

ROCKBUSTER MOVIE RENTAL ANALYSIS PROJECT

DATA DICTIONARY

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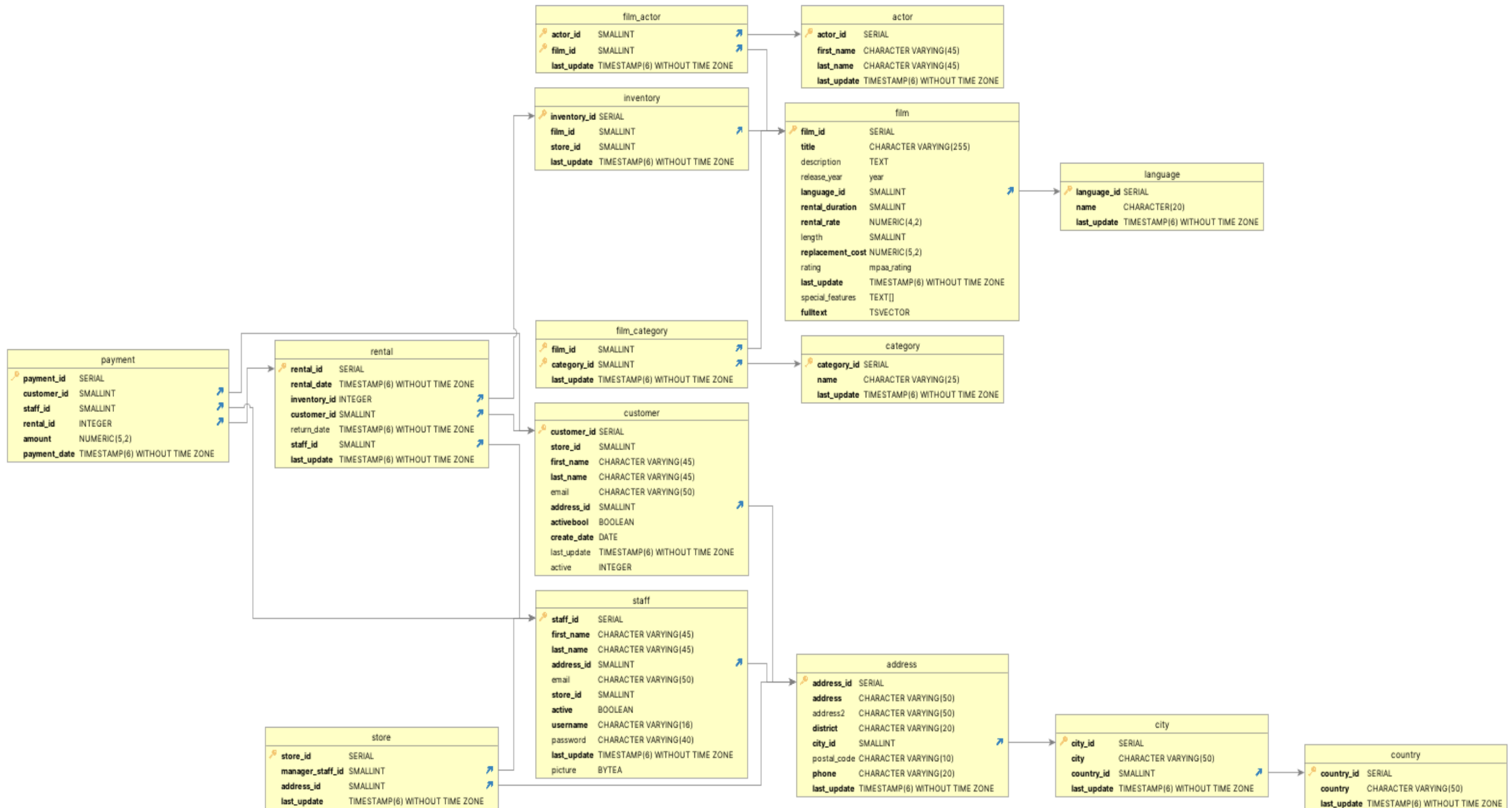
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OVER VIEW

- This document serves as a data dictionary for the Rockbuster database, outlining structures like tables and relationships Entity to aid in data management and querying in PostgreSQL.
- The Rockbuster database is structured to manage and store information for a video rental business.
- It encompasses details about films, actors, inventory, rentals, payments, and other related aspects.
- Rockbuster database has a snowflake schema. The fact table rental and payment are surrounded by dimension table such as inventory and customer, then dimension tables are surrounded by subdimension table. All of these together form a snowflake schema



















ENTITY RELATIONSHIP DIAGRAM (ERD)

RockBuster
Movie Rental



FACT TABLES

PAYMENT

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
payment_id	integer 				
customer_id	smallint 				
staff_id	smallint 				
rental_id	integer 				
amount	numeric 	5	2		
payment_date	timestamp without time zone 				

Column	Data Type	Description
payment_id	integer	Unique identifier of a payment
customer_id	smallint	Unique identifier of a customer
Staff_id	smallint	Unique identifier of a staff
Rental_id	integer	Unique identifier for rental
amount	numeric	Price of rental
Payment_date	Timestamp without time zone	Date of payment

RENTAL

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?	Default
rental_id	integer v			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	nextval('rer
rental_date	timestamp without ti... v			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
inventory_id	integer v			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
customer_id	smallint v			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
return_date	timestamp without ti... v			<input type="checkbox"/>	<input type="checkbox"/>	
staff_id	smallint v			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
last_update	timestamp without ti... v			<input checked="" type="checkbox"/>	<input type="checkbox"/>	now()

