DATABASE MANAGEMENT SYSTEM

CASE STUDY – PROJECT

Group – 9

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ZOO AND WILDLIFE DATA

- Create a database for a system that includes information on the number of national parks, zoos, and other animal sanctuaries across the nation and in each individual state. It should keep tabs on all the creatures that are present in the parks, sanctuaries, zoos, and other places mentioned above. The system should also include details on each animal, such as its species, the number of that animal in all of India, the region or state where it is found, its average lifetime, etc. The information about extinct species that were formerly present in India should be specifically recorded in the database. Additionally, it ought to keep tabs on the money, materials, and major areas of expenditure for each wildlife home. It ought to also be able to maintain detailed records about any kind of illness or medical help required by the animals. Migration of animals between different sanctuaries should also be recorded along with the proper reasons. Incorporate all the other necessary details for a valid wildlife database.

RELATIONAL MODEL

country (c_id, name, total_z, total_np, total_ws)

state (s_id, name, total_z, total_np, total_ws, c_id)

zoo (z_id, name, s_id, area_covered)

national_park (np_id, name, s_id, area_covered)

wildlife_sanctuary (ws_id, name, s_id, area_covered)

place (place_id)

animal (animal_id, name, avg_lifespan, animal_description)

animal_list (animal_id, place_id, current_no, past_no)

extinct_animal (animal_id, c_id, total_count)

tourist (place_id, visit_no, ratings, animal_id)

photography_place (place_id, animal_id)

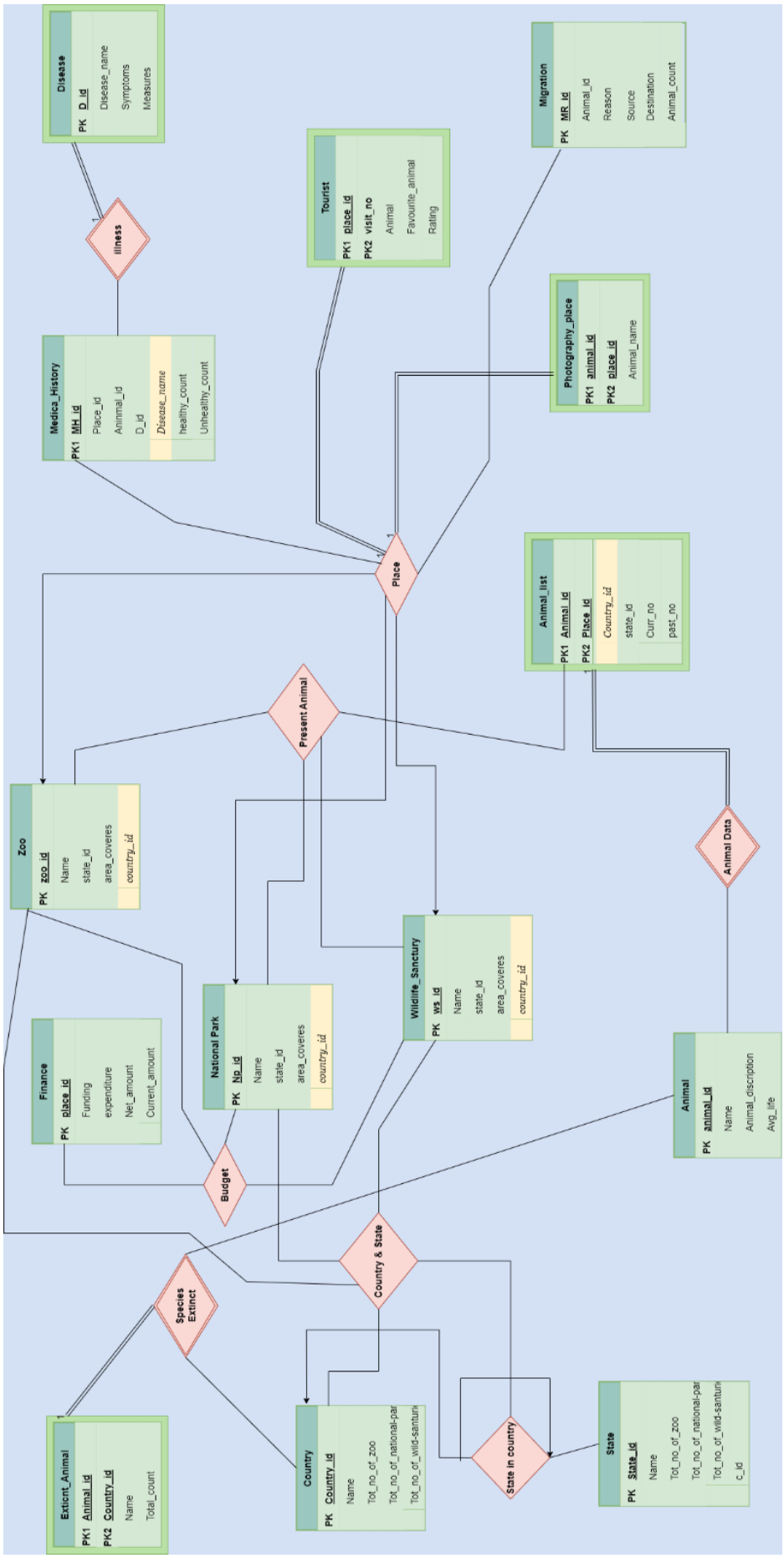
disease (d_id, disease_name, symptoms, measures)

