**Data Storage and Structure**

**Step 1. Create your Answers document:**

Create a new text document and call it “Answers 3.2.” You'll save a copy of your ERD, data dictionary, and written answers in this document.

**Step 2. Extract the ERD:**

* Download and install [DbVisualizer](https://www.dbvis.com/" \t "_blank) or [Lucidchart](https://lucid.app/" \t "_blank) (if you haven't already done so).
* Extract the ERD from the Rockbuster database and save it as an image (PNG or JPEG) using the instructions in the Exercise.
* Copy-paste the ERD into your answers document.

[**DbVisualizer**](https://www.dbvis.com/)

Diagram

Description automatically generated

**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.

From the visual it is a snowflake schema, as there is no central part in which all segments are connected. The fact table have multiple branches and are connected to multiple tables, creating subdimensions, typical to snowflake.

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 Tables**

* **Rental**

**Columns**

**rental\_id**

**Data Type**

Serial

**rental\_date**

**Description**

ID number provided for the individual rent event.

Date in which the rent occurred.

**inventory\_id**

TIMESTAMP(6) WITHOUT

TIMEZONE INTEGER

**customer\_id**

**return\_date**

**staff\_id**

SMALLINT

TIMESTAMP(6) WITHOUT TIMEZONE

SMALLINT

**last\_update**

TIMESTAMP(6) WITHOUT

TIMEZONE

ID number of the product

contained in the rental. ID number for the client.

Date which the return should occur.

ID number of the staff member that worked on the event

Last update on the event.

**Dimension Tables**

* **Payment**

**Columns**

**payment\_id customer\_id staff\_id**

**Data Type**

SERIAL SMALLINT SMALLINT

**rental\_id**

INTEGER

**amount**

NUMERIC (5,2)

**payment\_date**

TIMESTAMP(6) WIHOUT TIME

ZONE

**Description**

ID number for the transaction ID number for the client.

ID number of the staff member that worked on the event

ID number provided for the individual rent event.

Total monetary value of the payment

Date in which the payment was done

* **Customer**

**Columns**

**customer\_id store\_id first\_name last\_name email address\_id activebool create\_date**

**Data Type**

SERIAL SMALLINT

CHARACTER VARYING(45) CHARACTER VARYING(45) CHARACTER VARYING(50) SMALLINT

BOOLEAN DATE

**last\_update**

**Description**

ID number for the client. ID number for the store. First name of the client Last name of the client Email address of the client

ID number for the client address Client is active or inactive option Date which the customer was created on the system

Last update on the event.

**active**

TIMESTAMP(6) WIHOUT TIME

ZONE

INETEGER Client is active or inactive option

* **Staff**

**Columns**

**staff\_id**

**Data Type**

SERIAL

**first\_name**

**last\_name address\_id email store\_id active username password last\_update**

**Description**

ID number of the staff member that worked on the event

First name of the staff member Last name of the staff member Address of the staff member Email of the staff member

ID number for the store.

Staff is active or inactive option Staff login information

Staff password information

Last update on the event.

**picture**

CHARACTER VARYING(45)

CHARACTER VARYING(45) SMALLINT

CHARACTER VARYING(50) SMALLINT

BOOLEAN

CHARACTER VARYING(16) CHARACTER VARYING(40) TIMESTAMP(6) WIHOUT TIME ZONE

BYTEA Staff is active or inactive option

* **Film**

**Columns**

**film\_id title**

**Data Type**

SERIAL

CHARACTER VARYING(25)

**Description**

ID number for the movie

Text, Title of the movie

description release\_year

languange\_id rental\_duration

rental\_rate length replacement\_cost rating

last\_update

special\_feature fulltext

* **Film\_category**

TEXT

year SMALLINT SMALLINT

NUMERIC(4,2) SMALLINT NUMERIC(5,2)

mpaa\_rating

TIMESTAMP(6) WIHOUT TIME ZONE

TEXT TSVECTOR

Text, description of the movie Year in which the movie was released

Languages which the movie is available

Duration of the rental for this movie

Cost of the rental Length of the movie

Cost of a replacement unity Rating of the movie according to the MPAA ruling

Last update on the event.

Special features available in the movie

Keywords, metatags

**Columns**

**film\_id category\_id**

**Data Type**

SERIAL SMALLINT

**last\_update**

**Description**

ID number for the movie

ID number for the category of the movie

TIMESTAMP(6) WIHOUT TIME Last update on the event.

ZONE

* **Category**

**Columns**

**category\_id**

**Data Type**

SERIAL

**name**

**last\_update**

**Description**

ID number for the category of the movie

CHARACTER VARYING(25) Name of the movie category

TIMESTAMP(6) WIHOUT TIME Last update on the event.

ZONE

* **Film\_actor**

**Columns**

**actor\_id**

**Data Type**

SMALLINT

**film\_id**

**last\_update**

**Description**

ID number for the actor on the movie

SMALLINT ID number for the movie TIMESTAMP(6) WIHOUT TIME Last update on the event. ZONE

* **Inventory**

**Columns**

**inventory\_id**

**Data Type**

SERIAL

**film\_id**

**store\_id**

SMALLINT

SMALLINT

**last\_update**

**Description**

ID number of the product contained in the rental. ID number for the movie

ID number of the store in which the event happened

TIMESTAMP(6) WIHOUT TIME Last update on the event.

ZONE

* **Actor**

**Columns**

**actor\_id**

**Data Type**

SERIAL

**first\_name**

**last\_name last\_update**

**Description**

ID number for the actor on the movie

CHARACTER VARYING(45) Text, first name of the actor CHARACTER VARYING(45) Text, last name of the actor TIMESTAMP(6) WIHOUT TIME Last update on the event. ZONE

* **Language**

**Columns**

**languange\_id name last\_update**

**Data Type Description**

SERIAL ID for the language of the movie

CHARACTER(20) Name of the language TIMESTAMP(6) WIHOUT TIME Last update on the event. ZONE

* **Store**

**Columns**

**store\_id manager\_staff\_id address\_id last\_update**

**Data Type Description**

SERIAL ID number for the store.

SMALLINT ID number of the manager

SMALLINT Address of the store TIMESTAMP(6) WIHOUT TIME Last update on the event. ZONE

* **Address**

**Columns**

**address\_id address address2 district city\_id postal\_code phone**

**Data Type**

SERIAL

CHARACTER VARYING(50) CHARACTER VARYING(50) CHARACTER VARYING(20) SMALLINT

CHARACTER VARYING(10) CHARACTER VARYING(20)

**last\_update**

**Description**

ID number for the address Address part 1

Address part 2 District of the address

City where the address is Postal code of the address Phone number registered with address

TIMESTAMP(6) WIHOUT TIME Last update on the event.

ZONE

* **City**

**Columns**

**city\_id country\_id last\_update**

**Data Type Description**

CHARACTER VARYING(50) ID number for the City SMALLINT ID number for the Country TIMESTAMP(6) WIHOUT TIME Last update on the event. ZONE

* **Country**

**Columns**

**country\_id country last\_update**

**Data Type Description**

SERIAL ID number for the country CHARACTER VARYING(50) Country name TIMESTAMP(6) WIHOUT TIME Last update on the event. ZONE

Step 4

Which actors brought Rockbuster the most revenue?

film\_actor and film.

What language are the majority of movies in the collection?

film and Language