# TASK 3.2

## Step 1&2

**film_actor**
- actor_id — SMALLINT
- film_id — SMALLINT
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**actor**
- actor_id — SERIAL
- first_name — CHARACTER VARYING(45)
- last_name — CHARACTER VARYING(45)
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**inventory**
- inventory_id — SERIAL
- film_id — SMALLINT
- store_id — SMALLINT
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**film**
- film_id — SERIAL
- title — CHARACTER VARYING(255)
- description — TEXT
- release_year — year
- language_id — SMALLINT
- rental_duration — SMALLINT
- rental_rate — NUMERIC(4,2)
- length — SMALLINT
- replacement_cost — NUMERIC(5,2)
- rating — mpaa_rating
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE
- special_features — TEXT[]
- fulltext — TSVECTOR

**language**
- language_id — SERIAL
- name — CHARACTER(20)
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**film_category**
- film_id — SMALLINT
- category_id — SMALLINT
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**category**
- category_id — SERIAL
- name — CHARACTER VARYING(25)
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**payment**
- payment_id — SERIAL
- customer_id — SMALLINT
- staff_id — SMALLINT
- rental_id — INTEGER
- amount — NUMERIC(5,2)
- payment_date — TIMESTAMP(6) WITHOUT TIME ZONE

**rental**
- rental_id — SERIAL
- rental_date — TIMESTAMP(6) WITHOUT TIME ZONE
- inventory_id — INTEGER
- customer_id — SMALLINT
- return_date — TIMESTAMP(6) WITHOUT TIME ZONE
- staff_id — SMALLINT
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**customer**
- customer_id — SERIAL
- store_id — SMALLINT
- first_name — CHARACTER VARYING(45)
- last_name — CHARACTER VARYING(45)
- email — CHARACTER VARYING(50)
- address_id — SMALLINT
- activebool — BOOLEAN
- create_date — DATE
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE
- active — INTEGER

**staff**
- staff_id — SERIAL
- first_name — CHARACTER VARYING(45)
- last_name — CHARACTER VARYING(45)
- address_id — SMALLINT
- email — CHARACTER VARYING(50)
- store_id — SMALLINT
- active — BOOLEAN
- username — CHARACTER VARYING(16)
- password — CHARACTER VARYING(40)
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE
- picture — BYTEA

**address**
- address_id — SERIAL
- address — CHARACTER VARYING(50)
- address2 — CHARACTER VARYING(50)
- district — CHARACTER VARYING(20)
- city_id — SMALLINT
- postal_code — CHARACTER VARYING(10)
- phone — CHARACTER VARYING(20)
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**city**
- city_id — SERIAL
- city — CHARACTER VARYING(50)
- country_id — SMALLINT
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**country**
- country_id — SERIAL
- country — CHARACTER VARYING(50)
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE

**store**
- store_id — SERIAL
- manager_staff_id — SMALLINT
- address_id — SMALLINT
- last_update — TIMESTAMP(6) WITHOUT TIME ZONE
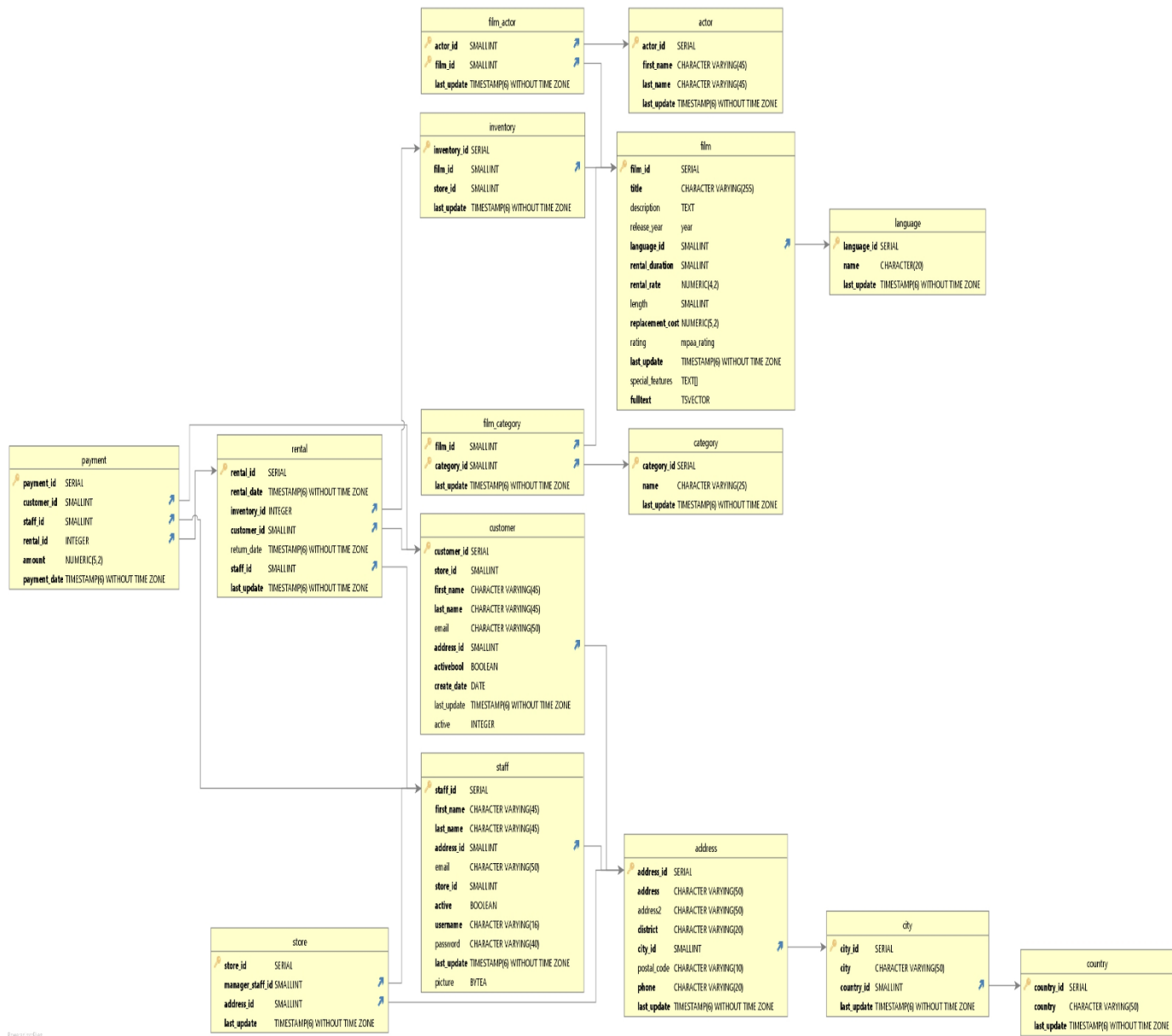
*The Entity relationship diagram (ERD) has a snowflake schema because it has so many sub-dimensions.*

# Steps 3

## Facts Tables

| PAYMENT | | |
|---|---|---|
| **Columns** | **Data Type** | **Description** |
| payment_id | SERIAL | Number assigned to payment |
| customer_id | SMALLINT | Number assigned to rental |
| staff_id | SMALLINT | Number assigned to rental |
| rental_ | INTEGER | Number assigned to rental |
| amount | NUMERIC(5,2) | amount of payment |
| payment_date | TIMESTAMP(6) WITHOUT TIME ZONE | Date of payment last updated |

| FILM_ACTOR | | |
|---|---|---|
| **Columns** | **Data Type** | **Description** |
| actor_id | SMALLINT | Number assigned to actor |
| film_id | SMALLINT | Number assigned to film |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of actor last updated |

| FILM_CATEGORY | | |
|---|---|---|
| **Columns** | **Data Type** | **Description** |
| film_id | SERIAL | Number assigned to film |
| category_id | SMALLINT | Number assigned to category |
| last_update | SERIAL | Date of film last updated |

| STORE | | |
|---|---|---|
| **Columns** | **Data Type** | **Description** |
| store_id | SERIAL | Number assigned to store |
| manager_staff_id | SMALLINT | Number assigned to manager |
| address_id | SMALLINT | Number assigned to address |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of store last updated |

# Dimension Tables

| RENTAL | | |
|---|---|---|
| **Columns** | **Data Type** | **Description** |
| Rental_id | SERIAL | Number assigned to rental |
| Rental_date | TIMESTAMP(6) WITHOUT TIME ZONE | Date of rental last updated |
| Inventory_id | INTEGER | Number assigned to inventory |
| Customer_id | SMALLINT | Number assigned to customer |
| Return_date | TIMESTAMP(6) WITHOUT TIME ZONE | Date of return last updated |
| Staff_id | SMALLINT | Number assigned to staff |
| Last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of rental last updated |