medical_history (mh_id, animal_id, place_id, unhealthy_count, healthy_count, d_id)

migration_record (mr_id, source_id, destination_id, animal_id, animal_count, reason)

finance (place_id, funding, expenditure, current_amount, net_amount)

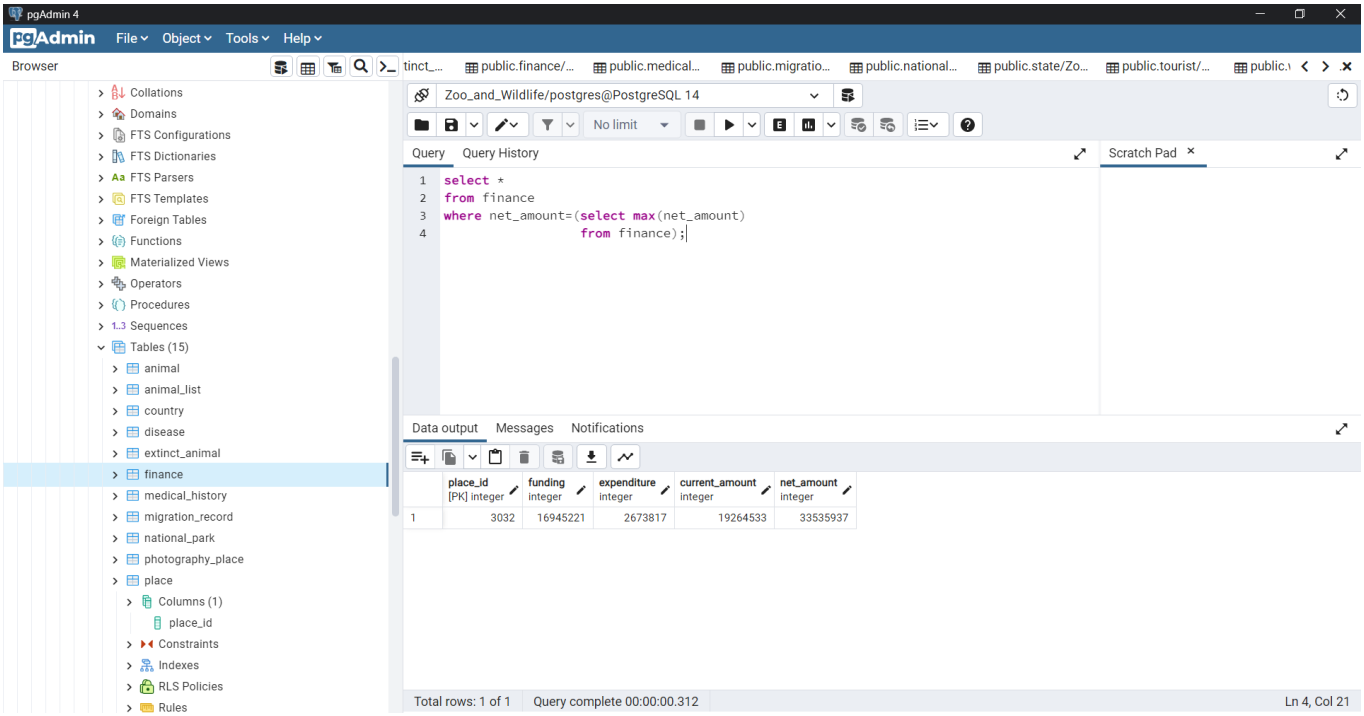
E-R DIAGRAM


Disease
PK D_id
Disease_name
Symptoms
Measures
Illness
Medica_History
PK1 MH_id
Place_id
Aninmal_id
D_id
Disease_name
healthy_count
Unhealthy_count
Tourist
PK1 place_id
PK2 visit_no
Animal
Favourite_animal
Rating
Migration
PK MR_id
Animal_id
Reason
Source
Destination
Animal_count
Photography_place
PK1 animal_id
PK2 place_id
Animal_name
Place
Animal_list
PK1 Animal_id
PK2 Place_id
Country_id
state_id
Curr_no
past_no
Present Animal
Animal Data
Zoo
PK zoo_id
Name
state_id
