Rockbuster Data Dictionary

Overview

This document is a data dictionary for the Rockbuster database. It outlines the tables and relationships to aid data managers when querying in PostgresSQL.

The database stores information for Rockbuster's video rental business. It includes details about films, actors, inventory, rentals, payments, and other related aspects.

The database has a snowflake schema. The two fact tables are rental and payment. They are surrounded by dimension tables, and subsequently subdimension tables.

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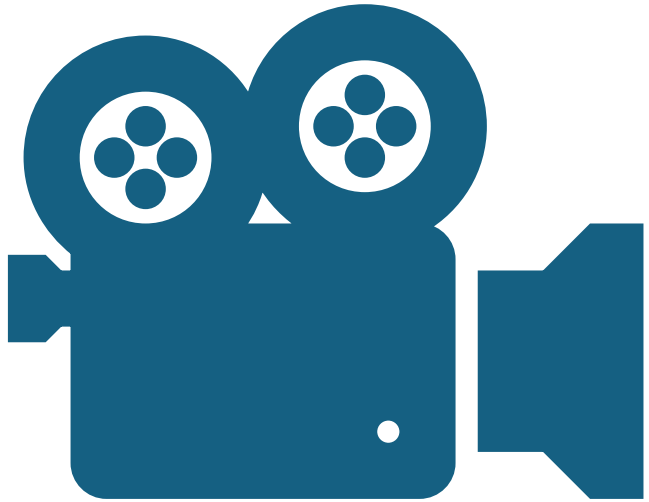
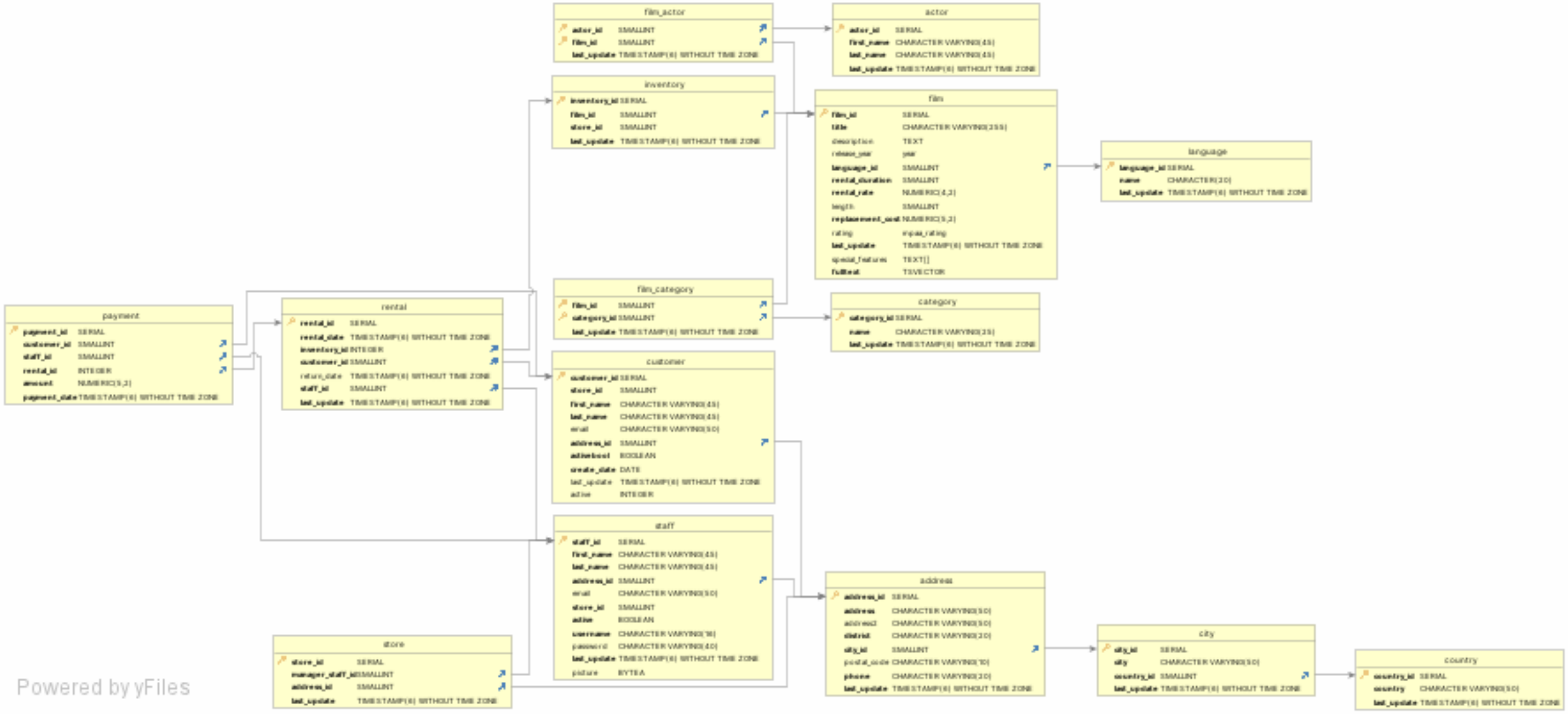


