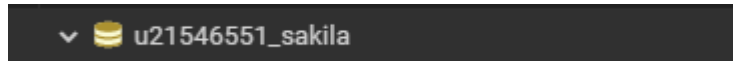


COS 221 Practical Assignment 4

Michael Chinyama U21546551

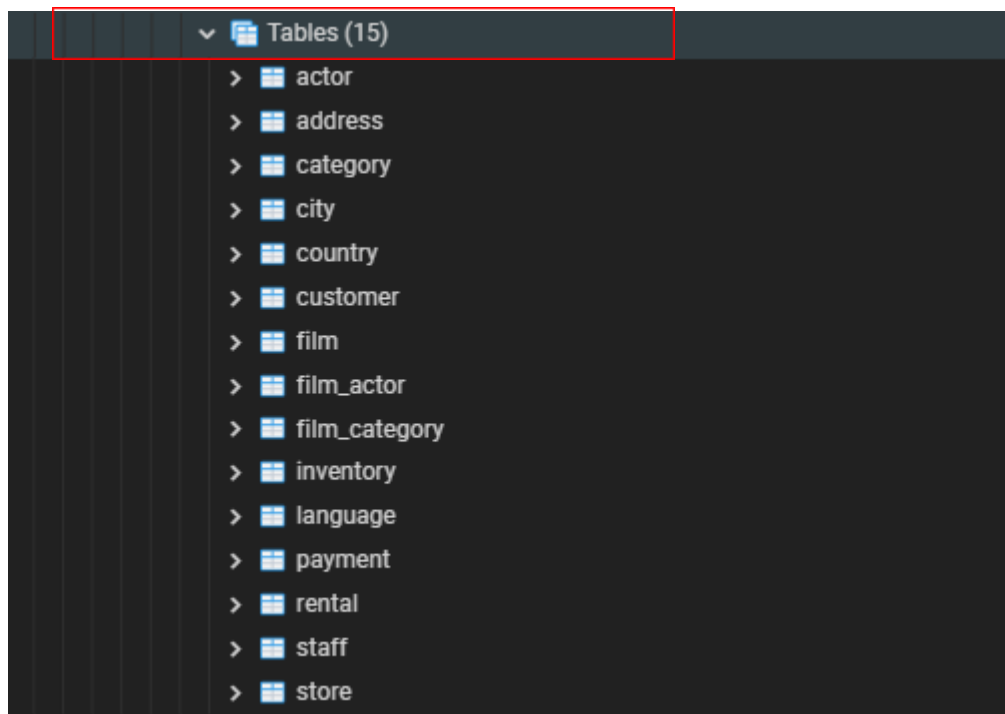
Task 1

