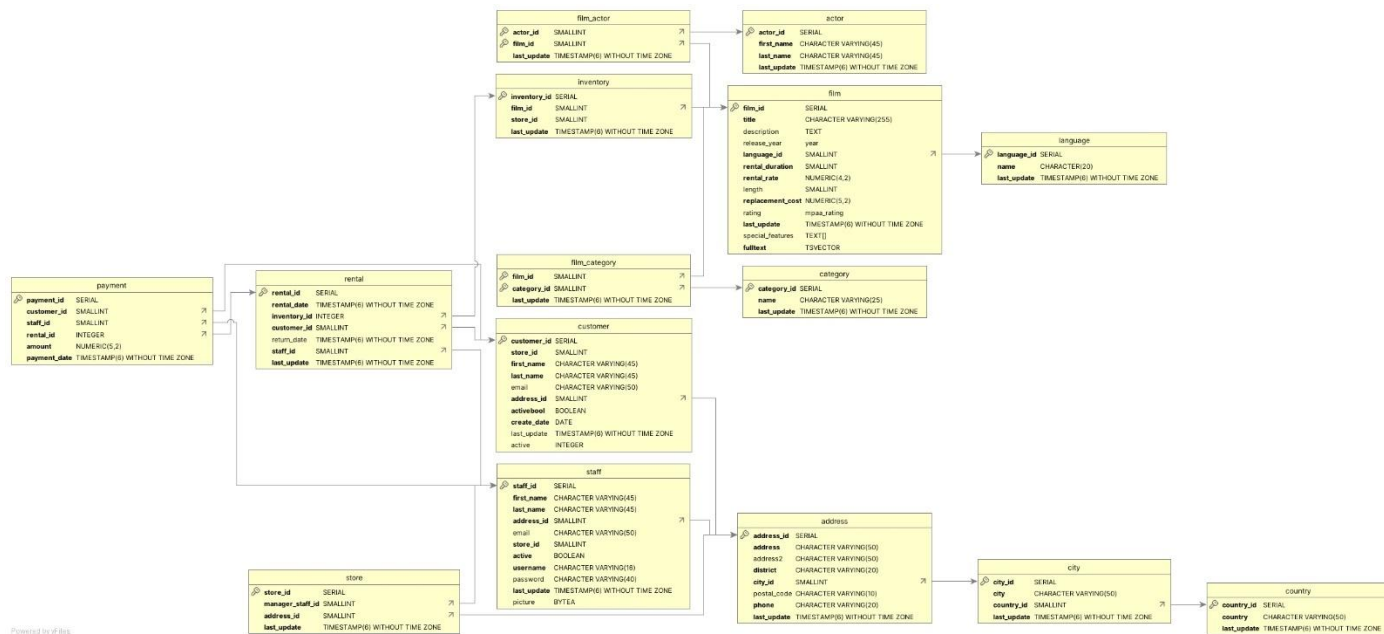# Answers 3.2

Does the Rockbuster database have a snowflake schema or a star schema?

The Rockbuster database has a snowflake schema. There is a fact table – Payment which is related to three other tables through foreign key. In this schema, payment table has three dimension tables- customer, rental, and staff. Each of these dimension tables have sub-dimension tables. Hence it forms a snowflake schema.

Fact table

<u>Payment</u>

Columns	Data type	Description
Payment_id	Serial	A unique id associated with payment
Customer_id	SMALLINT	A unique id assigned to every customer
Staff_id	SMALLINT	A unique id assigned to the staff
Rental_id	Integer	A unique id for every rental transaction
Amount	Numeric	The total cost of the rent
Payment date	Time stamp without timezone	The date and time when rental was paid.

