DATA DICTIONARY

Rockbuster Movie Rental Analysis Project

JUNE 17, 2024

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3.10: Presenting SQL Results
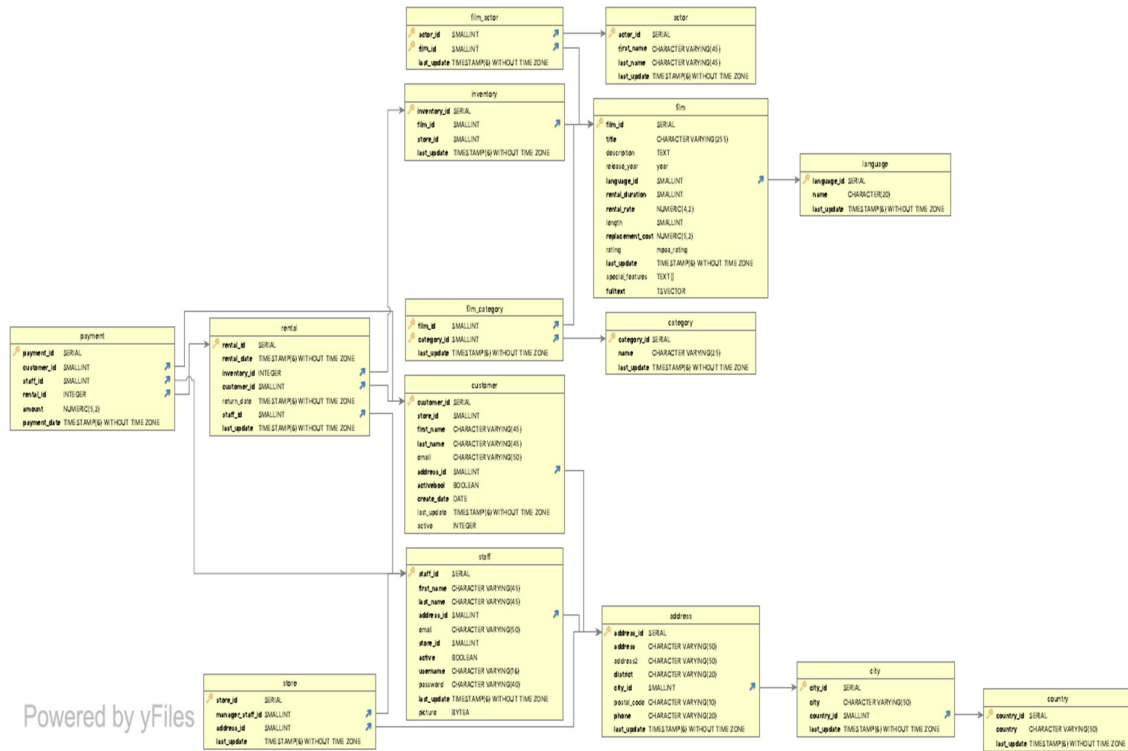
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Project Overview

In order to facilitate data management and PostgreSQL querying, this document acts as a data dictionary for the Rockbuster database, defining table and relationship structures.

The Rockbuster database is set up to handle and preserve data for a company that rents out videos. It includes information on films, performers, stock, rentals, expenses, and other relevant topics.

The Rockbuster database is a snowflake schema. The snowflake schema is arranged in the shape of a well, a snowflake. The fact table of the snowflake schema is surrounded by dimension tables, unlike the star schema which is also surrounded by sub-dimension tables.

Entity Relationship Diagram (ERD)

Fact Table

Payment

Column	Data Type	Description
payment_id	SERIAL	This is a primary key and unique id to identify payment.
customer_id	SMALLINT	It is a foreign key and unique id to identify the customer
staff_id	SMALLINT	It is a foreign key and unique id to identify the personnel member of Rockbuster
rental_id	INTEGER	It is a foreign key and unique id to identify the rental transaction
amount	NUMERIC(5,2)	It is a numerical amount value with a max of 5 digits and a fraction of 2 digits.
Payment_date	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time in a temporary format.