Entity Relationship Diagram (ERD)



Fact Tables

Payment

Columns	Data Type	Description
payment_id	SERIAL	Primary key, integer, unique value to identify payment
customer_id	SMALLINT	Foreign key, small integer, unique number used to identify the customer
staff_id	SMALLINT	Foreign key, small integer, unique number to identify personnel member
rental_id	INTEGER	Foreign key, larger integer, unique number used to identify the rental transaction
amount	NUMERIC(5,2)	Monetary amount, number with max 5 digits, including and 2 digits in fraction part; max value 999.99
payment_date	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Rental

Columns	Data Type	Description
rental_id	SERIAL	Primary key, integer, uniqueunique number used to identify the rental transction
rental_date	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec) used to indicate the date and time the rent has started
inventory_id	INTEGER	Foreign key, larger integer, unique number used to identify an item to be rented
customer_id	SMALLINT	Foreign key, small integer, unique number used to identify the customer
return_date	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec). The date and time set as a deadline when the rental items to be returned.
staff_id	SMALLINT	Foreign key, small integer, unique number used to identify the personnel member
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Dimension Tables

Inventory

Columns	Data Type	Description
inventory_id	SERIAL	Primary key, larger integer, unique number used to identify anitem to be rented
film_id	SMALLINT	Foreign key, integer, unique number to identify each film and connect to Film table
store_id	SMALLINT	Small integer, unique number used to identify the store in Rockbuster classification
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Film

Columns	Data Type	Description
film_id	SERIAL	Primary key, unique number used to identify each film as a rental item
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 to identify the language; linked to Language table
rental_duration	SMALLINT	Small integer, the number of days the item was rented
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)	Cost the customer can be charged in case of loss or damage of rental item. Monetary amount, number with max 5 digits, including and 2-digit fractions.
rating	mpaa_rating	Film rating introduced by Movie Picture Association
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)
special_features	TEXT[[	Extra videos related to the film available for audience
fultext	TSVECTOR	Text-searchable data where we can use a word as an index

Dimension Tables

Language

Columns	Data Type	Description
actor_id	SMALLINT	Composite key, unique number used to identify the actor in this database. Foreign key connecting linked to Actor table.
film_id	SMALLINT	Composite key, unique number used to identify the film in this database. Foreign key connecting linked to Film table.
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Actor

Columns	Data Type	Description
actor_id	SERIAL	Primary key, unique number used to identify the actor in this database.
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, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Film Category

Columns	Data Type	Description
film_id	SMALLINT	Primary key, unique number used to identify the film category
category_id	SMALLINT	The name of the film category, max 25 characters
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Category

Columns	Data Type	Description
category_id	SERIAL	Primary key, unique number used to identify the film category
name	CHARACTER VARYING(25)	The name of the film category, max 25 characters
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Dimension Tables

Customer

Columns	Data Type	Description
customer_id	SERIAL	Primary key, unique number used to identify the customer in this database
store_id	SMALLINT	Small integer, unique number used to identify store in Rockbuster classification
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 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 customer account was created. Temporal date (yyyy-mm-dd)
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)
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 personnel member
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 Address table
email	CHARACTER VARYING(50)	Employee's email. Max 50 characters
store_id	SMALLINT	Small integer, unique number to identify the store in Rockbuster classification
active	BOOLEAN	True or false statement to indicate the employee's status. Boolean data can hold three possible values: true, false or null.
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, store both date (yyyy-mm-dd) and time (hours:minutes:sec)
picture	BYTEA	Employee's picture. Used to store raw binary data, e.g. images.

Dimension Tables

Store

Columns	Data Type	Description
store_id	SERIAL	Primary key, unique number to identify the store in Rockbuster classification
manager_staff_id	SMALLINT	Foreign key, unique number to identify the manager staff, linked to Staff table
address_id	SMALLINT	Foreign key, unique number to identify the store address, linked to Address table
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

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 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, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

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 to identify the country in this database, linked to Country table
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)

Dimension Tables

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 (yyyy-mm-dd) and time (hours:minutes:sec)