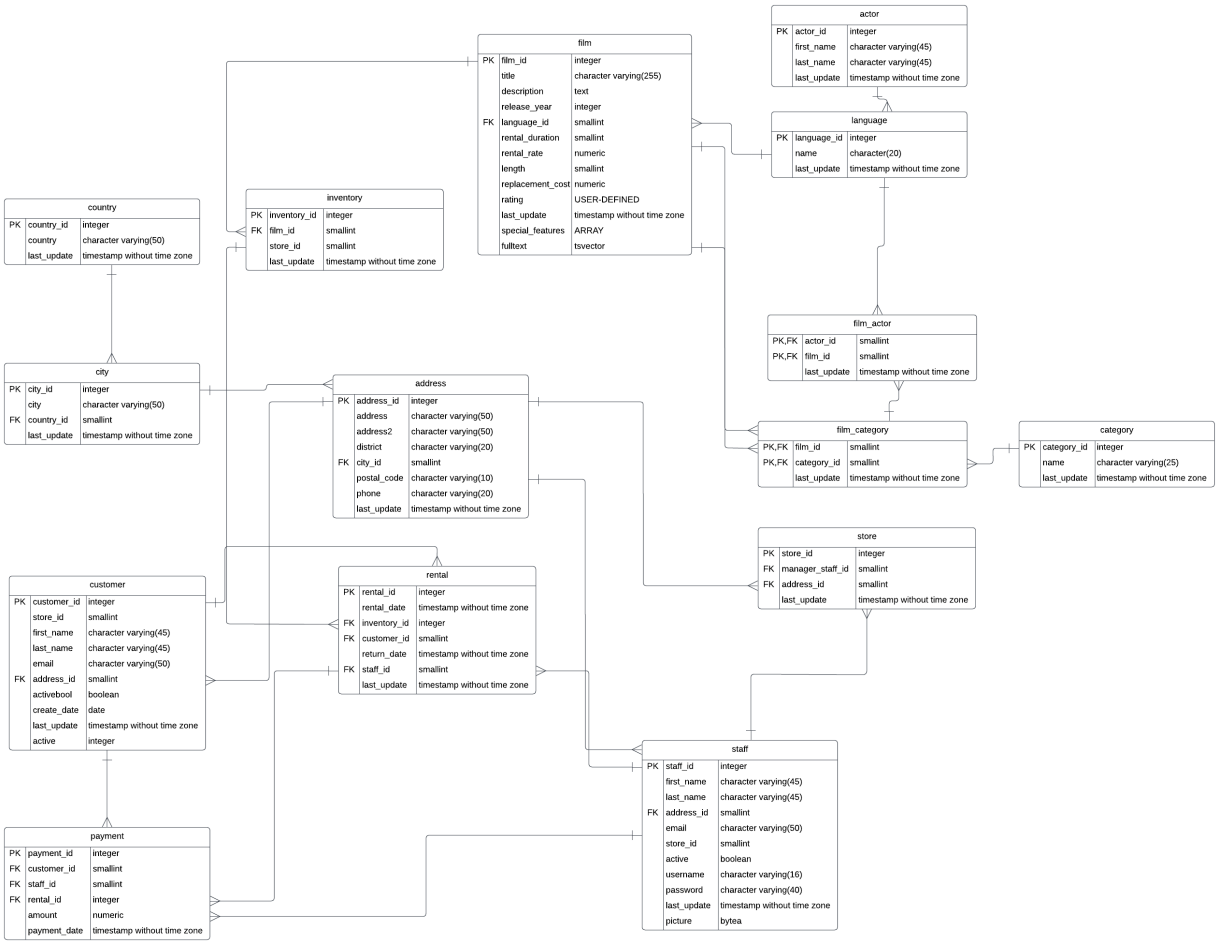
3.2 Data Storage and Structure

ERD (Entity Relationship Diagram)



- Take a moment to examine your ERD. Does the Rockbuster database have a snowflake schema or a star schema? Write a brief explanation for your answer.

The diagram below has a snowflake schema, the fact table connects to dimensions tables that at the same time are connected to other dimension table that gives extra detail of the information.

- List all the fact tables and all the dimension tables in the schema. For each table, list every column and its data type, and write a brief description of the column. To get an idea of what this should look like, check out these example fact and dimension tables.

Fact tables: rental table
Dimesion tables: actor, address, category, city, country, customer, film, film_actor, film_category, inventory, language, payment, staff, store.