- ## <u>Rental</u>

Columns	Data type	Description

Rental_id	Serial	A unique id for every rental transaction
Rental date	Timestamp without time zone	The date and time when movie was rented
Inventory_id	Integer	A unique id for every inventory
Customer_id	SmallInt	A unique id for every customer
Return_date	Timestamp without time zone	The date and time when movie was returned
Staff_id	SmallInt	A unique id for every staff
Last_update	Timestamp without time zone	Date and time when rental was updated

Dimensions table:

- **Film actor**

Columns	Data type	Description
Actor_id	SMALLINT	A unique id for every actor in the film
Film_id	SMALLINT	A unique id for every film
Last_update	Timestamp without time zone	Date and time when film was updated

- **Inventory**

Columns	Data type	Description
Inventory_id	Serial	A unique id for every rental unit
Film_id	SmallINT	A unique id for every film
Store_id	SmallINT	A unique id for every store
Last_updated	Timestamp without time zone	Date and time when inventory was updated

- **Language**

Columns	Data type	Description
Language_id	SERIAL	A unique id for primary language in the film
Name	CHARACTER (20)	Language spoken in the film
Last_update	Timestamp without time zone	Date and time when data was updated

- **Film category**

Columns	Data type	Description
Film_id	SMALLINT	A unique id assigned to every film
Category_id	SMALLINT	A unique id assigned to a film category
Last_updated	Timestamp without time zone	Date and time when data was last updated

- **Customer**

Columns	Data type	Description
Customer_id	SERIAL	A unique id assigned to customer
Store_id	SMALLINT	A unique id assigned to every store
First_name	CHARACTER VARYING	First name of the customer
Last_name	CHARACTER VARYING	Last name of the customer
email	CHARACTER VARYING	Email address of the customer
Address_id	SMALLINT	A unique id assigned to customer address
Activebool	BOOLEAN	Identifies if the customer is active in the system of not (True/False values)
Create_date	Date	Date when customer was registered
Last_update	Timestamp without time zone	Date when data was updated
active	INTEGER	Identifies if the customer is active in the system or not (Integer values)

- **Staff**

Columns	Data type	Description
Staff_id	SERIAL	A unique id assigned to every staff
First_name	CHARACTER VARYING	First name of the staff member
Last_name	CHARACTER VARYING	Last name of the staff member
Address_id	SMALLINT	Address of the staff member
email	CHARACTER VARYING	Email address of the staff
Store_id	SMALLINT	A unique id assigned to the specific store

Active	BOOLEAN	Identifies if the staff member is active in the system or not (TRUE/FALSE values)
username	CHARACTER VARYING	Username of the staff member
password	CHARACTER VARYING	Password of the staff member
Last_updated	Timestamp without time zone	Date when data was updated
picture	BYTEA	Picture of the staff member

Sub-dimension tables

- **Film**

Columns	Data type	Description
Film_id	SERIAL	A unique id for every film
Title	Character VARYING(255)	Title of the film
Description	Text	Summary of the film
Release_year	Year	The year when the film was released
Language_id	SMALLINT	A unique id for language spoken in the film
Rental_duration	SMALLINT	The duration for which the film is rented
Rental_rate	NUMERIC (4,2)	The cost to rent the film
Length	SMALLINT	The length of the film in minutes
Replacement_cost	NUMERIC (5,2)	The cost to replace the film if it is lost
Rating	Mpaa_rating	Motion Pictures Association of America rating system
Last_update	Timestamp without time zone	The date and time when it was updated
Special_features	TEXT	Additional features of film rental
Fulltext	TSVECTOR	Key words associated with the film

- **Category**

Columns	Data type	Description
Category_id	SERIAL	A unique id for every category
Name	CHARACTER VARYING (25)	Name of the film category
Last_updated	Timestamp without time zone	Date and time when data was last updated

- **Actor**

Columns	Data type	Description
Actor_id	Serial	A unique id for every actor
First_name	Character VARYING(45)	First name of the actor
Last_name	Character VARYING(45)	Last name of the actor
Last_update	Timestamp without time zone	Date and time when actor was updated.

- **Which actors brought Rockbuster the most revenue?**

  Payment—Rental—Inventory--Film_actor--Actor

- **What language are the majority of movies in the collection?**

  Inventory—Film--Language