area_coveres
country_id
Wildlife_Sanctury
PK ws_id
Name
state_id
area_coveres
country_id
National Park
PK Np_id
Name
state_id
area_coveres
country_id
Finance
PK place_id
Funding
expenditure
Net_amount
Current_amount
Budget
Animal
PK animal_id
Name
Animal_discription
Avg_life
Species Extinct
Country & State
Extinct_Animal
PK1 Animal_id
PK2 Country_id
Name
Total_count
Country
PK Country_id
Name
Tot_no_of_zoo
Tot_no_of_national-par
Tot_no_of_wild-santurie
State in country
State
PK State_id
Name
Tot_no_of_zoo
Tot_no_of_national-par
Tot_no_of_wild-santurie
c_id

SQL-Queries

Q.1] print finance record who has max net_amount.

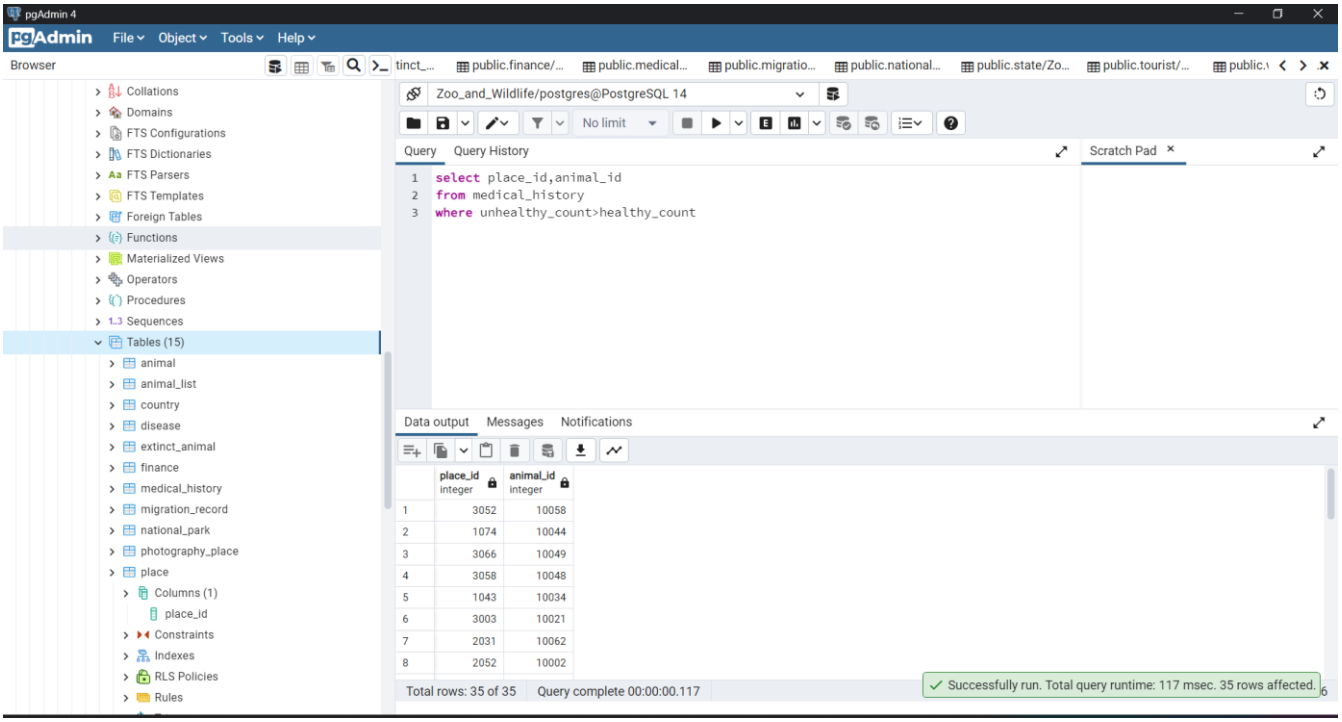
```
select *
from finance
where net_amount = (select max(net_amount)
                    from finance);
```