Rental

Column	Data Type	Description
rental_id	SERIAL	This is a primary key, integer, and unique id to identify the rental transaction
rental_date	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time in a temporary format used to indicate the date and time the rental occurred or started
inventory_id	INTEGER	It is a foreign key integer, a unique id used to identify a film or item rented by customers
customer_id	SMALLINT	It is a foreign key integer, a unique id used to identify the customer
Return_date	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time in a temporary format used to indicate the date and time the rent was returned.
staff_id	SMALLINT	It is a foreign key integer, a unique number used to identify the personnel member of Rockbuster
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Dimension Table

Store

Column	Data Type	Description
store_id	SERIAL	This is a primary key, integer, and unique id to identify the store specification in Rockbuster
manager_staff_id	SMALLINT	Key to identifying the unique id of the store manager in the staff table
address_id	SMALLINT	It is a foreign key integer, a unique id used to identify the address of the store
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Film_actor

Column	Data Type	Description
actor_id	SMALLINT	Key to identifying the unique id of the actor
film_id	SMALLINT	Unique id key to identifying each film
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Inventory

Column	Data Type	Description
inventory_id	SERIAL	This is a primary key, integer, and unique id to identify the inventory of a film to be rented by customers
film_id	SMALLINT	Unique id key to identifying each film to be rented by customers
store_id	SMALLINT	This is a primary key, integer, and unique id to identify the store specification in Rockbuster
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Film_category

Column	Data Type	Description
film_id	SMALLINT	Unique id key to identifying each film in the database. This is a foreign key.
category_id	SMALLINT	Unique id key to identifying each film category in the database. Also, a foreign key connects to the Category table.
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Customer

Column	Data Type	Description
customer_id	SERIAL	Unique id key to identifying each customer rented a film in the database. This is a foreign key.
store_id	SMALLINT	This is a primary key, integer, and unique id to identify the store specification in Rockbuster
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	The foreign key identifying the customer's address, linked to the address table
activebool	BOOLEAN	Boolean data hold up to three possible values: true, false or null. The statement is to indicate the customer account status.
create_date	DATE	The date when the customer account was created.
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.
active	INTEGER	Integer, a number to indicate whether the customer account is active or not

Staff

Column	Data Type	Description
staff_id	SERIAL	Primary key, unique id 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	The foreign key, employee's address, linked to the address table
email	CHARACTER VARYING(50)	Employee's email. Max 50 characters
store_id	SMALLINT	Small integer, unique number used to identify the store in Rockbuster specification
active	BOOLEAN	Boolean data hold up to three possible values: true, false or null. The statement is to indicate the customer account status.
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	Transaction date and time for last update in a temporary format.
picture	BYTEA	Employee's picture. Bytea data type is used to store raw binary data, e.g. images.

Actor

Column	Data Type	Description
actor_id	SERIAL	The primary key and unique id used to identify the actor in the 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	Transaction date and time for last update in a temporary format.

Film

Columns	Data type	Description
film_id	SERIAL	The primary key, a unique id used to identify each film as a rental item
title	CHARACTER VARYING(255)	Film title, with max 255 characters, including spaces
description	TEXT	Synopsis of film with unlimited length
release_year	year	The year film was released
language_id	SMALLINT	This is a foreign key, a unique id used to identify the language of film audio. It linked to the language table
rental_duration	SMALLINT	Number of days the film was rented for
rental_rate	NUMERIC(4,2)	The rate id with max 4 digits number, including and 2-digit in the fraction portion.
length	SMALLINT	The length of film (minutes).
replacement_cost	NUMERIC(5,2)	Lost or damaged rental cost. Customers will be charged a monetary value of 5 digits maximum, including 2 digits in the fraction portion.
rating	mpaa_rating	Rating for film produced by Movie Picture Association.
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.
special_features	TEXT[[	Additional film-related videos are accessible to viewers.
fultext	TSVECTOR	Text-searchable information with word indexing

Language

Columns	Data type	Description
language_id	SERIAL	The primary key, a unique id used to identify the language
name	CHARACTER(20)	The title of the audio-visual film's language
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Category

Columns	Data type	Description
category_id	SERIAL	The primary key, a unique id used to identify the film category
name	CHARACTER VARYING(25)	The film category name, up to 25 characters
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Address

Columns	Data type	Description
adress_id	SERIAL	The primary key, a unique id used to identify the address
address	CHARACTER VARYING(50)	Address details in line1
address2	CHARACTER VARYING(50)	Address details in line2
district	CHARACTER VARYING(20)	Address details such as district/state/region name
city_id	SMALLINT	A foreign key, small integer, or unique id used to identify the city.
postal_code	CHARACTER VARYING(10)	Address details such as postal code, max 10 characters
phone	CHARACTER VARYING(20)	Contact details, max 20 characters
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format
city	CHARACTER VARYING(50)	Name of the city under the address
country_id	SMALLINT	A foreign key, a unique id used to identify the country linked to a table
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

City

Columns	Data type	Description
country_id	SERIAL	The primary key, a unique id used to identify a city in the database
country	CHARACTER VARYING(50)	Country name under the address in the database
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.

Country

Columns	Data type	Description
country_id	SERIAL	The primary key, a unique id used to identify the country in the database
country	CHARACTER VARYING(50)	Country name under the address in the database
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Transaction date and time for last update in a temporary format.