## CUSTOMER

| Columns | Data Type | Description |
| --- | --- | --- |
| Customer_id | SERIAL | Number assigned to customer |
| Store_id | SMALLINT | Number assigned to store |
| First_name | CHARACTER VARYING(45) | Name assigned to the customer |
| Last_name | CHARACTER VARYING(45) | Name assigned to customer |
| Email | CHARACTER VARYING(45) | Email assigned to language |
| Address_id | SMALLINT | Address assigned to address |
| Activebool | BOOLEAN | If customer is active? |
| Create_date | DATE | Date entry created |
| Last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of customer last updated |
| active | INTEGER | Is customer active? |

## ADDRESS

| Columns | Data Type | Description |
| --- | --- | --- |
| address_id | SERIAL | Number assigned to address |
| address | CHARACTER VARYING(50) | Street address |
| Address2 | CHARACTER VARYING(50) | Second street address |
| District | CHARACTER VARYING(20) | Address district |

| City_id | SMALLINT | Address city |
|---|---|---|
| Postal_code | CHARACTER VARYING(10) | Address postal code |
| phone | CHARACTER VARYING(20) | Phone number of staff |
| Last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of address of staff last updated |

| STAFF | | |
|---|---|---|
| **Columns** | **Data Type** | **Description** |
| staff_id | SERIAL | Number assigned to staff |
| First_name | CHARACTER VARYING(45) | Name of the staff |
| Last_name | CHARACTER VARYING(45) | Name of the staff |
| Address_id | SMALLINT | Staff's address |
| Email | CHARACTER VARYING(50) | Staff's email |
| Store_id | SMALLINT | Number assigned to store |
| Active | BOOLEAN | If staff is active? |
| Username | CHARACTER VARYING(40) | Staff's username |
| password | CHARACTER VARYING(40) | Staff's password |
| Last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of staff's last updated |
| Picture | BYTEA | Staff's picture |

## CITY

| Columns | Data Type | Description |
|---|---|---|
| city_id | SERIAL | Number assigned to city |
| city | CHARACTER VARYING(50) | Name of city |
| Country_id | SMALLINT | Name of country |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of city last updated |

## COUNTRY

| Columns | Data Type | Description |
|---|---|---|
| country_id | SERIAL | Number assigned to country |
| Country | CHARACTER VARYING(50) | Name of country |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of country last updated |

## INVENTORY

| Columns | Data Type | Description |
|---|---|---|
| inventory_id | SERIAL | Number assigned to Inventory |
| Film_id | SMALLINT | Number assigned to film |
| Store_id | SMALLINT | Number assigned to store |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of inventory last updated |

## ACTOR

| Columns | Data Type | Description |
| --- | --- | --- |
| actor_id | SERIAL | Number assigned to actor |
| First_name | CHARACTER VARYING(45) | Actor's first name |
| Last_name | CHARACTER VARYING(45) | Actor's last name |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of actor last updated |

## FILM

| Columns | Data Type | Description |
| --- | --- | --- |
| film_id | SERIAL | Number assigned to film |
| title | CHARACTER VARYING(255) | Title of film |
| description | TEXT | Description of film |
| Release_year | Year | Release year of film |
| Language_id | SMALLINT | Number assigned to film |
| Rental_duration | SMALLINT | Rental duration of film |
| Rental_rate | NUMERIC(4,2) | Rental rate of film |
| length | SMALLINT | Length of film |
| Replacement_cost | NUMERIC(5,2) | Replacement cost of film |
| rating | Mpaa_rating | Rating of film |
| Last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of film's last updated |
| Special_features | TEXT[] | Description of what special features are included in the film |
| fulltext | TSVECTOR | Summary of text describing film |

| LANGUAGE | | |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| language_id | SERIAL | Number assigned to language |
| name | CHARACTER(20) | Name of language |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of language last updated |

| CATEGORY | | |
| --- | --- | --- |
| **Columns** | **Data Type** | **Description** |
| category_id | SERIAL | Number assigned to film |
| name | CHARACTER(25) | Name of category |
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date category last updated |

# Step 4

*Which actors brought Rockbuster the most revenue? From the description of the actor table, we can easily locate where to get the which actors brought the most revenue.*

*What language are the majority of movies in the collection? The answer can be found in the language table, I can easily get the details from the language tables.*