Dimesion tables

Table_Actor

Columns	Data_type	Description
actor_id	integer	primary key in the actor table
first_name	character varying(45)	refers to actor's first name
last_name	character varying(45)	refers to the actor's last name
last_update	timestamp without time zone	last time the info was updated

Address

Columns	Data_type	Description
address_id	integer	primary key in the address table
address	character varying (50)	address information
address2	character varying (50)	extra details about address
district	character varying (50)	address location (city, state)
city_id	smallint	secondary key aout city
postal_code	character varying (10)	postal code number
phone	character varying (20)	phone number of the customer
last_update	timestamp without time zone	last time the information was updated

Category

Columns	Data_type	Description
category_id	integer	primary key about category
name	character varying (50)	genre name (category)
last_update	timestamp without time zone	last time the information was updated

City

Columns	Data_type	Description
city_id	integer	primary key city table
city	character varying (50)	name of the city
country_id	smallint	secondary key country table
last_update	timestamp without time zone	last time the information was updated

Country

Columns	Data_type	Description
country_id	integer	primary key country table

country	character varying (50)	name of the country
last_update	timestamp without time zone	last time the information was updated

Customer

Columns	Data_type	Description
customer_id	integer	primary key customer table
store_id	smallint	secondary key from store details
first_name	character varying (45)	details of the customer's name
last_name	character varying (45)	details of the customer's last name
email	character varying (50)	customer's email
address_id	smallint	secondary key address table
activebool	boolean	boolean for active or inactive customer (true/false)
create_date	date	date when the customer account was created
last_update	timestamp without time zone	last time the information was updated
active	integer	active/inactive customer 1,0

film

Columns	Data_type	Description
film_id	integer	primary key customer table
title	character varying (255)	Film's name
description	text	film's general description
release_year	integer	year when the film was released
language_id	smallint	secondary key for language
rental_duration	smallint	rental duration for that film
rental_rate	numeric	cost of film's rent
length	smallint	movie length in minutes
replacement_cost	numeric	cost of the film in case it has to be replaced
rating	USER-DEFINED	film rate by the customer
last_update	timestamp without time zone	last time the information was updated
special_features	ARRAY	additional features
fulltext	tsvector	additional details

film_actor

Columns	Data_type	Description
actor_id	smallint	secodary key actor
film_id	smallint	secodary key film
last_update	timestamp without time zone	last time info was updated

film_category

Columns	Data_type	Description
film_id	smallint	secodary key actor
category_id	smallint	primary key category
last_update	timestamp without time zone	last time info was updated

inventory

Columns	Data_type	Description
inventory_id	integer	primary key inventory
film_id	smallint	secondary key from film table
store_id	smallint	secondary key from store table
last_update	timestamp without time zone	last time the information was updated.

language

Columns	Data_type	Description
language_id	integer	primary key language
name	character (20)	language name
last_update	timestamp without time zone	last time information was updated

payment

Columns	Data_type	Description
payment_id	inter	primary key payment
customer_id	smallint	secondary key from customer table
staff_id	smallint	secondary key from staff table
rental_id	integer	secondary key from rental table
amount	numeric	payment registered
payment_date	timestamp without time zone	last time information was updated

staff

Columns	Data_type	Description
staff_id	inter	primary key staff table
first_name	character varying (45)	staff person first name
last_name	character varying (45)	staff person last name
address_id	smallint	secondary key address table
email	character varying (50)	staff person email
store_id	smallint	secondary key store
active	boolean	true/false staff is active
username	character varying (16)	staff's username
password	character varying (40)	staff's account password
last_update	timestampt without time zone	last time information was updated
picture	bytea	picture of the person (staff)

store

Columns	Data_type	Description
store_id	integer	primary key store table
manager_staff_id	smallint	secondary key from staff table
address_id	smallint	secondary key from address table
last_update	timestamp without time zone	last time information was updated

Fact tables

rental

Columns	Data_type	Description
rental_id	integer	key primary rental table
rental_date	timestamp without time zone	the date when the film was rented
inventory_id	integer	secondary key inventory id (item rented)
customer_id	smallint	secondary key from customer table
return_date	timestamp without time zone	date when the film was returned
staff_id	smallint	secondary key from staff table
last_update	timestamp without time zone	las time ifnromation was updated

- If a column name doesn't tell you enough to write a description, you can also view the tables in pgAdmin 4. The SQL syntax for selecting a table is `SELECT * FROM table_name`. So `SELECT * FROM film` would return the film table, for example.
- Which actors brought Rockbuster the most revenue?
  The tables that give this information are film_actor, rental and film
- What language are the majority of movies in the collection?
  Language and film