Column	Data Type	Description
Rental_id	Serial	identifier for each rental transaction
Rental_date	Timestamp (6) without time zone	Data of rental occurred
Inventory_id	Integer	Unique identifier for inventory
Customer_id	Smallint	Unique identifier for customer
Return_date	Timestamp (6) without time zone	Date of item be returned
Staff_id	Smallint	Unique identifier for staff
Last_update	Timestamp (6) without time zone	Date and time of record last updated

DIMENSION TABLES

RockBuster
Movie Rental

STORE

Columns	Data Type	Description
store_id	Serial	Unique identifier of store
manager_staff_id	Integer (SMALLINT)	Foreign key to link to staff table
address_id	Integer (SMALLINT)	Foreign key to link to address table
last_update	Date (Timestamp)	Date of when the record was last updated

FILM ACTOR

Columns	Data Type	Description
actor_id	Integer (SMALLINT)	Composite Primary key to identify each single actor, also acts as foreign key to link the actor table
Film_id	Integer (SMALLINT)	Composite Primary Key to identify each single film, also acts as foreign key to link the film table
Last_update	Date (Timestamp)	Date of when the record was last updated

DIMENSION TABLES

INVENTORY

Columns	Data Type	Description
Inventory_id	Serial	Id to identify each unique movie copy
Film_id	Integer (SMALLINT)	Foreign key to link to film table
Store_id	Integer (SMALLINT)	id of the store where the copy of the movie is located
Last_update	Date (Timestamp)	Date of when the record was last updated

FILM CATEGORY

Columns	Data Type	Description
Film_id	Integer (SMALLINT)	Composite Primary Key to identify each category
Category_id	Integer (SMALLINT)	Composite Primary Key to identify each category and foreign key to link to category table
Last_update	Date (Timestamp)	Date of when the record was last updated

DIMENSION TABLES

RockBuster
Movie Rental

CUSTOMER

Columns	Data Type	Description
Customer_id	Serial	Primary Key to identify each unique customer
Store_id	Integer (SMALLINT)	Id of the store the client record is referring to
First_name	VARCHAR	Customer name
Last_Name	VARCHAR	Customer last name
Email	VARCHAR	Customer email
Address_id	Integer (SMALLINT)	foreign key to link to address table
Active_bool	Boolean	Whether the customer is active or not
Create_date	Date	When the client was first recorded in the database
Last_update	Date (Timestamp)	Date of when the record was last updated
Active	Integer	Whether the customer is active or not

DIMENSION TABLES

RockBuster
Movie Rental

STAFF

Columns	Data Type	Description
Staff_id	Serial	Primary Key to identify each unique staff
First_name	VARCHAR	Staff first name
Last_name	VARCHAR	Staff last name
Address_id	Integer (SMALLINT)	foreign key to link to address table
Email	VARCHAR	Staff email
Store_id	Integer (SMALLINT)	Id of the store the staff record is referring to
active	Boolean	Whether the staff is active or not
Username	VARCHAR	Staff username
Password	VARCHAR	Staff password
Last_update	Date (Timestamp)	Date of when the record was last updated
Picture	BYTEA	Picture of staff

DIMENSION TABLES

ACTOR

Actor_id	Serial	Primary key to identify unique actor
First_name	VARCHAR	Actor first name
Last_name	VARCHAR	Actor last name
Last_update	Date (Timestamp)	Date of when the record was last updated

FILM

Columns	Data Type	Description
Film_id	Serial	Primary key to identify each unique film
Title	VARCHAR	title of Film
Description	Text	Description of film
Release_year	Year	Year of release of the film
Language_id	Integer (SMALLINT)	foreign key to link to language table
Rental_duration	Integer (SMALLINT)	Duaration of the rental
Rental_rate	Numeric two decimal place	Rate of the rental
Length	Integer (SMALLINT)	Duration of the film
Replacement_cost	Numeric two decimal place	Cost associated with film replacement
Rating	Mpaa_rating	Rating of the film
Last_update	Date (Timestamp)	Date of when the record was last updated
Special_features	Text	Extra information available in the film
Fulltxt	TSVECTOR	Extra information about content

DIMENSION TABLES

CATEGORY

Columns	Data Type	Description
Category_id	Serial	Primary Key to identify each unique category
Name	VARCHAR	Category name
Last_update	Date (Timestamp)	Date of when the record was last updated

ADDRESS

Columns	Data Type	Description
Address_id	Serial	Primary Key to identify each unique address
Address	Varchar	Address information
Address2	Varchar	Address information
District	Varchar	Address information
City_id	Integer (SMALLINT)	foreign key to link to city table
Postal_code	VARCHAR	Address information
Phone	VARCHAR	Phone number
Last_update	Date (Timestamp)	Date of when the record was last updated

DIMENSION TABLES

LANGUAGE

Columns	Data Type	Description
Language_id	Serial	Primary key to identify different languages
Name	VARCHAR	Language name
Last_update	Date (Timestamp)	Date of when the record was last updated

CITY

Columns	Data Type	Description
City_id	Serial	Primary Key to identify each unique city
City	Varchar	City name
Country_id	Smallint	foreign key to link to country table
Last_update	Date (Timestamp)	Date of when the record was last updated

COUNTRY

Columns	Data Type	Description
Country_id	Serial	Primary key to identify each unique country
Country	Varchar	Country name
Last_update	Date (Timestamp)	Date of when the record was last updated

Data storage:

- Which actors brought Rockbuster the most revenue?
payment – rental - customer – inventory – film_actor – actor
- What language are the majority of movies in the collection?
inventory – film - language

DIMENSION TABLES:

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