2023

ROCKBUSTER STEALTH

DANIEL LOCKE

Table of Contents

3. Glossary

4. ERD

5.1 Actor

5.2 Film Actor

5.3 Film Category

5.4 Category

6.1 Film

6.2 Customer

7.1 Rental

7.2 Inventory

7.3 Staff

8.1 Address

8.2 City

8.3 Country

8.4 Language

9.1 Store

9.2 Payment

Glossary

Company Overview: Rockbuster Stealth LLC is a movie rental company that used to have stores around the world. Facing stiff competition from streaming services such as Netflix and Amazon Prime, the Rockbuster Stealth management team is planning to use its existing movie licenses to launch an online video rental service to stay competitive.

Relation Database: A collection of data stored in one or more tables made up of rows and columns.

Schema: A bit like a blueprint for a database. It describes the structure of a database including the tables, the columns in each table, the primary key of each table, and how the tables are connected by foreign keys, among other things.

Entity relationship diagram (ERD): Illustrates the links between the tables in a relational database.

Links To: Refers to the relationships between the fact tables and dimension tables within the database. Specifically, it denotes the foreign key columns in the fact tables that link to the primary key columns in the dimension tables. These links establish the relationships between the numerical data in the fact tables and the descriptive attributes in the dimension tables.

Links From: Refers to the relationships between dimension tables and fact tables within the database. It represents the inverse relationship of "LINKS TO," indicating the foreign key columns in the dimension tables that link back to the primary key columns in the fact tables.

Key: A column (or set of columns) that acts as a unique identifier for a row, which is helpful for finding records. There are several types of keys found in databases. Knowing the differences between them will help you understand the relationships between the various tables in the database.

Primary Key (PK): The primary key is a column or set of columns that act as a unique identifier for each record in a table. There can only be one primary key within a table, and it must meet the following criteria:

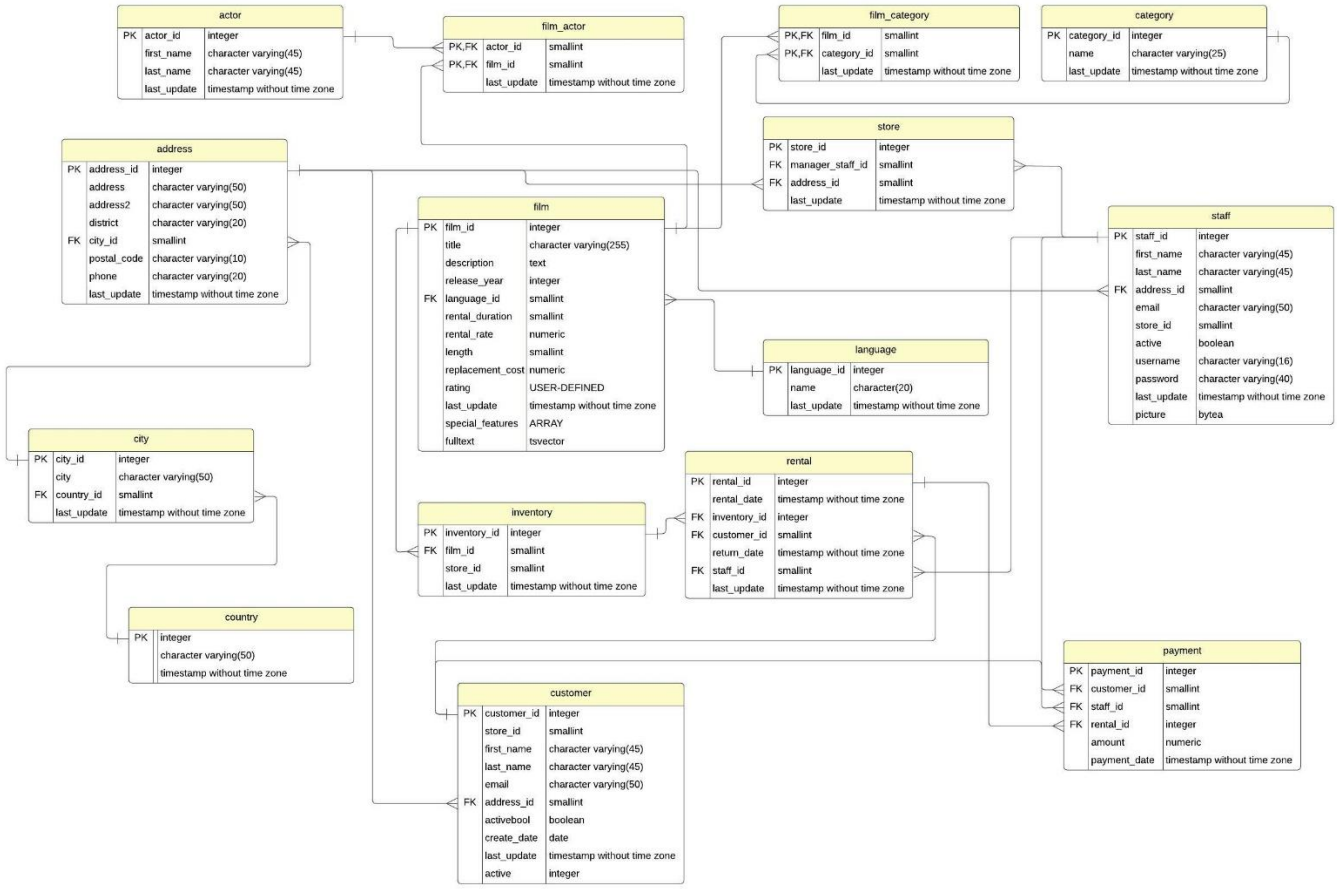
1. It must be unique for each row.
2. It cannot be null for any record.
3. The values of the primary key can’t be modified if it’s linked to another table.