Q.2] print place and animal where there are more unhealthy animal than healthy animal

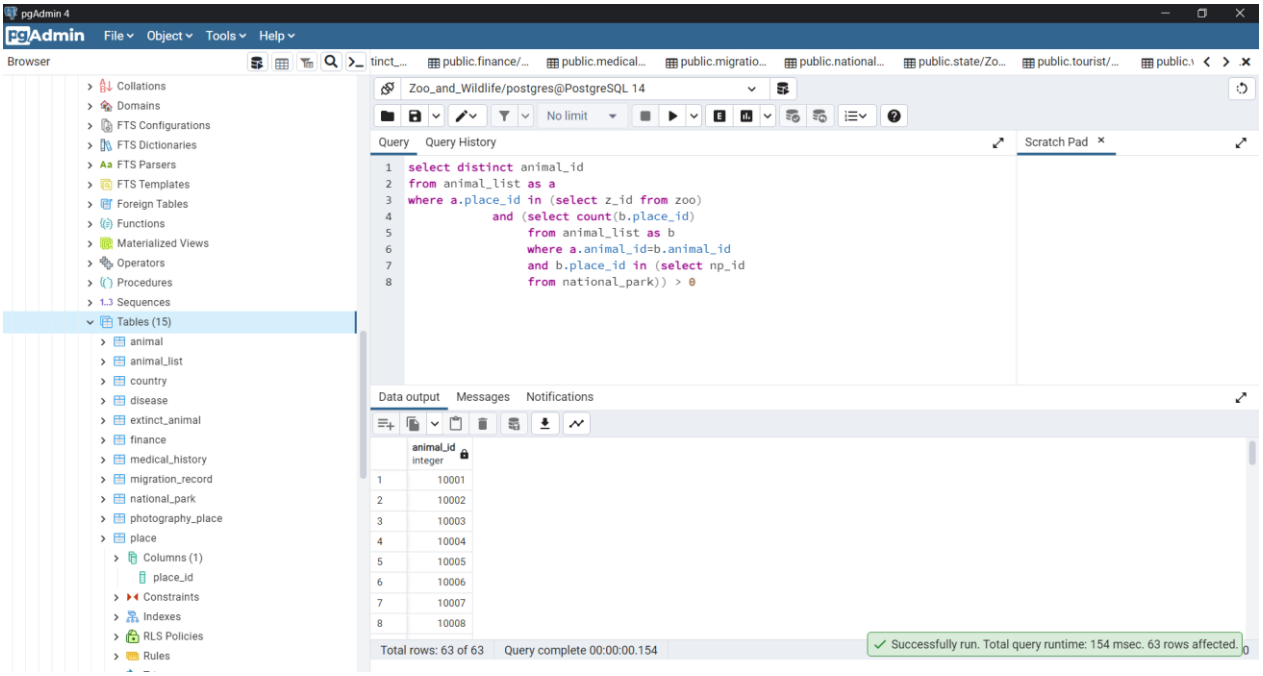
Select place_id, animal_id

From medical_historyWhere unhealthy_count > healthy_count



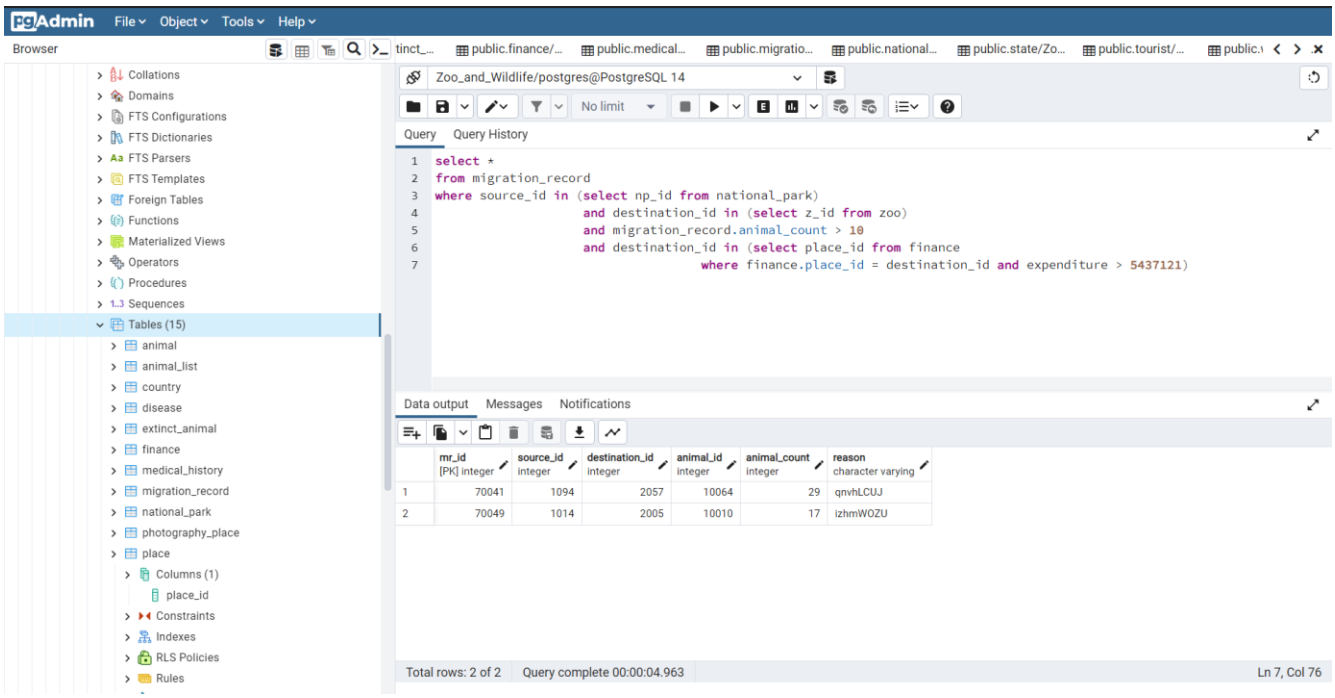
Q.3] print animal which are found in zoo as well as in national park

```
select distinct animal_id
from animal_list as a
where a.place_id in (select z_id from zoo)
                    and (select count(b.place_id)
                        from animal_list as b
                        where a.animal_id=b.animal_id
                        and b.place_id in (select np_id from national_park)) > 0
```



