Data Dictionary

Rockbuster

A data dictionary is a centralized repository that defines and describes the structure, relationships, and attributes of data within a database or information system.

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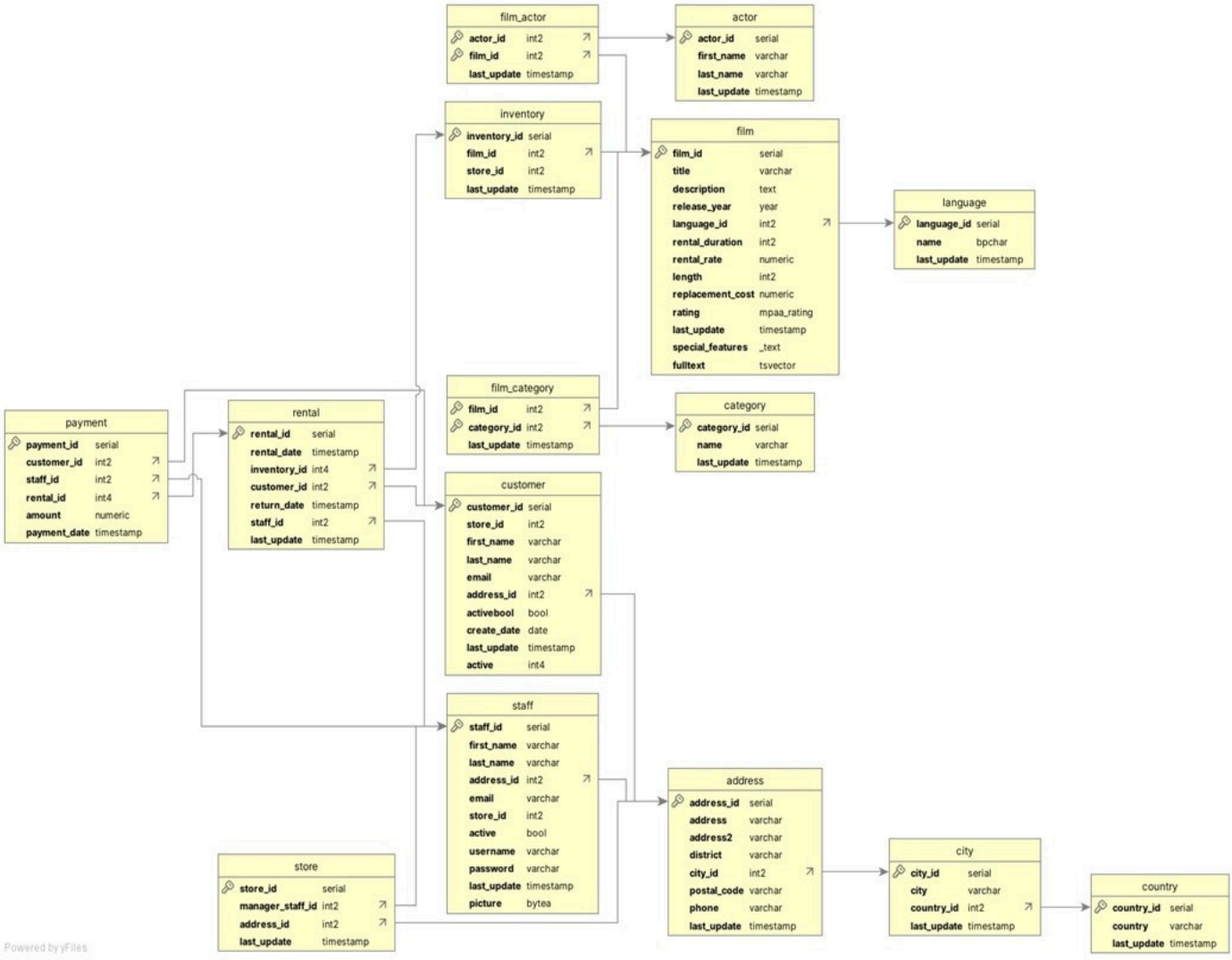
01

ER Diagram: Data Storage and Structure



02
Fact Tables

Payment Tablel

Information about payment transactions with timestamps of customers

Column	Data Type	Description	Relationships
payment_id	serial	Unique identifier for the payment	Primary key
customer_id	smallint	Unique identifier for the customer	Foreign key – links to rental and customer tables via customer_id
staff_id	smallint	Unique identifier for the staff	Foreign key – links to rental and staff tables via staff_id
rental_id	integer	Unique identifier for the rental	Foreign key – links to rental table via rental_id
amount	numeric(5,2)	Amount of payment	
payment_date	timestamp without time zone	Date of payment	

02
Fact Tables

Rental Table

Rental information and transactions with timestamps of customers.

Column	Data Type	Description	Relationships
rental_id	serial	Unique identifier for the rental	Primary key; foreign key in payment table
rental_date	timestamp without time zone	Date and time of the rental	
inventory_id	integer	Unique identifier for the inventory	Foreign key
customer_id	smallint	Unique identifier for the customer	Foreign key
return_date	timestamp without time zone	Date and time of rental return	
staff_id	smallint	Unique identifier for staff	Foreign key
last_update	timestamp without time zone	Date and time of the last update	

03

Dimension Tables

Actor Table

This has actors first and last names.