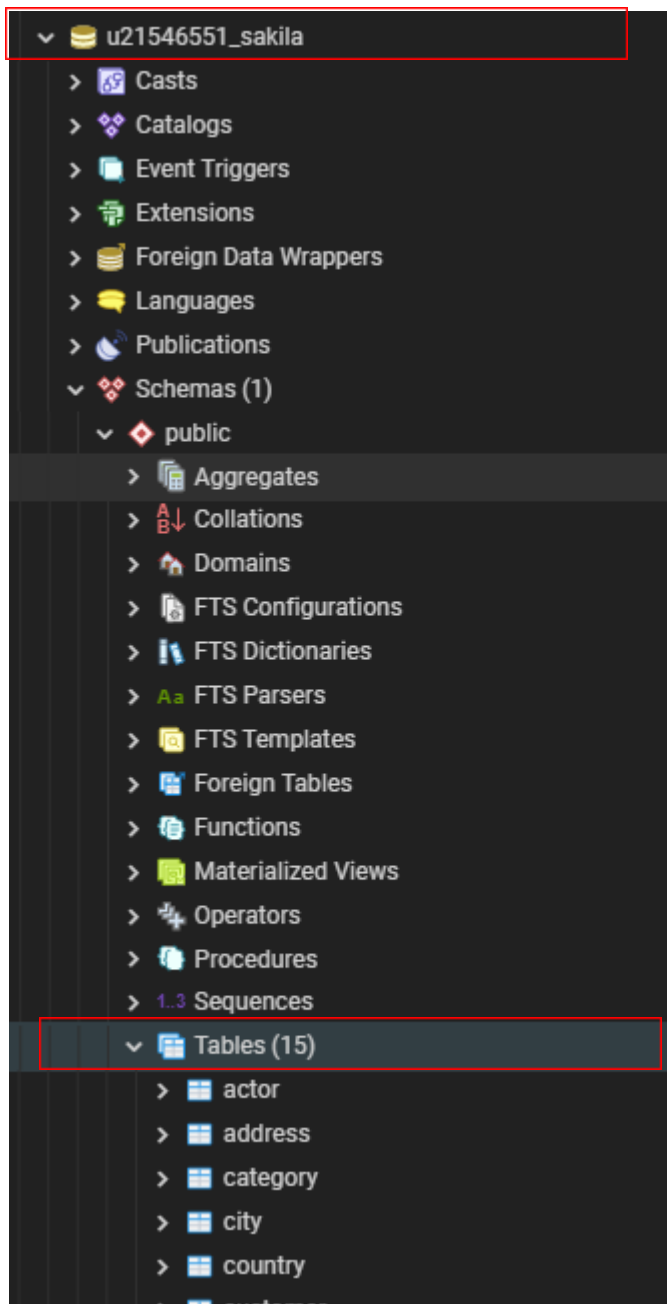


Task 2

2.1. I have chosen pgAdmin to manage and interact with the database.

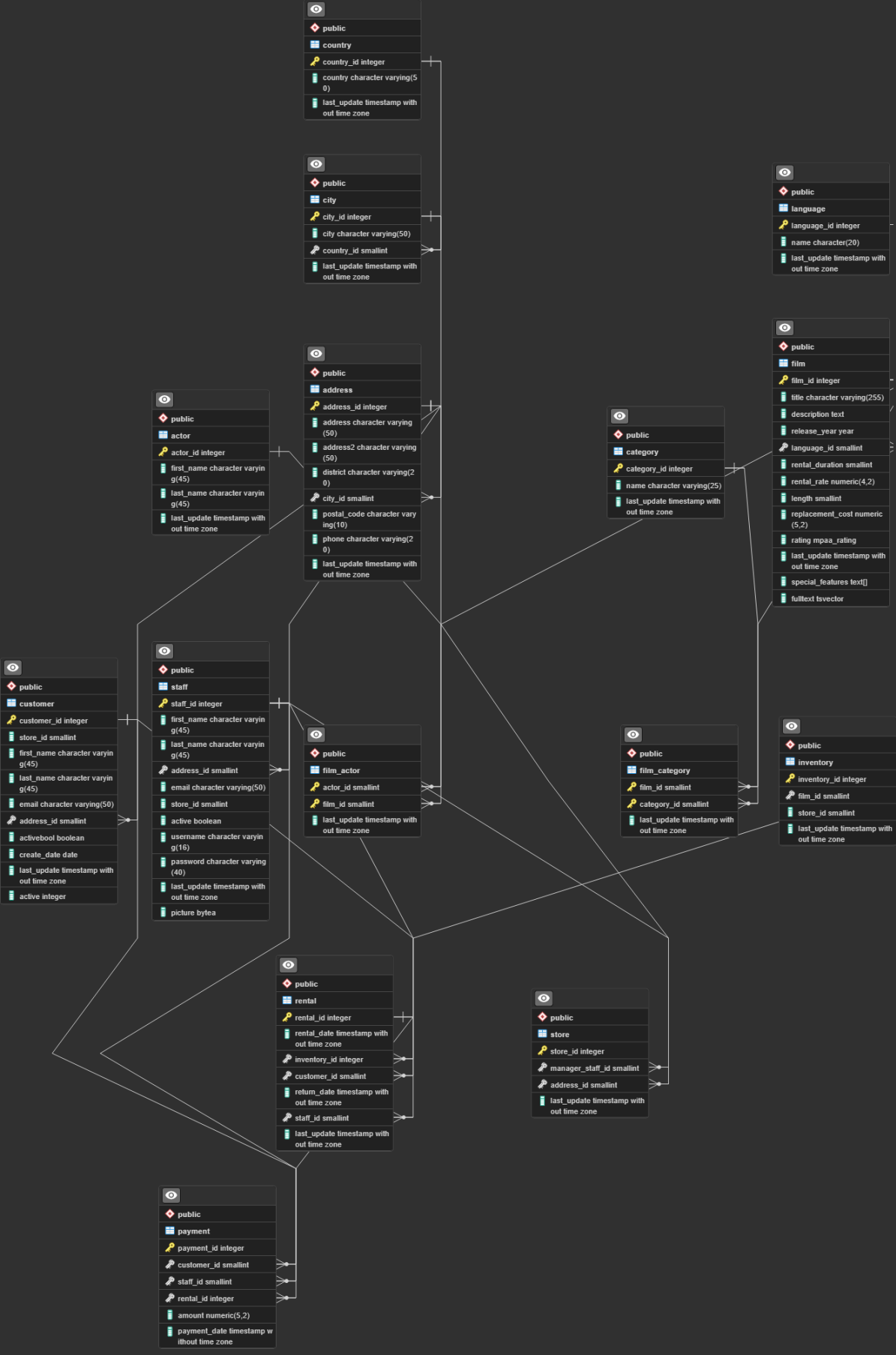
2.2.