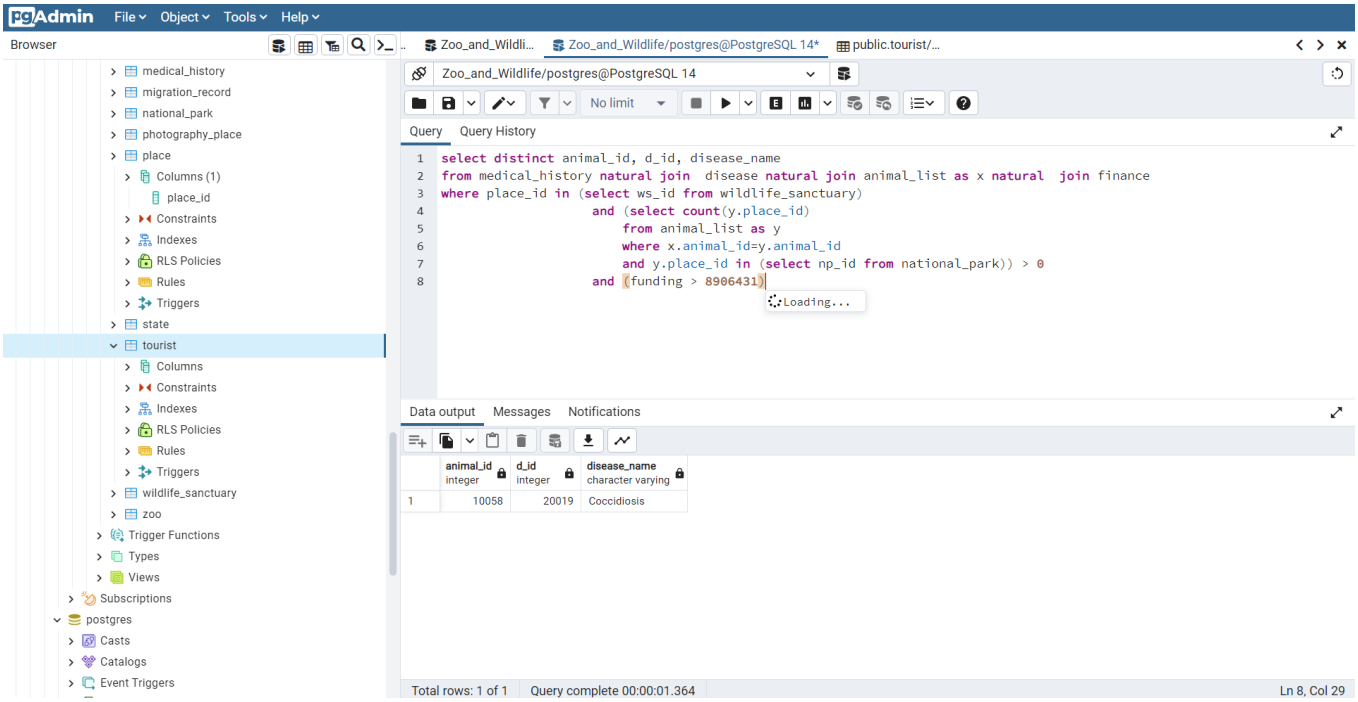
Q.4] find the migration record of the animal who is migrated in from the national park to the zoo and the also the animal count is greater than 10 and expenditure of the zoo is greater than 5437121.

```
select *
from migration_record
where source_id in (select np_id from national_park)
                    and destination_id in (select z_id from zoo)
                    and migration_record.animal_count > 10
                    and destination_id in (select place_id from finance
                                           where finance.place_id = destination_id and expenditure > 5437121)
```