Column	Data Type	Description	Relationships
actor_id	serial	Unique identifier for the actor	Primary key; foreign key in film_actor table
first_name	varchar(45)	First name of the actor	
last_name	varchar(45)	Last name of the actor	
last_update	timestamp without time zone	Date and time of the last update	

03

Dimension Tables

Address Table

Street addresses, postal codes for customers as well as phone numbers.

Column	Data Type	Description	Relationships
address_id	serial	Unique identifier for the address	Primary key; foreign key in staff, store, and customer tables
address	varchar(50)	Street address	
address2	varchar(50)	Additional address info (may be null)	
district	varchar(20)	District, region, state, or prefecture of address	
city_id	smallint	Unique identifier for the city	Foreign key
postal_code	varchar(10)	Zip or postal code of the address	
phone	varchar(20)	Phone number	
last_update	timestamp without time zone	Date and time of last update	

03

Dimension Tables

Category Table

Genre of Films

Column	Data Type	Description	Relationships
category_id	serial	Unique identifier for the category	Primary key; foreign key in film_category table
name	varchar(25)	Genre of film	
last_update	timestamp without time zone	Date and time of last update	

City Table

Names of Cities and Country IDs

Column	Data Type	Description	Relationships
city_id	serial	Unique identifier for the city	Primary key; foreign key in address table
city	varchar(50)	Name of city	
country_id	smallint	Unique identifier for the country	Foreign key
last_update	timestamp without time zone	Date and time of last update	

03

Dimension Tables

Country Table

Names of countires and Country IDs

Column	Data Type	Description	Relationships
country_id	serial	Unique identifier for the country	Primary key; foreign key in city table
country	varchar(50)	Name of country	
last_update	timestamp without time zone	Date and time of last update	

Dimension Tables

Customer Table

Customer information and active status at various stores

Column	Data Type	Description	Relationships
customer_id	serial	Unique identifier for the customer	Primary key; foreign key in rental and payment tables
store_id	smallint	Unique identifier for the store	
first_name	varchar(45)	First name of customer	
last_name	varchar(45)	Last name of the customer	
email	varchar(50)	Customer email	
address_id	smallint	Unique identifier for the customer address	Foreign key
activebool	boolean	States if the customer is active (true/false)	
create_date	date	Date of customer acquisition	
last_update	timestamp without time zone	Date and time of last update	
active	integer	States if the customer is active (binary)	

Dimension Tables

Film Table

This includes information about the film rentals

Column	Data Type	Description	Relationships
film_id	serial	Unique identifier for the film	Primary key; foreign key in inventory, film_actor, and film_category tables
title	varchar(255)	Title of the film	
description	text	Film description	
release_year	integer	Year of film release	
language_id	smallint	Unique identifier for the language of film	Foreign key
rental_duration	smallint	How many days the film was rented for	
rental_rate	numeric(4,2)	Price of rental rate	
length	smallint	Length of film	
replacement_cost	numeric(5,2)	Price of rental (replacement cost)	

Dimension Tables

Film Table

This includes information about the film rentals

Column	Data Type	Description	Relationships
last_update	timestamp without time zone	Date and time of last update	
special_features	text[]	Extra features (commentary, deleted scenes, BTS, trailers)	
fulltext	tsvector	Improves searches (keywords in film description)	

03

Dimension Tables

Film Actor Table

This includes Actor and film IDs

Column	Data Type	Description	Relationships
actor_id	smallint	Unique identifier for the actor	Primary key; foreign key in actor table
film_id	smallint	Unique identifier for the film	Foreign key; part of composite key
last_update	timestamp without time zone	Date and time of last update	

Film Category Table

Film and category IDs

Column	Data Type	Description	Relationships
film_id	smallint	Unique identifier for the film	Composite key; foreign key
category_id	smallint	Unique identifier for the film category	Composite key; foreign key
last_update	timestamp without time zone	Date and time of last update	

Dimension Tables

Inventory Table

Inventory store and film IDs

Column	Data Type	Description	Relationships
inventory_id	serial	Unique identifier for the inventory item	Primary key; foreign key
film_id	smallint	Unique identifier for the film	
store_id	smallint	Unique identifier of store inventory	
last_update	timestamp without time zone	Date and time of last update	

Language Table

The films language

Column	Data Type	Description	Relationships
language_id	serial	Unique identifier for the language	Primary key; foreign key
name	char(20)	Language	
last_update	timestamp without time zone	Date and time of last update	

Dimension Tables

Staff Table

Staff count information at various stores

Column	Data Type	Description	Relationships
staff_id	serial	Unique identifier for the staff member	Primary key; foreign key
first_name	varchar(45)	First name of staff member	
last_name	varchar(45)	Last name of staff member	
address_id	smallint	Unique identifier for the address of staff member	Foreign key
email	varchar(50)	Email of staff member	
store_id	smallint	Unique identifier for the store	
active	boolean	Staff member active status (true/false)	
username	varchar(16)	Username of staff member	
password	varchar(40)	Password of staff member	
last_update	timestamp without time zone	Date and time of last update	
picture	bytea	Image of staff member	

03

Dimension Tables

Store Table

Manger IDs who work at various stores

Column	Data Type	Description	Relationships
store_id	serial	Unique identifier for the store	Primary key; foreign key
manager_staff_id	smallint	ID of store manager	Foreign key
address_id	smallint	ID of store address	Foreign key
last_update	timestamp without time zone	Date and time of last update	