Before inserting data into the database, we had to create 16 tables named actor, address, category, city, country, customer, film, film_actor, film_category, film_text, inventory, language, payment, rental, staff and store. Each table has their own unique primary keys. After analysing the data, we found that there is relation between the data in the tables. For example, ‘country_id’ in the table ‘city’ is a foreign key that connects to the primary key in the table ‘country’. This data correlation was found when we analysed the dataset by drawing all the tables and their respective columns on a piece of paper.

Since there should only be one primary key for each table, we set ‘actor_id’ as the primary key for actor, ‘address_id’ for the table address, ‘category_id’ for the table category, ‘city_id’ for city, ‘country_id’ for country, ‘customer_id’ for customer, ‘film_id’ for film, ‘actor_id’ with ‘film_id’ for film_actor, ‘film_id’ with ‘category_id’ for film_category, ‘film_id’ with ‘title’ for film_text, ‘inventory_id’ for inventory, ‘language_id’ for language, ‘payment_id’ for payment, ‘rental_id’ for rental, ‘staff_id’ for staff and finally, ‘store_id’ for store.

As for the foreign keys, there are five tables with no foreign keys and they are actor, category, country, film_text and language. For the rest of the tables, the foreign keys are ‘city_id’ in address, ‘country_id’ in city, ‘store_id’ and ‘address_id’ in customer, ‘language_id’ in film, ‘actor_id’ in film_actor, ‘category_id’ in film_category, ‘film_id’ and ‘store_id’ in inventory, ‘customer_id’, ‘staff_id’ and ‘rental_id’ in payment, ‘inventory_id’, ‘customer_id’ and ‘staff_id’ in rental, ‘address_id’ and ‘store_id’ in staff and finally, ‘address_id’ in store.

We also set some Check and Default constraints in the tables. For example, in the table ‘film’, we set a constraint to check that the input for rating should be either G,

NC-17, PG, PG-13 or R. With this constraint, any other input for film rating that is not one of these ratings will not be able to be accepted. In the same table, we set a default constraint for film rating, which is G. This means that if there is no rating inputted, G will automatically be the rating as it is the default value.

With these relations, we were able to design an entity relational diagram by clicking on the tool Designer. This tool enables us to map out the relations from table to table to better visualize the references from foreign keys to primary keys.

Upon creating the tables and setting the constraints, we then uploaded the dataset into the database on phpMyAdmin.