Foreign Key (FK): A column, or set of columns, that refers to the primary key in another table. Foreign keys are used to establish relationships between tables and are helpful in navigating from one table to another.

Fact Tables: Store information about events. Fact tables typically have two columns: one with numerical values and one with foreign keys that link to dimension tables, which hold descriptive information about various entities.

Dimension Tables: A dimension table is a table in a database. Like most database tables, the dimension table contains multiple columns and rows. Normally one column is the primary key, which uniquely identifies each row, and the other columns correspond to the attributes defined in the dimension, as determined by the data model.

ERD


actor
PK actor_id integer
first_name character varying(45)
last_name character varying(45)
last_update timestamp without time zone
film_actor
PK,FK actor_id smallint
PK,FK film_id smallint
last_update timestamp without time zone
film_category
PK,FK film_id smallint
PK,FK category_id smallint
last_update timestamp without time zone
category
PK category_id integer
name character varying(25)
last_update timestamp without time zone
store
PK store_id integer
FK manager_staff_id smallint
FK address_id smallint
last_update timestamp without time zone
address
PK address_id integer
address character varying(50)
address2 character varying(50)
district character varying(20)
FK city_id smallint
postal_code character varying(10)
phone character varying(20)
last_update timestamp without time zone
film
PK film_id integer
title character varying(255)
description text
release_year integer
FK language_id smallint
rental_duration smallint
rental_rate numeric
length smallint
replacement_cost numeric
rating USER-DEFINED
last_update timestamp without time zone
special_features ARRAY
fulltext tsvector
staff
PK staff_id integer
first_name character varying(45)
last_name character varying(45)
FK address_id smallint
email character varying(50)
store_id smallint
active boolean
username character varying(16)
password character varying(40)
last_update timestamp without time zone
picture bytea
language
PK language_id integer
name character(20)
last_update timestamp without time zone
city
PK city_id integer
city character varying(50)
FK country_id smallint
last_update timestamp without time zone
rental
PK rental_id integer
rental_date timestamp without time zone
FK inventory_id integer
FK customer_id smallint
return_date timestamp without time zone
FK staff_id smallint
last_update timestamp without time zone
inventory
PK inventory_id integer
FK film_id smallint
store_id smallint
last_update timestamp without time zone
country
PK integer
character varying(50)
timestamp without time zone
payment
PK payment_id integer
FK customer_id smallint
FK staff_id smallint
FK rental_id integer
amount numeric
payment_date timestamp without time zone
customer
PK customer_id integer
store_id smallint
first_name character varying(45)
last_name character varying(45)
email character varying(50)
FK address_id smallint
activebool boolean
create_date date
last_update timestamp without time zone
active integer

