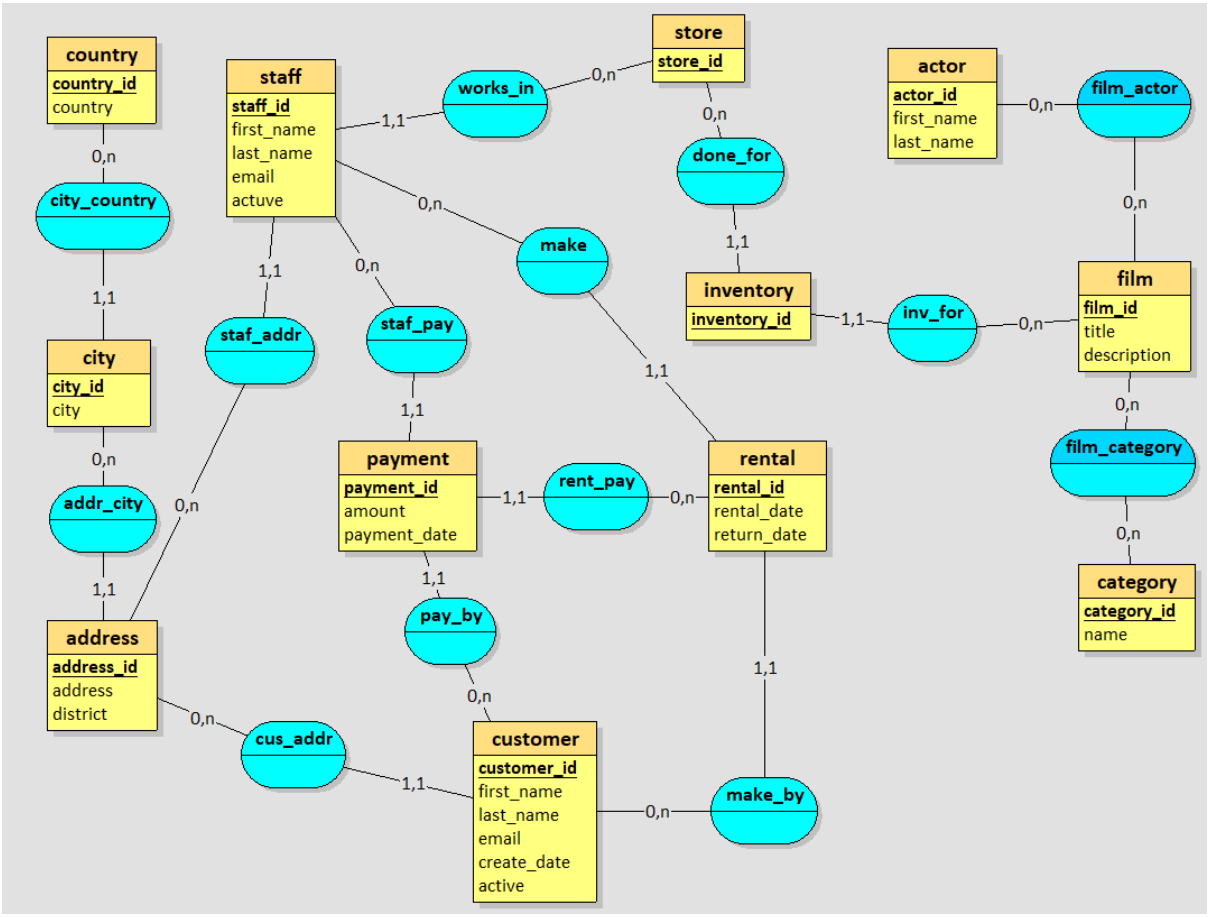
Assignment 2

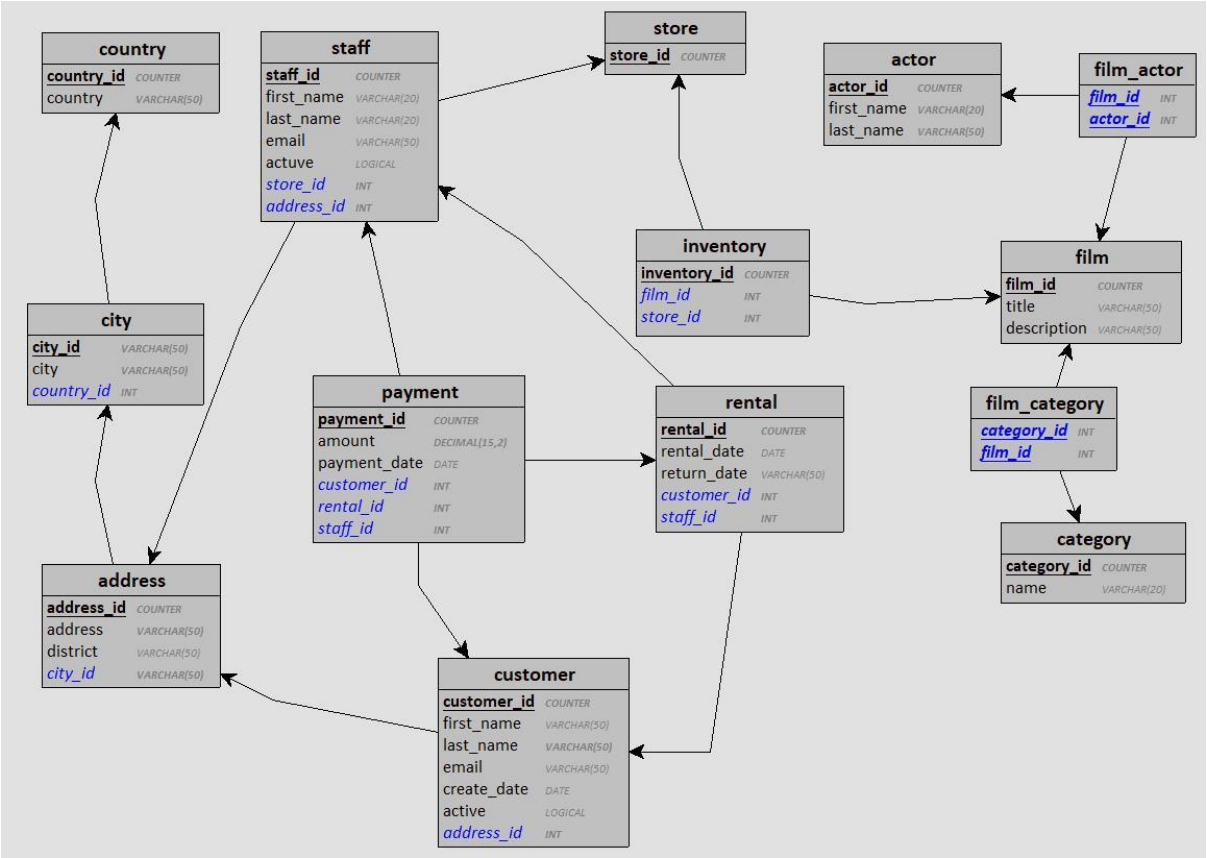
From the Assignment 1 we have studied the following:

List of entities

- actor — contains actors data including first name and last name.
- film — contains films data such as title, release year, length, rating, etc.
- category — contains film's categories data.
- store — contains the store data including manager staff and address.
- inventory — stores inventory data.
- rental — stores rental data.
- payment — stores customer's payments.
- staff — stores staff data.
- customer — stores customer's data.
- address — stores address data for staff and customers
- city — stores the city names.
- country — stores the country names.

List of relationships (ER and RM diagrams)


country
country_id
country
0,n
city_country
1,1
city
city_id
city
0,n
addr_city
1,1
address
address_id
address
district
staff
staff_id
first_name
last_name
email
actuve
1,1
works_in
0,n
store
store_id
0,n
done_for
1,1
inventory
inventory_id
1,1
inv_for
0,n
actor
actor_id
first_name
last_name
0,n
film_actor
0,n
film
film_id
title
description
0,n
film_category
0,n
category
category_id
name
1,1
staf_addr
0,n
staf_pay
1,1
payment
payment_id
amount
payment_date
1,1
rent_pay
0,n
rental
rental_id
rental_date
return_date
1,1
pay_by
0,n
customer
customer_id
first_name
last_name
email
create_date
active
0,n
cus_addr
1,1
make
1,1
make_by
1,1



Tasks:

Please build the database corresponding to the above RM diagram and provide the SQL script of these queries:

1. List all countries.

2. Show the number of countries.

3. Find United States in the country table.