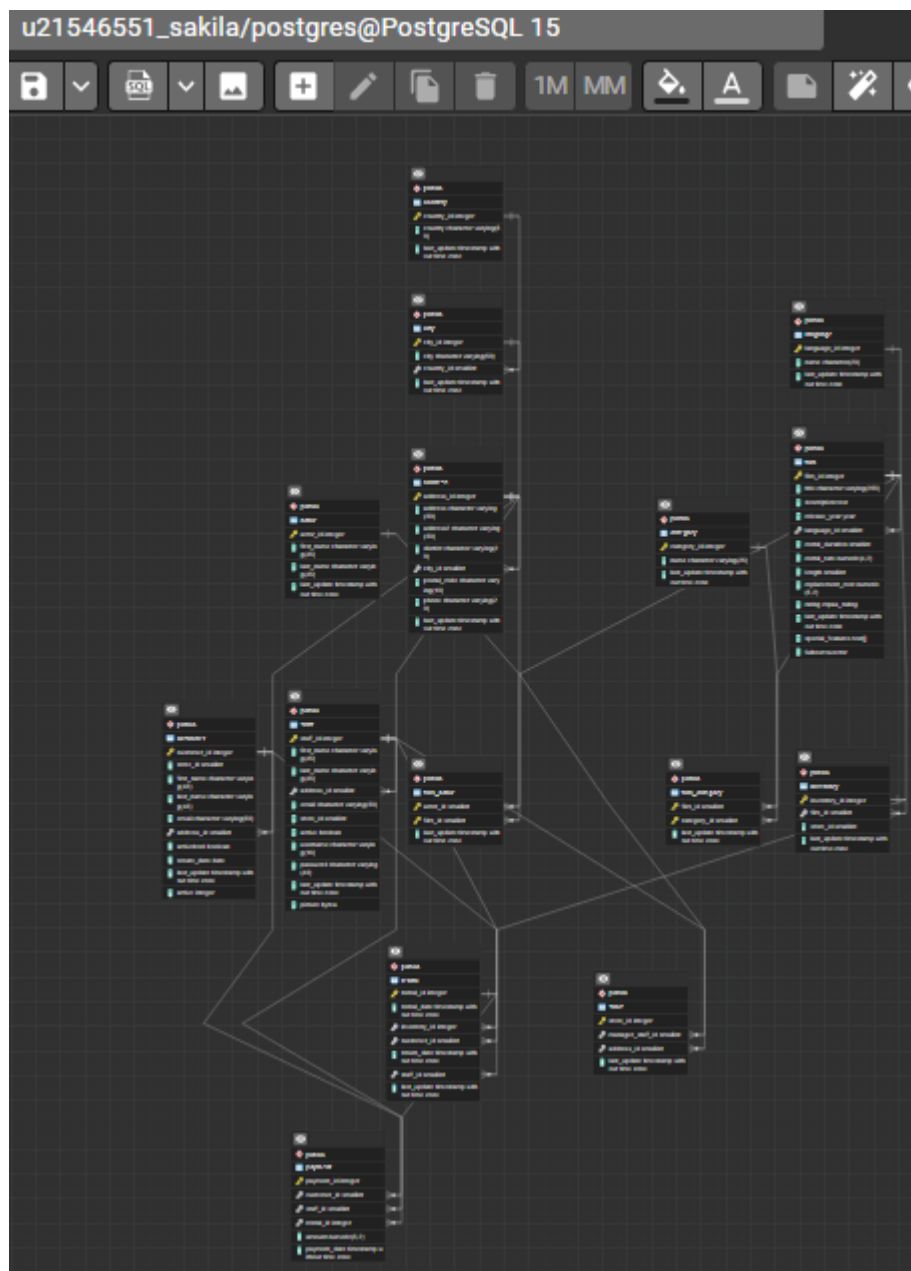


Task 3

3.1. clear image but with no database name:



With database name but not so clear:



3.2. The store table holds data relating to each store that stores/holds and sells films in the database. So, each store holds attributes such as the store id, the manager of that store, the address id of that store and the last time the current store had any of its attribute values updated. The data types for each of these attributes are integer for store_id, smallint for manager_staff_id, smallint for address_id and timestamp without time zone for last_update.

As for the tables that have a relationship with the store table, there are the customer, film and staff.

For a customer, a store_id is stored in order to be able to keep track of which store the customer may buy their films from or which store a customer is originally registered to so that that store may send notifications to only customers registered at it. So each customer record in the customer table stores a store_id as a foreign key which references the primary key of store_id in store.

For a film, certain stores may have a particular film whilst others may not, so a store id is kept in order to keep track of where a film is stored. The film does not necessarily store the store_id but rather a separate table named as inventory, which stores both the film_id and store_id. This allows multiples of the same films to be stored in different stores without creating duplicates of films in the film table. So each inventory record in the inventory table stores a store_id as a foreign key which references the primary key of store_id in store.

For a staff member, the store at which a staff member works at has to be kept track of so that other details relating to the staff member's job at that workplace can be tracked too. So each staff record in the staff table stores a store_id as a foreign key which references the primary key of store_id in store.

Task 4

See "readme.txt" or <https://github.com/waveyboym/WVY-DBMS/blob/main/README.md>

Task 5

5.1. I have stored the secret credentials inside of a config.properties file:

<https://github.com/waveyboym/WVY-DBMS/blob/main/wvydbms/src/main/resources/config.properties>

5.2. I uploaded all my source files to github and included a readme.md to help with installation:

<https://github.com/waveyboym/WVY-DBMS>

5.3. I made use of the "to_tsvector" function in postgresql to convert a given description to a tsvector and I made use of ILIKE with % symbols appended on both sides of the query string when querying to broaden searching for data in the database and finally, I made use of the Random function to randomize certain results returned from queries.

Task 6

Demo