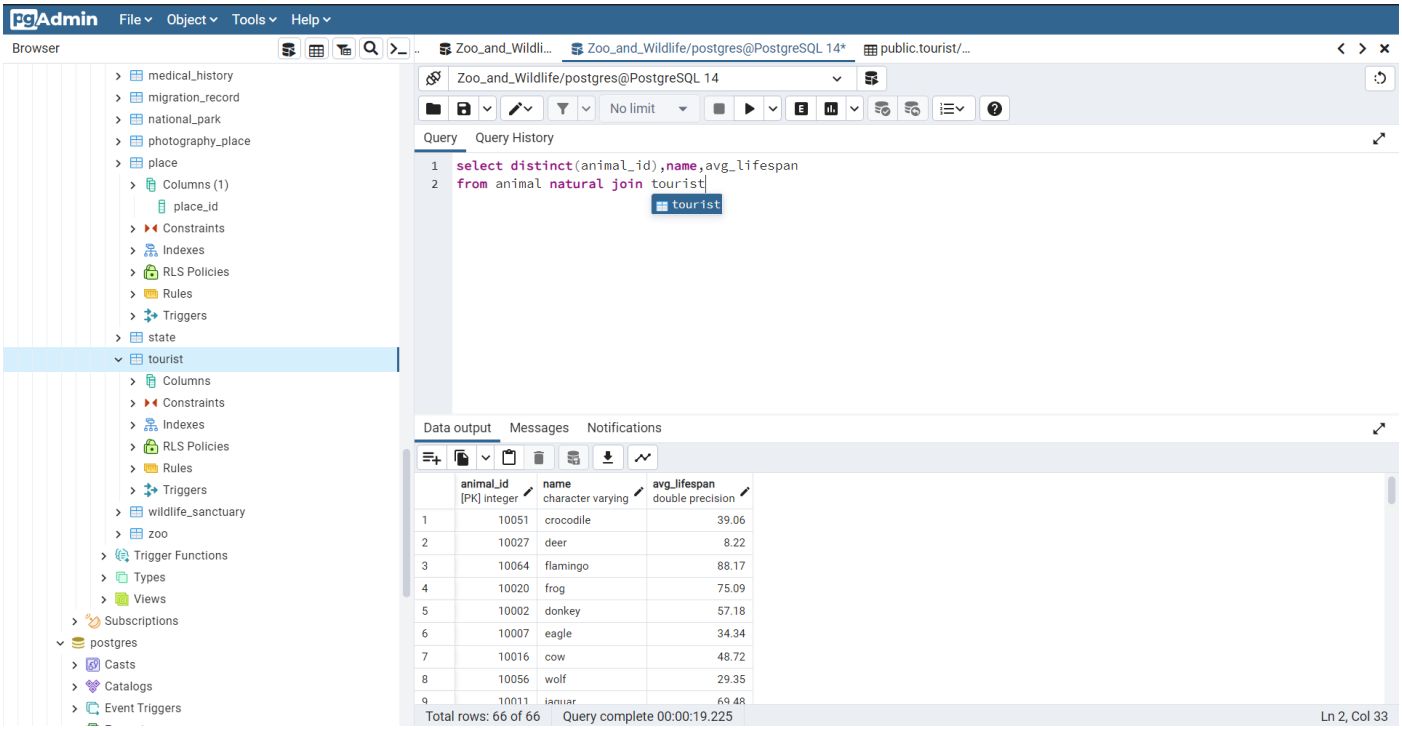
Q.5] Find the animal and the disease of that where the animal should in the wildlife santury as well as in the national park, with the funding greater than 8906431.

```
select distinct animal_id, d_id, disease_name
from medical_history natural join  disease natural join animal_list as x natural  join finance
where place_id in (select ws_id from wildlife_sanctuary)
                and (select count(y.place_id)
                    from animal_list as y
                    where x.animal_id=y.animal_id
                    and y.place_id in (select np_id from national_park))  > 0
                and (funding > 8906431)
```



Q.6] print animal name, avg_lifespan where animal is liked by tourist

```
select distinct(animal_id),name,avg_lifespan
from animal natural join tourist
```


pgAdmin
File
Object
Tools
Help
Browser
Zoo_and_Wildli...
Zoo_and_Wildlife/postgres@PostgreSQL 14*
public.tourist/...
medical_history
migration_record
national_park
photography_place
place
Columns (1)
place_id
Constraints
Indexes
RLS Policies
Rules
Triggers
state
tourist
Columns
Constraints
Indexes
RLS Policies
Rules
Triggers
wildlife_sanctuary
zoo
Trigger Functions
Types
Views
Subscriptions
postgres
Casts
Catalogs
Event Triggers
Zoo_and_Wildlife/postgres@PostgreSQL 14
No limit
Query
Query History
select distinct(animal_id),name,avg_lifespan
from animal natural join tourist
tourist
Data output
Messages
Notifications
animal_id [PK] integer
name character varying
avg_lifespan double precision
1 10051 crocodile 39.06
2 10027 deer 8.22
3 10064 flamingo 88.17
4 10020 frog 75.09
5 10002 donkey 57.18
6 10007 eagle 34.34
7 10016 cow 48.72
8 10056 wolf 29.35
Total rows: 66 of 66
Query complete 00:00:19.225
Ln 2, Col 33

Thank You