4. List all payments with an amount of either 1.99, 2.99, 3.99 or 4.99

Suppose the country table was created using the following statement:

CREATE TABLE country (

country_id serial primary key,

country character varying(50) NOT NULL,

last_update timestamp without time zone DEFAULT now() NOT NULL

);

5. Insert a new record named utopia into the country table.

6. Can this query be executed successfully: insert into country(country_id, country) values (1, 'Utopia');

7. Order countries by id asc, then show the 12th to 17th rows.

8. Find the first name of all customers, without duplicates.

9. List stores with more than 200 customers.

10. Find all duplicated first names in the customer table.

11. List all addresses in a city whose name starts with 'A'.

12. Why this query doesn't work? select * from address natural join city where city like 'A%'

13. Display the average amount paid by each customer, along with the customer's first and last name.

14. List all customers' first name, last name and the city they live in.

15. Assume there are in film categories. Let L = Min(L1, L2, .. Ln) where Li = the length of the longest film in the ith category.

16. Please write a single SQL query that finds all films whose lengths are greater than L.

17. Find all customers with at least one payment whose amount is greater than 11 dollars.

18. Find all customers with at least three payments whose amount is greater than 9 dollars.

19. Create a view that shows all customers who made the high price of rental.

20. List the number of customers in each country, sorted high to low.