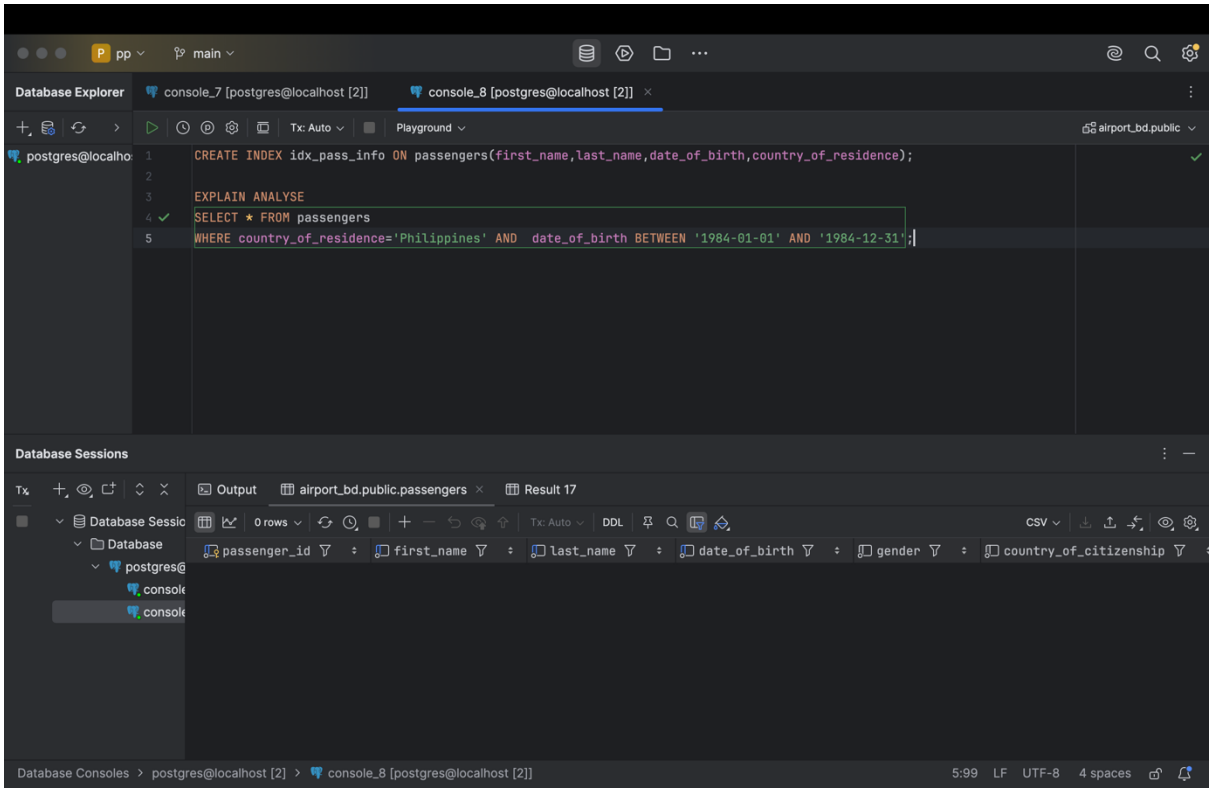




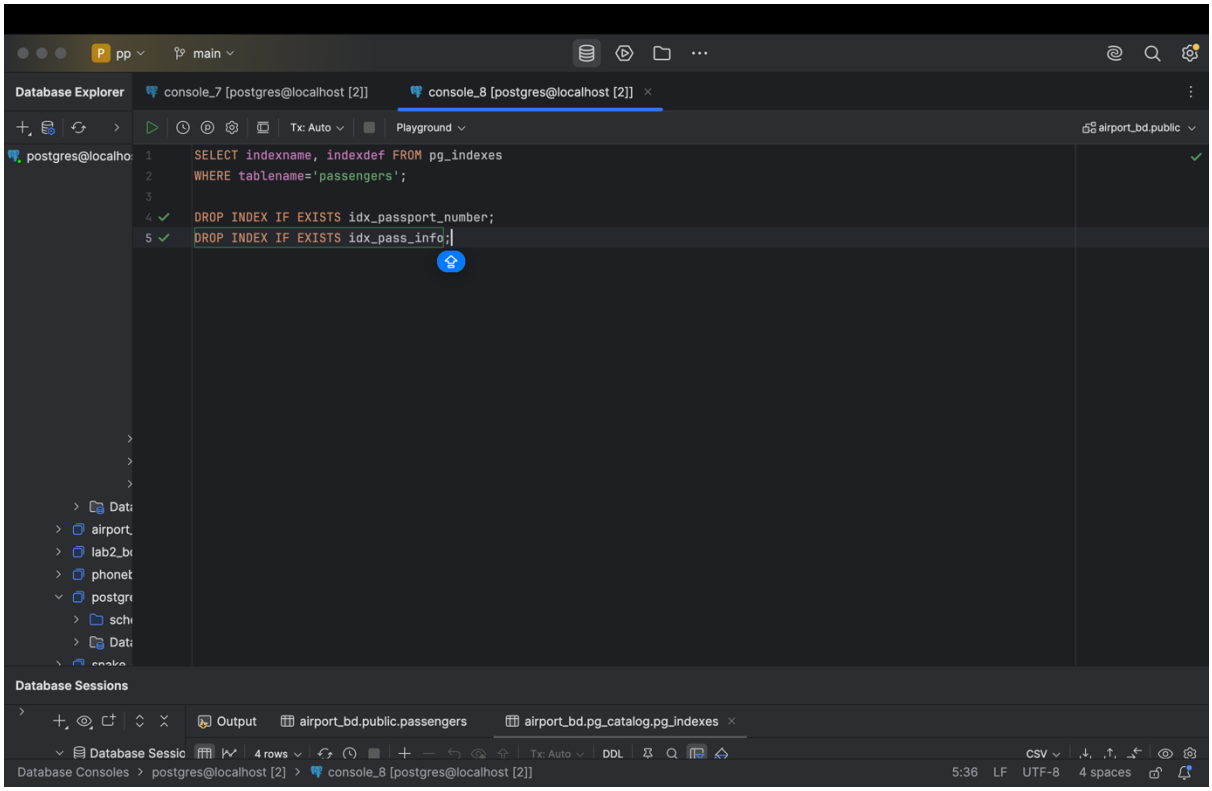
The index works — it doesn't allow duplication of passport numbers.

7. Create an index for the Passengers table. Use for that first name, last name, date of birth and country of citizenship. Then, write a SQL query to find a passenger who was born in Philippines and was born in 1984 and check if the query uses indexes or not. Give the explanation of the results.





8. Write a SQL query to list indexes for table Passengers. After delete the created indexes.


pp
main
Database Explorer
console_7 [postgres@localhost [2]]
console_8 [postgres@localhost [2]]
Tx: Auto
Playground
airport_bd.public
postgres@localho
SELECT indexname, indexdef FROM pg_indexes
WHERE tablename='passengers';
DROP INDEX IF EXISTS idx_passport_number;
DROP INDEX IF EXISTS idx_pass_info;
Database Sessions
Output
airport_bd.public.passengers
airport_bd.pg_catalog.pg_indexes
4 rows
DDL
CSV
Database Consoles
postgres@localhost [2]
console_8 [postgres@localhost [2]]
5:36
LF
UTF-8
4 spaces