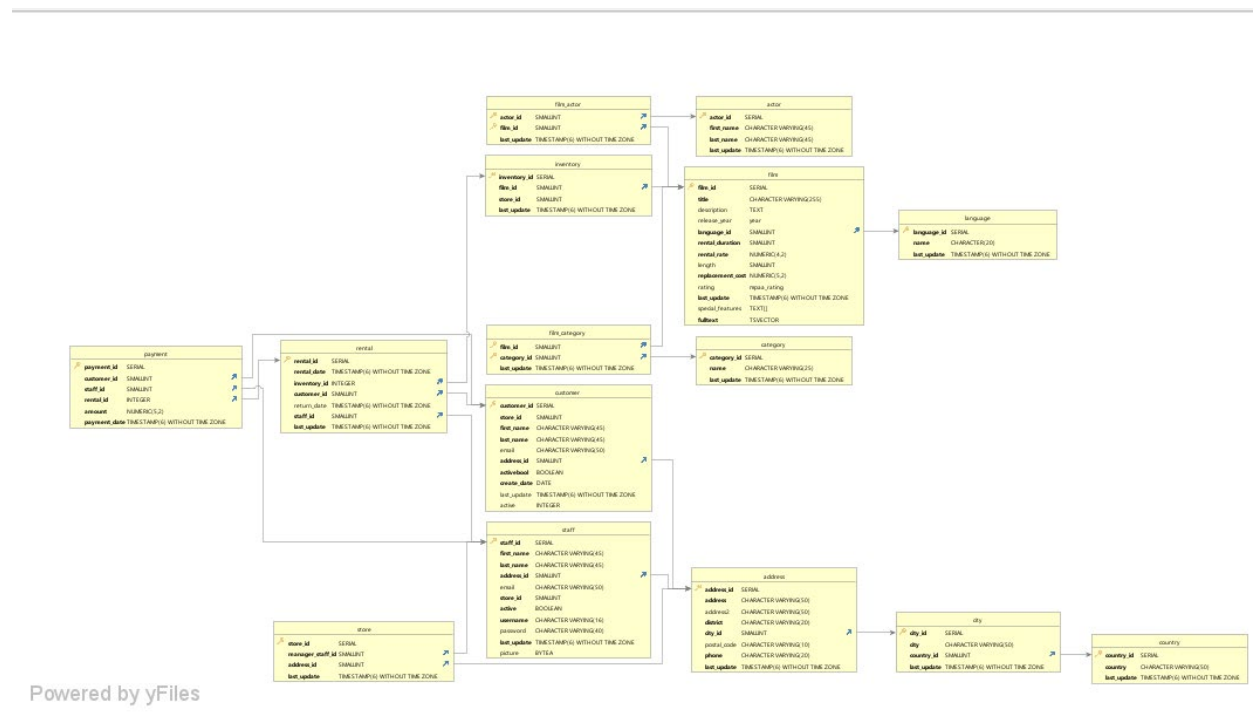Data Immersion

May 20, 2022

Exercise 3.2

Step 2

Extract the ERD from the Rockbuster database and save it as an image (PNG or JPEG) using the instructions in the Exercise.

Powered by yFiles

Step 3

Take a moment to examine your ERD. Does the Rockbuster database have a snowflake schema or a star schema? Write a brief explanation for your answer.

I would consider this a Snowflake Schema as the various tables are interconnected, and not just connected to the center of the Star.

List all the fact tables and all the dimension tables in the schema. For each table, list every column and its data type, and write a brief description of the column. To get an idea of what this should look like, check out these example fact and dimension tables.