5.1 Actor

Actor		
PK	actor_id	integer
	first_name	character varying(50)
	last_name	character varying(50)
	last_update	timestamp without time zone

Links from: Film actor

5.2 Film Actor

Film_Actor		
PK,FK	actor_id	smallint
PK,FK	film_id	smallint
	last_update	timestamp without time zone

Links To: Actor & Film

5.3 Film Category

Film_Category		
PK,FK	film_id	smallint
PK,FK	category_id	smallint
	last_update	timestamp without time zone

Links To: Film & Category

5.4 Category

Category		
PK	category_id	integer
	name	character varying(25)
	last_update	timestamp without time zone

Link From: film category

6.1 Film

Film		
PK	film_id	integer
	title	character varying(255)
	description	text
	release_year	integer
FK	language_id	smallint
	rental_duration	smallint
	rental_rate	numeric
	length	smallint
	replacement_cost	numeric
	rating	USER-DEFINED
	last_update	timestamp without time zone
	special_features	ARRAY
	fulltext	tsvector

Links From: Inventory, Film Category & Film Actor

Links To: Language

6.2 Customer

Customer		
PK	customer_id	integer
	store_id	smallint
	first_name	character varying(45)
	last_name	character varying(45)
	email	character varying(50)
FK	address_id	smallint
	activebool	boolean
	create_date	date
	last_update	timestamp without time zone
	active	integer

Links From: Payment & Rental

Links To: Address

7.1 Rental

Rental		
PK	rental_id	integer
	rental_date	timestamp without time zone
FK	inventory_id	integer
FK	customer_id	smallint
	return_date	timestamp without time zone
FK	staff_id	smallint
	last_update	timestamp without time zone

Links From: Payment

Links To: Inventory, Customer & Staff

7.2 Inventory

Inventory		
PK	inventory_id	integer
FK	film_id	smallint
	store_id	smallint
	last_update	timestamp without time zone

Links From: Rental

Links To: Film

7.3 Staff

Staff		
PK	staff_id	integer
	first_name	character varying(45)
	last_name	character varying(45)
FK	address_id	smallint
	email	character varying (50)
	store_id	smallint
	active	boolean
	username	character varying(16)
	password	character varying(45)
	last_update	timestamp without time zone
	picture	bytea

Links From: Store, Rental, Payment

Links To: Address

8.1 Address

Address		
PK	address_id	integer
	address	character varying(50)
	address2	character varying(50)
	district	character varying(20)
FK	city_id	smallint
	postal_code	character varying (10)
	phone	character varying (20)
	last_update	timestamp without time zone

Links From: Customer, Store, Staff

Links To: City

8.2 City

City		
PK	city_id	integer
	city	character varying(50)
FK	country_id	smallint
	last_update	timestamp without time zone

Links From: Address

Links To: Country

8.3 Country

Country		
PK	country_id	Integer
	country	character varying (50)
	last_update	timestamp without time zone

Links From: City

8.4 Language

Language		
PK	language_id	integer
	name	character(20)
	last_update	timestamp without time zone

Links From: Film

9.1 Store

Store		
PK	store-id	integer
FK	manager_staff_id	smallint
FK	address_id	smallint
	last_update	timestamp without time zone

Links To: Staff & Address

9.2 Payment

Payment		
PK	payment_id	integer
FK	customer_id	smallint
FK	staff_id	smallint
FK	rental_id	integer
	amount	numeric
	payment_date	timestamp without time zone

Links To: customer, rental & staff