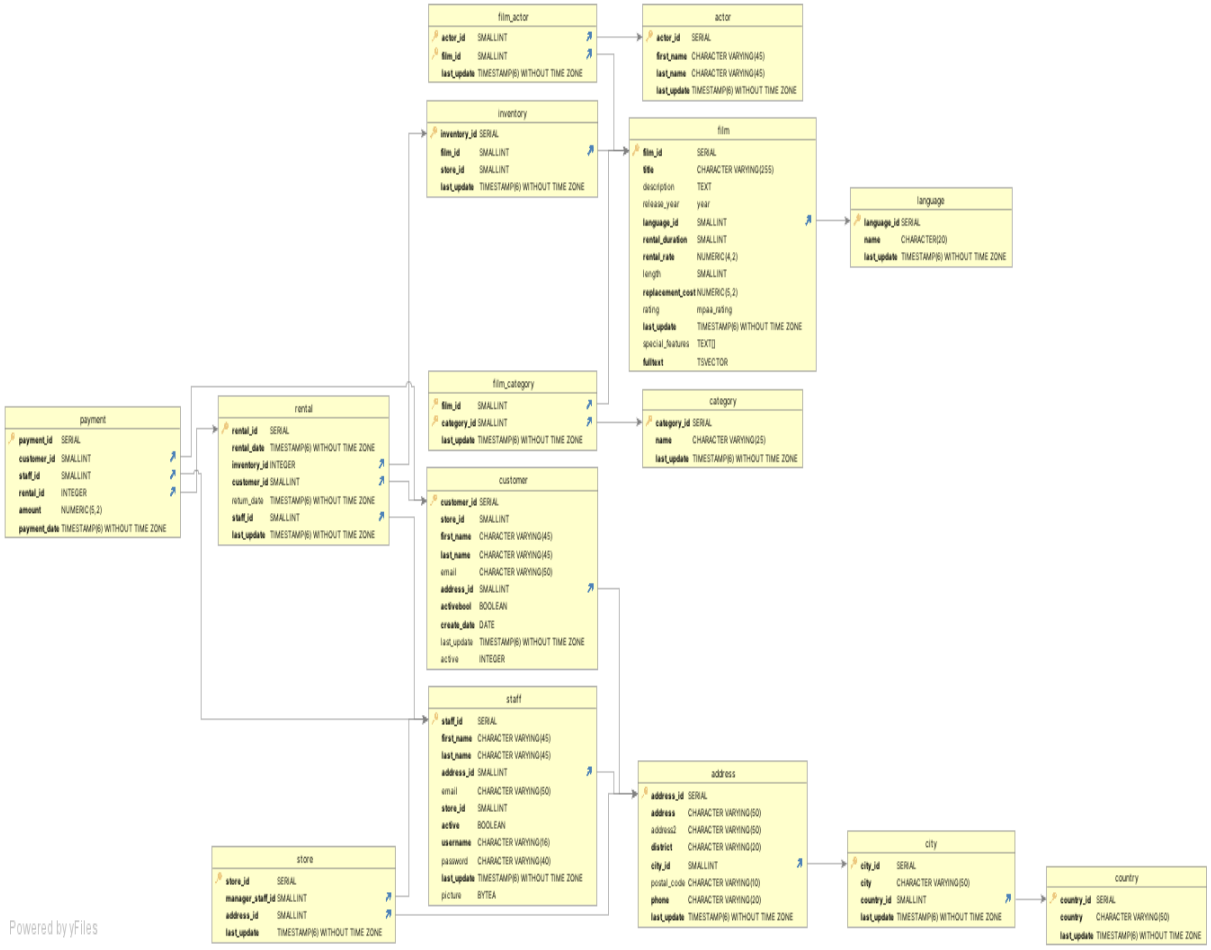
Rockbuster Stealth

Data Dictionary

This document acts as a data dictionary for the Rockbuster database, detailing structures like tables and relationships to facilitate data management and querying in PostgreSQL. The Rockbuster database is designed to manage and store information for a video rental business, covering details about films, actors, inventory, rentals, payments, and other related elements. The Rockbuster database follows a snowflake schema. The fact tables, rental and payment, are connected to dimension tables such as inventory and customer, which in turn are connected to sub-dimension tables. Together, these elements form a snowflake schema.

Table of Contents

Entity Relationship Diagram (ERD)



FACT TABLES

Payment

Columns	Data Type	Description
payment_id	Serial	Surrogate Primary Key
customer_id	SMALLINT	Foreign key to link to customer table
staff_id	SMALLINT	Foreign key to link to staff table
rental_id	INTEGER	Foreign key, larger integer, unique number used to identify the rental transaction
amount	NUMERIC(5,2)	Price
payment_date	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time values

Rental

Columns	Data Type	Description
rental_id	SERIAL	Primary key, unique number used to identify the rental transction
rental_date	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date and time of the rental
inventory_id	INTEGER	Foreign key, larger integer
customer_id	SMALLINT	Foreign key, unique number used to identify the customer
return_date	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of the return
staff_id	SMALLINT	Foreign key, unique number used to identify the employee of Rockbuster
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of the last changes

DIMENSION TABLES

Inventory

Columns	Data Type	Description
inventory_id	SERIAL	Primary key, unique number used to identify an item
film_id	SMALLINT	Foreign key, unique number used to identify a film and connect to the Film table
store_id	SMALLINT	Small integer, unique number used to identify the store
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Film category