Fact Table

Rental

Column	Data Type	Description
rental_id	SERIAL	Rental identification number
rental_date	TIMESTAMP(6) WITHOUT TIME ZONE	Date of Rental
inventory_id	INTEGER	Inventory identification number
customer_id	SMALLINT	Customer identification number
return_date	TIMESTAMP(6) WITHOUT TIME ZONE	Date the rental was returned
staff_id	SMALLINT	Staff identification number
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Dimension Tables

Payment		
Payment_id	SERIAL	Payment identification number
Customer_id	SMALLINT	Customer identification number
Staff_id	SMALLINT	Staff identification number
Rental_id	INTEGER	Rental identification number
Amount	NUMERIC(5,2)	Amount paid (including cents)
Payment_date	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Store		
Store_id	SERIAL	Store identification number
Manager_staff_id	SMALLINT	Staff manager identification number
Address_id	SMALLINT	Store address identification number
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Film_Actor		
Actor_id	SERIAL	Actor identification number
Film_id	SMALLINT	Film identification number
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

inventory		
Actor_id	SERIAL	Actor identification number
Film_id	SMALLINT	Film identification number
Store_id	SMALLINT	Store identification number
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Film_category		
Film_id	SMALLINT	Film identification number
Category_id	SMALLINT	Film category identification number
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Customer		
Customer_id	SERIAL	Customer identification number
Store_id	SMALLINT	Store identification number

First_name	CHARACTER VARYING(45)	First name of the customer
Last_name	CHARACTER VARYING(45)	Last name of the customer
Email	CHARACTER VARYING(50)	Email address of the customer
Address_id	SMALLINT	Address of the customer
Activebool	BOOLEAN	Is the customer still active?
Create_date	DATE	Date the customer account was created
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated
active	INTEGER	Is the customer still active?

Staff		
staff_id	SERIAL	Staff identification number
First_name	CHARACTER VARYING(45)	First name of the Staff Member
Last_name	CHARACTER VARYING(45)	Last name of the Staff Member
Address_id	SMALLINT	Staff address identification number
Email	CHARACTER VARYING(50)	Staff Member email address
Store_id	SMALLINT	Store identification number
Active	BOOLEAN	Is the Staff Member active?
Username	CHARACTER VARYING(16)	Staff Member Username
Password	CHARACTER VARYING(40)	Staff Member Password
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated
picture	BYTEA	Employee's Picture

Actor		
Actor_id	SERIAL	Actor identification number
First_name	CHARACTER VARYING(45)	First name of the actor
Last_name	CHARACTER VARYING(45)	Last name of the actor
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Film		
Film_id	SERIAL	Film identification number
Title	CHARACTER VARYING(255)	Film Title
Description	TEXT	Description of the film
Release_year	YEAR	Year the film was released
Language_id	SMALLINT	Languages the film is in
Rental_duration	SMALLINT	Length of the rental duration
Rental_rate	NUMERIC(4,2)	Price of the rental
Length	SMALLINT	Movie length
Replacement_cost	NUMERIC(5,2)	Cost of replacing the movie
Rating	MPAA_RATING	Movie rating
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated
Special_features	TEXT	Any special features included
fulltext	TSVECTOR	Specific words associated with the film

Category		
Category_id	SERIAL	Movie category identification number
Name	CHARACTER VARYING(25)	Name of the movie category
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Address		
Address_id	SERIAL	Address identification number
Address	CHARACTER VARYING(50)	Address
Address2	CHARACTER VARYING(50)	Additional address space
District	CHARACTER VARYING(20)	District of the address
City_id	SMALLINT	City identification number
Postal_code	CHARACTER VARYING(10)	Postal code of the address
Phone	CHARACTER VARYING(20)	Phone number associated with the address
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Language		
Language_id	SERIAL	Language identification number
Name	CHARACTER(20)	Name of the language
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

City		
City_id	SERIAL	City identification number
City	CHARACTER VARYING(50)	City
Country_id	SMALLINT	Country identification number
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Country		
Country_id	SERIAL	Country identification number
Country	CHARACTER VARYING(50)	Country
Last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Date this entry was last updated

Step 4

To figure out which actor has grossed the most revenue through their rentals, we would need the following tables:

- Actor
- Film_Actor
- Film

To find out which language most of the movies are in, we would need the following tables:

- Language
- Film