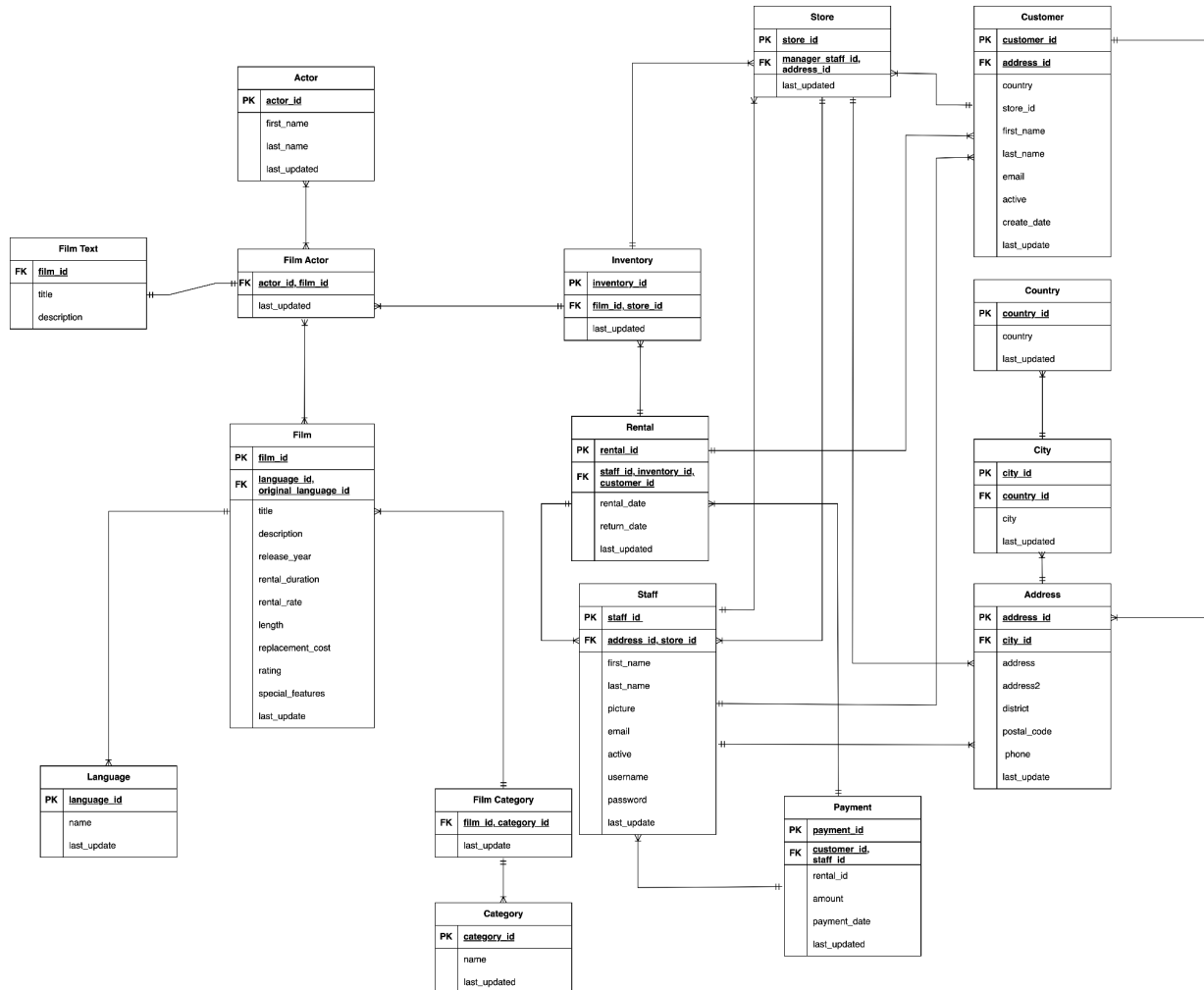


Answer 1:



ER Diagram of Movie Rental Database

The database contains tables for actors, films, categories, languages, stores, staff members, customers, addresses, and rental transactions. The relationships between these tables are designed to model the rental store.

The main table in the database is the film table, which stores information about movies, including their titles, descriptions, release years, languages, rental durations, ratings, and

replacement costs. This table is connected to several other tables, such as language, film_category, and film_actor, by foreign key relationships.

The actor table contains information about actors involved in the films, while the category table stores different genres of movies, such as Action, Comedy, or Drama. The language table contains languages used in the films.

The customer table stores customer details, including their names, email addresses, and associated addresses, which are stored in the address table. The store table holds information about the stores, and the staff table contains details about the employees working at those stores.

The inventory table keeps track of the individual copies of films available for rental at each store, and the rental table records rental transactions, including rental dates, customer IDs, inventory IDs, and staff IDs.

The Movie Rental Database also includes several views, such as customer_list, film_list, staff_list, sales_by_store, and sales_by_film_category, which provide convenient ways to access and analyze the data.

Overall, the Movie Rental Database is a relational database design, showcasing various table structures, relationships, constraints, and data types.

Answer 2:

a. Popular Rental Categories: The most popular movie categories among customers based on rental count are:

1. Sports
2. Action
3. Animation
4. Sci-Fi
5. Family

b. Revenue Analysis: The movie categories that contributed the most to the total revenue, in descending order, are:

1. Sports
2. Sci-Fi
3. Animation
4. Drama
5. Comedy

c. Recommendations:

Based on the analysis of popular rental categories and revenue contribution, the following recommendations can be made:

1. Improve customer satisfaction by adding up-to-date selection of movies in the most popular categories.
2. Optimize inventory management by prioritizing new releases and top revenue-generating categories for maintaining sufficient inventory.
3. Increase revenue through targeted marketing campaigns by promoting the top revenue-generating categories and adjusting rental rates for revenue-generating categories, and exploring alternative revenue streams.