Columns	Data Type	Description
film_id	SMALLINT	Composite key, unique number used to identify the film in this database. Foreign key connecting linked to the Film table
category_id	SMALLINT	Composite key, unique number used to identify the film category in this database. Foreign key connecting category and film
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Category

Columns	Data Type	Description
Category_id	Serial	Primary key, unique number used to identify the Film category
Name	Character Varying (25)	Name of the category
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Inventory

Columns	Data Type	Description
Inventory_id	Serial	Primary key, unique number used to identify an item
Film_id	Smallint	Foreign key, integer, unique number used to identify each film and connect to the Film table
Store_id	Smallint	Unique number used to identify the store
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Film

Columns	Data Type	Description
film_id	SERIAL	Primary key, unique number used to identify each film
title	CHARACTER VARYING(255)	Film title, fixed-length character with max 255 characters, including spaces
description	TEXT	Film synopsis with unlimited length
release_year	year	Integer, the year the film was released
language_id	SMALLINT	Foreign key, unique number used to identify the language of a film audio; linked to the Language table
rental_duration	SMALLINT	the number of days the item was rented for
rental_rate	NUMERIC(4,2)	Rating, number with max 4 digits, including and 2 digits in fraction part
length	SMALLINT	Small integer, the length of film (minutes)
replacement_cost	NUMERIC(5,2)	The charge for a lost or damaged item. Monetary amount, number with max 5 digits, including and 2 digits in fraction part
rating	mpaa_rating	Film rating introduced by Movie Picture Association
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes
special_features	TEXT[]	Extras related to the film
fultext	TSVECTOR	Text-searchable data where we can use a word as an index

Language

Columns	Data Type	Description
language_id	SERIAL	Primary key, unique number used to identify the language
name	CHARACTER(20)	The name of the language of the film audio
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Film actor

Columns	Data Type	Description
actor_id	SMALLINT	Composite key, unique number used to identify the actor
film_id	SMALLINT	Composite key, unique number used to identify the film
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Actor

Columns	Data Type	Description
actor_id	SERIAL	Primary key, unique number used to identify the actor
first_name	CHARACTER VARYING(45)	Actor's first name, max 45 characters
last_name	CHARACTER VARYING(45)	Actor's last name, max 45 characters
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Customer

Columns	Data Type	Description
customer_id	SERIAL	Primary key, unique number used to identify the customer
store_id	SMALLINT	Unique number used to identify the store
first_name	CHARACTER VARYING(45)	Customer's first name, max 45 characters
last_name	CHARACTER VARYING(45)	Customer's last name, max 45 characters
email	CHARACTER VARYING(50)	Customer's email, max 50 characters

address_id	SMALLINT	Foreign key, customer's address, linked to the Address table
activebool	BOOLEAN	True or false statement to indicate the customer account status. Boolean data can hold three possible values: true, false or null
create_date	DATE	The date when the customer account was created. Temporal date
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes
active	INTEGER	Integer, a number to indicate whether the customer account is active or not

Staff

Columns	Data Type	Description
staff_id	SERIAL	Primary key, unique number used to identify the staff memer
first_name	CHARACTER VARYING(45)	Employee's first name, max 45 characters
last_name	CHARACTER VARYING(45)	Employee's last name, max 45 characters
address_id	SMALLINT	Foreign key, employee's address, linked to the Address table
email	CHARACTER VARYING(50)	Employee's email, max 50 characters
store_id	SMALLINT	Unique number used to identify the store
active	INTEGER	Integer, a number to indicate whether the employee’s account is active or not
username	CHARACTER VARYING(16)	Employee's username / log-in ID for internal account, max 16 characters
password	CHARACTER VARYING(40)	Employee's password used to log in to internal account, max 40 characters
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes
picture	BYTEA	Employee's picture. Bytea data type is used to store raw binary data, e.g. images

Store

Columns	Data Type	Description
store_id	SERIAL	Primary key, unique number used to identify the store in Rockbuster classification
manager_staff_id	SMALLINT	Foreign key, unique number used to identify the manager staff, linked to the Staff table
address_id	SMALLINT	Foreign key, unique number used to identify the store address, linked to the Address table
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Address

Columns	Data Type	Description
adress_id	SERIAL	Primary key, unique number used to identify the address in this table
address	CHARACTER VARYING(50)	Any address in this database - line1 (street number and street name)
address2	CHARACTER VARYING(50)	Any address in this database - line2, it can be used as a secondary address designator such as apartment number or building name
district	CHARACTER VARYING(20)	Any address in this database - district / state / region name
city_id	SMALLINT	Foreign key, small integer, unique number used to identify the city in this database, linked to the City table
postal_code	CHARACTER VARYING(10)	Any address in this database - postal code, max 10 characters
phone	CHARACTER VARYING(20)	Phone number related to the address in this database, max 20 characters
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

City

Columns	Data Type	Description
city_id	SERIAL	Primary key, unique number used to identify the city in this database
city	CHARACTER VARYING(50)	City name in the address in this database
country_id	SMALLINT	Foreign key, unique number used to identify the country in this database, linked to the Country table
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes

Country

Columns	Data Type	Description
country_id	SERIAL	Primary key, unique number used to identify the city in this database
country	CHARACTER VARYING(50)	Country name in the address in this database
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, stores both date and time of last changes