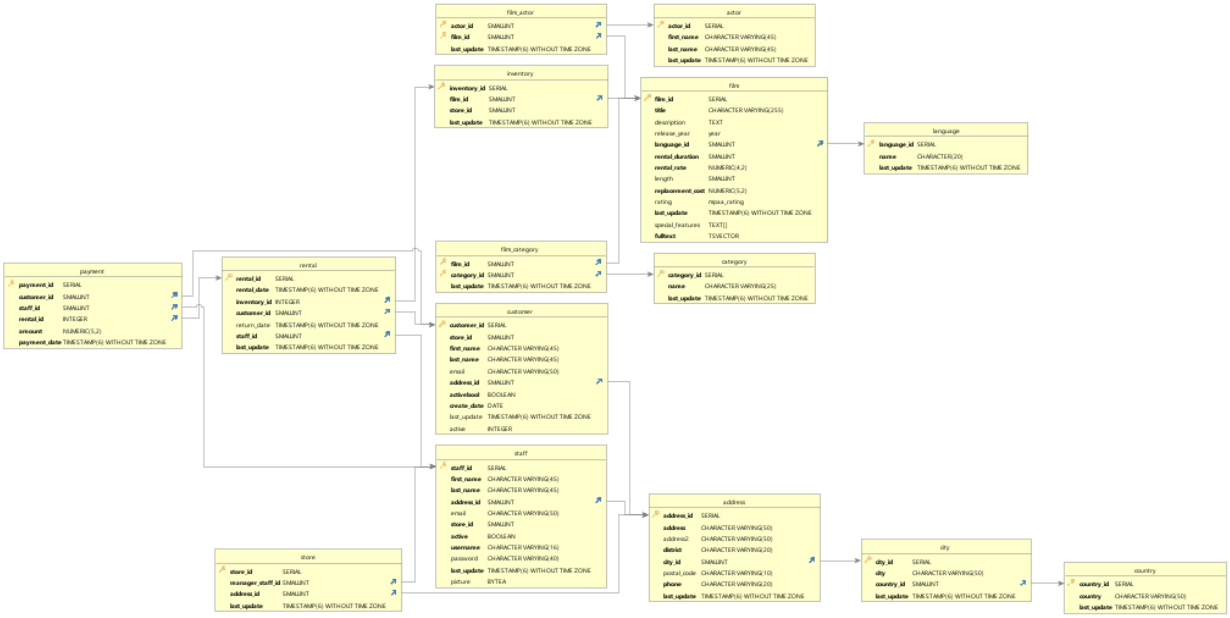
3.2: Data Storage & Structure
Prepared by: Rob Rowland

Step 2:



Step 3:

This is a snowflake schema because it contains sub dimension tables that go beyond a star schema.

Fact Tables:

Payment		
Column	**Data Type**	**Description**
payment_id	SERIAL	Number assigned to payment
customer_id	SMALLINT	Number assigned to customer
staff_id	SMALLINT	Number assigned to staff member
rental_id	INTEGER	Number assigned to rental
amount	NUMERIC(5,2)	Payment amount
payment_date	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of payment

Store		
Column	**Data Type**	**Description**
store_id	SERIAL	Number assigned to store
manager_staff_id	SMALLINT	Number assigned to management staff member
address_id	SMALLINT	Number assigned to address
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Film_Actor		
Column	**Data Type**	**Description**
actor_id	SMALLINT	Number assigned to actor
film_id	SMALLINT	Number assigned to film
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Film_Category		
Column	**Data Type**	**Description**
film_id	SMALLINT	Number assigned to film
category_id	SMALLINT	Number assigned to film category
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Dimension Tables:

Rental		
Column	**Data Type**	**Description**
rental_id	SERIAL	Number assigned to rental
rental_date	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of rental
inventory_id	INTEGAR	Number assigned to inventory
customer_id	SMALLINT	Number assigned to customer
return_date	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of rental return due date
staff_id	SMALLINT	Number assigned to staff member
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Inventory		
Column	**Data Type**	**Descripton**
inventory_id	SERIAL	Number assigned to inventory
film_id	SMALLINT	Number assigned to film
store_id	SMALLINT	Number assigned to store
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Customer		
Column	**Data Type**	**Descripton**
customer_id	SERIAL	Number assigned to customer
store_id	SMALLINT	Number assigned to store
first_name	CHARACTER VARYING(45)	Customer first name
last_name	CHARACTER VARYING(45)	Customer last name
email	CHARACTER VARYING(45)	Customer email address
address_id	SMALLINT	Number assigned to customer email address
activebool	BOOLEAN	Customer status (active or inactive)
create_date	DATE	Date/time customer data was created
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update
active	INTEGAR	Customer status (active or inactive)

Staff		
Column	**Data Type**	**Descripton**
staff_id	SERIAL	Number assigned to staff member
first_name	CHARACTER VARYING(45)	Staff member first name
last_name	CHARACTER VARYING(45)	Staff members last name
address_id	SMALLINT	Number assigned to staff member address
email	CHARACTER VARYING(45)	Staff member email address
store_id	SMALLINT	Number assigned to store
active	BOOLEAN	Staff member status (active or inactive)
username	CHARACTER VARYING(45)	Staff member username
password	CHARACTER VARYING(45)	Staff member password
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update
picture	BYTEA	Staff member picture

Actor		
Column	**Data Type**	**Descripton**
actor_id	SERIAL	Number assigned to actor
first_name	CHARACTER VARYING(45)	Actor first name
last_name	CHARACTER VARYING(45)	Actor last name
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Film		
Column	**Data Type**	**Descripton**
film_id	SERIAL	Number assigned to film
title	CHARACTER VARYING(45)	Title of film
description	TEXT	Descripton of film
release_year	year	Year the film was released
language_id	SMALLINT	Number assigned to language of film
rental_duration	SMALLINT	Length of time the film was rented
rental_rate	NUMERIC(4,2)	Pricing rate of rental
length	SMALLINT	Lenth of film
replacement_cost	NUMERIC(5,2)	Cost to replace film
rating	mpaa_rating	Film rating
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update
special_features	TEXT[]	Special features of film
fulltext	TSVECTOR	Key words and terms associated with film

Category		
Column	**Data Type**	**Descripton**
category_id	SERIAL	Number assigned to category
name	CHARACTER VARYING(45)	Name of film category
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Address

Column	Data Type	Descripton
address_id	SERIAL	Number assigned to address
address	CHARACTER VARYING(50)	Street address
address2	CHARACTER VARYING(50)	Secondary/overflow street address
district	CHARACTER VARYING(50)	District of street address
city_id	SMALLINT	Number assigned to city
postal_code	CHARACTER VARYING(50)	Postal code of address
phone	CHARACTER VARYING(50)	Phone number associated with address
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Language		
Column	**Data Type**	**Descripton**
language_id	SERIAL	Number assigned to language
name	CHARACTER(20)	Name of language
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

City		
Column	**Data Type**	**Descripton**
city_id	SERIAL	Number assigned to city
city	CHARACTER VARYING(50)	Name of city
country_id	SMALLINT	Number assigned to country
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Country		
Column	**Data Type**	**Descripton**
country_id	SERIAL	Number assigned to country
country	CHARACTER VARYING(50)	Name of country
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date/time of last data update

Which actors brought Rockbuster the most revenue?

- I would need the actor, film_actor, and film tables.

What language are the majority of movies in the collection?

- I would need the inventory, film, and language tables.