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Data Immersion 3.2

Data Storage & Structure

2.

A computer screen with many text

AI-generated content may be incorrect.

3.

The Rockbuster database has a snowflake schema, as there are many subtables containing foreign keys, related to dimension tables, relating back to fact tables.

The fact tables in this database are **payment** and **rental**.

**payment**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| payment\_id | serial | Unique ID for payments |
| customer\_id | smallint | ID for each customer |
| staff\_id | smallint | ID for the staff member |
| rental\_id | integer | ID for rental |
| Amount | numeric | The amount paid for a rental |
| payment\_id | timestamp | Date and Time each payment was made |

**rental**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| rental\_id | serial | Unique ID for a rental |
| rental\_date | timestamp | date the rental was made |
| inventory\_id | integer | ID for the inventory |
| customer\_id | smallint | ID for the customer aquiring a rental |
| return\_date | timestamp | Date the return is scheduled for |
| staff\_id | smallint | ID number for the staff member |
| last\_update | timestamp | Date and Time the rental was made |

The dimension tables are extensive including, **store, film\_actor, inventory, film\_category, customer, staff, actor, film, category, address, language, city,** and **country**:

**store**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| store\_id | serial | ID number for specific stores |
| manager\_staff\_id | smallint | ID number for the staff manager |
| address\_id | smallint | ID number for the address |
| last\_update | timestamp | Date and Time of the last update |

**film\_actor**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| actor\_id | smallint | ID number for the actor |
| film\_id | smallint | ID number for the film |
| last\_update | timestamp | Date and Time of last update |

**Inventory**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| inventory\_id | serial | Unique ID for the specific rental |
| film\_id | smallint | ID for the film |
| store\_id | smallint | ID for the store |
| last\_update | timestamp | Date and Time of the last update |

**film\_category**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| film\_id | smallint | ID for the film |
| category\_id | smallint | ID for the category |
| last\_update | timestamp | Date and Time of last update |

**customer**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| customer\_id | serial | Unique ID for the customer |
| store\_id | smallint | ID number for the store |
| first\_name | varchar | First Name of customer |
| last\_name | varchar | Last Name of the customer |
| email | varchar | Email of the customer |
| address\_id | smallint | ID of customers address |
| activeboot | bool | Is the customer active? |
| create\_date | date | Date the customer data was created |
| last\_update | timestamp | Date and Time of the last update |
| active | integer | Possibly the length of time active? |

**staff**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| staff\_id | serial | Unique ID for staff member |
| first\_name | varchar | First name |
| last\_name | varchar | Last name |
| address\_id | smallint | ID for address |
| email | varchar | Email address |
| store\_id | smallint | ID of store staff member is employed |
| active | bool | Is the staff member active? |
| username | varchar | Login username |
| password | varchar | Login password |
| last\_update | timestamp | Date and Time staff data was created |
| picture | bytea | Picture of staff member |

**actor**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| actor\_id | serial | Unique ID of actor |
| first\_name | varchar | First name |
| last\_name | varchar | Last name |
| last\_update | timestamp | Date and Time of last update |

**film**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| film\_id | serial | Unique ID for the film |
| title | varchar | Title of the film |
| description | text | An open text description |
| release\_year | year | Year released |
| language\_id | smallint | ID number for the language of the film |
| rental\_duration | smallint | The length of rental |
| rental\_rate | numeric | The cost of rental |
| length | smallint | The length of the film |
| replacement\_cost | numeric | Cost of replacing the rental |
| rating | mpaa\_rating | Given rating of the film |
| last\_update | timestamp | Date and Time of last update |
| special\_features | \_text | Any additional features included with rental, possibly things like 3d glasses or memorobilia |
| fulltext | tsvector | Key words for text searches |

**category**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| category\_id | serial | Unique ID for category |
| name | varchar | name of category |
| last\_update | timestamp | Date and Time of last update |

**address**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| address\_id | serial | Unique ID for address |
| address | varchar | Street Address |
| address2 | varchar | Secondary Street Address |
| district | varchar | District the address is located in |
| city\_id | smallint | City the address is located in |
| postal\_code | varchar | ZIP code of address |
| phone | varchar | Phone number |
| last\_update | timestamp | Date and Time of last update |

**language**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| language\_id | serial | Unique ID of language |
| name | bpchar | Name of Language |
| last\_update | timestamp | Date and Time of last update |

**city**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| city\_id | serial | Unique ID of city |
| city | varchar | Name of city |
| country\_id | smallint | ID of country city resides in |
| last\_update | timestamp | Date and Time of last update |

**country**

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| country\_id | serial | Unique ID of country |
| country\_id | varchar | ID of country |
| last\_update | timestamp | Date and Time of last update |

4.

* Which actors brought Rockbuster the most revenue?

In order to find which actors brought the most revenue, I would be need the **payment, rental, inventory, film\_actor,** and **actor**.

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

To find which language the majority of movies in I would use the **film** and **language** tables.