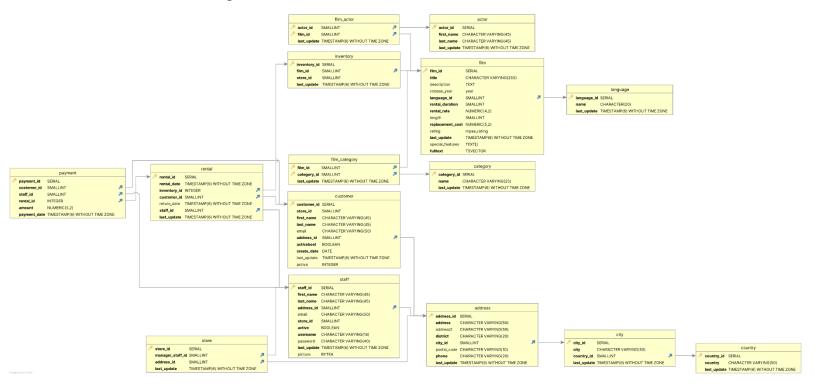
Exercise 3.10: Data Storage and Structure

Step 3:

Finalizing the data dictionary drafted in Exercise 3.2

Rockbuster ERD image from *DbVisualizer*



The Rockbuster database has a **snowflake** schema. The fact tables (rental & payment) are surrounded by dimension tables, which are surrounded by more sub-dimension tables.

List of Tables:

Fact Tables:

<u>rental</u>

Column	Data Type	Description
rental_id	INTEGER	Primary key
rental_date	TIMESTAMP(6) WITHOUT	Date of rental
	TIME ZONE	
inventory_id	INTEGER	Foreign key
customer_id	SMALLINT	Foreign key
return_date	TIMESTAMP(6) WITHOUT	Date of return
	TIME ZONE	
staff_id	SMALLINT	Foreign key
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

payment

Column	Data Type	Description
payment_id	INTEGER	Primary key
customer_id	SMALLINT	Foreign key
staff_id	SMALLINT	Foreign key
rental_id	INTEGER	Foreign key
amount	NUMERIC(5,2)	Amount of rental transaction
payment_date	TIMESTAMP(6) WITHOUT	Date of payment
	TIME ZONE	

Dimension Tables:

<u>customer</u>

Column	Data Type	Description
customer_id	INTEGER	Primary key
store_id	SMALLINT	Foreign key
first_name	CHARACTER VARYING(45)	First name of customer
last_name	CHARACTER VARYING(45)	Last name of customer
email	CHARACTER VARYING(50)	Email address of customer
address_id	SMALLINT	Foreign key
activebool	BOOLEAN	True if "active", False if
		"inactive"
create_date	DATE	Date of customer account
		creation

last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	
active	INTEGER	Active status represented by
		'0', inactive status
		represented by '1'

<u>address</u>

Column	Data Type	Description
address_id	INTEGER	Primary key
address	CHARACTER VARYING(50)	Primary address
address2	CHARACTER VARYING(50)	Additional address (optional)
district	CHARACTER VARYING(20)	District name
city_id	SMALLINT	Foreign key
postal_code	CHARACTER VARYING(10)	Postal Code
phone	CHARACTER VARYING(20)	Phone number
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

<u>city</u>

Column	Data Type	Description
city_id	INTEGER	Primary key
city	CHARACTER VARYING(50)	Name of city
country_id	SMALLINT	Foreign key
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

country

Column	Data Type	Description
country_id	INTEGER	Primary key
country	CHARACTER VARYING(50)	Name of country
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

<u>store</u>

Column	Data Type	Description
store_id	INTEGER	Primary key

manager_staff_id	SMALLINT	Foreign key (connects to
		'staff_id' of staff member
		who is the manager of store)
address_id	SMALLINT	Foreign key
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

<u>staff</u>

Column	Data Type	Description
staff_id	INTEGER	Primary key
first_name	CHARACTER VARYING(45)	First name of staff
last_name	CHARACTER VARYING(45)	Last name of staff
address_id	SMALLINT	Foreign key
email	CHARACTER VARYING(50)	Email address of staff
store_id	SMALLINT	Foreign key
active	BOOLEAN	True if "active", False if
		"inactive"
username	CHARACTER VARYING(16)	Username of staff
password	CHARACTER VARYING(40)	Password of staff
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	
picture	BYTEA	Staff profile picture

<u>inventory</u>

Column	Data Type	Description
inventory_id	INTEGER	Primary key
film_id	SMALLINT	Foreign key
store_id	SMALLINT	Foreign key
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

<u>film</u>

Column	Data Type	Description
film_id	INTEGER	Primary key

title	CHARACTER VARYING(255)	Title of film
description	TEXT	Description of film
release_year	year	Year of film release
language_id	SMALLINT	Foreign key
rental_duration	SMALLINT	Duration of rental
rental_rate	NUMERIC(4,2)	Rate of rental
length	SMALLINT	Length of film
replacement_cost	NUMERIC(5,2)	Cost to replace item
rating	mpaa_rating	MPAA Rating
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	
special_features	TEXT[]	Trailers, Deleted scenes,
		Behind the scenes, etc.
fulltext	TSVECTOR	Index of 'key words'

language

Column	Data Type	Description
language_id	INTEGER	Primary key
name	CHARACTER(20)	Name of language
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

category

Column	Data Type	Description
category_id	INTEGER	Primary key
name	CHARACTER VARYING(25)	Name of category
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

film category

Column	Data Type	Description
film_id	SMALLINT	Composite key
category_id	SMALLINT	Composite key
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

<u>actor</u>

Column	Data Type	Description
actor_id	INTEGER	Primary key

first_name	CHARACTER VARYING(45)	Actor's first name
last_name	CHARACTER VARYING(45)	Actors' last name
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	

film actor

Column	Data Type	Description
actor_id	SMALLINT	Composite key
film_id	SMALLINT	Composite key
last_update	TIMESTAMP(6) WITHOUT	Time of last update
	TIME ZONE	