

Task 3.2 – Data Storage Structure

Step 2:



Step 3:

The Rockbuster database has a snowflake schema because it consists of sub-dimension tables. I can see the foreign keys in each table, and how they relate to one another.

FACT TABLE

Rental

Columns	Data Type	Description
rental_id	SERIAL	A unique ID assigned to each rental
rental_date	TIMESTAMP(6) WITHOUT TIME ZONE	The date the rental transaction occurred
inventory_id	INTEGER	The ID assigned to each item stored in inventory
customer_id	SMALLINT	The ID assigned to each customer
return_date	TIMESTAMP(6) WITHOUT TIME ZONE	The date the item was returned
staff_id	SMALLINT	The ID assigned to each working staff member
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

DIMENSION TABLE

Payment

Columns	Data Type	Description
payment_id	SERIAL	The ID assigned to each payment transaction
customer_id	SMALLINT	The ID assigned to each customer
staff_id	SMALLINT	The ID assigned to each working staff member
rental_id	INTEGER	A unique ID assigned to each rental
amount	NUMERIC(5,2)	The total cost of each rental transaction
payment_date	TIMESTAMP(6) WITHOUT TIME ZONE	The date the payment transaction occurred

Film_actor

Columns	Data Type	Description
actor_id	SMALLINT	The ID assigned to each actor in the film
film_id	SMALLINT	The ID assigned to each film
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Actor

Columns	Data Type	Description
actor_id	SMALLINT	The ID assigned to each actor in the film
first_name	CHARACTER VARYING (45)	The actor's first name
last_name	CHARACTER VARYING (45)	The actor's last name
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Inventory

Columns	Data Type	Description
inventory_id	SERIAL	The ID assigned to each item stored in inventory
film_id	SMALLINT	The ID assigned to each film
store_id	SMALLINT	The ID assigned to each store
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Film

Columns	Data Type	Description
film_id	SMALLINT	The ID assigned to each film
title	CHARACTER VARYING (255)	The title of the film
description	TEXT	The description of the film
release_year	year	The year the film was released
language_id	SMALLINT	The ID assigned to the language of the film
rental_duration	TIMESTAMP(6) WITHOUT TIME ZONE	The length of how long the rental is for
rental_rate	NUMERIC(4,2)	The rate at which the film is being charged to rent
length	SMALLINT	The duration of the film
replacement_cost	NUMERIC(5,2)	The cost it would be to replace the film
rating	mpaa_rating	The rating of the film
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated
special_features	TEXT[]	Special features of the film
fulltext	TSVECTOR	Lexeme with pointers in the film

Film_category

Columns	Data Type	Description
film_id	SMALLINT	The ID assigned to each film
category_id	SMALLINT	The ID assigned for each category
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Category

Columns	Data Type	Description
category_id	SMALLINT	The ID assigned for each category
name	CHARACTER VARYING (25)	The name of each category
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Customer

Columns	Data Type	Description
customer_id	SMALLINT	The ID assigned to each customer
store_id	SMALLINT	The ID assigned to each store
first_name	CHARACTER VARYING (45)	The customer's first name
last_name	CHARACTER VARYING (45)	The customer's last name
email	CHARACTER VARYING (50)	The customer's email address
address_id	SMALLINT	The customer's address
activebool	BOOLEAN	If the customer's account is active or not
create_date	DATE	The date the customer signed up
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated
active	INTEGER	If the customer is active

Staff

Columns	Data Type	Description
staff_id	SERIAL	The ID assigned to each working staff member
first_name	CHARACTER VARYING (45)	The staff member's first name
last_name	CHARACTER VARYING (45)	The staff member's last name
address_id	SMALLINT	The ID of the address for the staff member
email	CHARACTER VARYING (50)	The staff member's email address
store_id	SMALLINT	The ID assigned to each store
active	BOOLEAN	If the staff member is actively working
username	CHARACTER VARYING (16)	The staff member's username
password	CHARACTER VARYING (40)	The staff member's password
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated
picture	BYTEA	Picture of the staff member

Store

Columns	Data Type	Description
store_id	SERIAL	The ID assigned to each store
manager_staff_id	SMALLINT	The ID of the manager
address_id	SMALLINT	The address of the staff member
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Address

Columns	Data Type	Description
address_id	SERIAL	The ID of the address
address	CHARACTER VARYING (50)	The primary address
address2	CHARACTER VARYING (50)	The secondary address
district	CHARACTER VARYING (20)	The district the address is located
city_id	SMALLINT	The ID of the city
postal_code	CHARACTER VARYING (10)	The postal code
phone	CHARACTER VARYING (20)	The phone number
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

City

Columns	Data Type	Description
city_id	SERIAL	The ID of the city
city	CHARACTER VARYING (50)	The name of the city
country_id	SMALLINT	The ID of the country
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Country

Columns	Data Type	Description
country_id	SERIAL	The ID of the country
country	CHARACTER VARYING (50)	The name of the country
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Language

Columns	Data Type	Description
language_id	SERIAL	The ID of the language
name	CHARACTER VARYING (20)	The name of the language
last_update	TIMESTAMP(6) WITHOUT TIME ZONE	The time the transaction was last updated

Step 4:

- **Which actors brought Rockbuster the most revenue?**
 - I would look at the film, film_actor, and actor tables
- **What language are the majority of movies in the collection?**
 - The language and film table