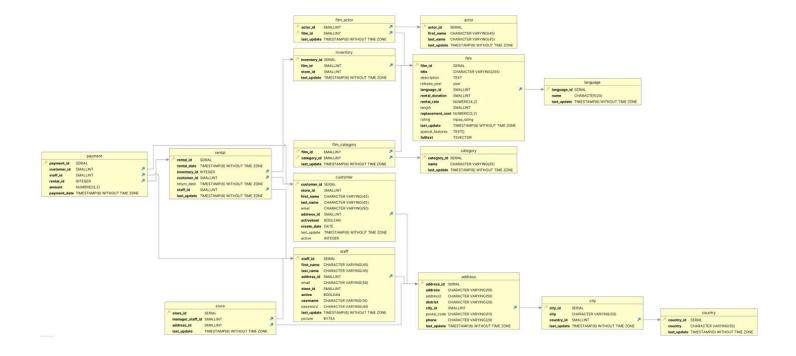


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## **ENTITY RELATIONSHIP DIAGRAM**



PK = PRIMARY KEY

FK = FOREIGN KEY

## **FACT TABLES**

#### payment

| payment |              |                  |                     |
|---------|--------------|------------------|---------------------|
| KEY     | COLUMNS      | DATA TYPE        | DESCRIPTION         |
| PK      | payment_id   | SERIAL           | Unique payment      |
|         |              |                  | identifier          |
| FK      | customer_id  | SMALLINT         | Unique customer     |
|         |              |                  | identifier          |
| FK      | staff_id     | SMALLINT         | Unique staff member |
|         |              |                  | identifier          |
| FK      | rental_id    | INTEGER          | Unique rental       |
|         |              |                  | identifier          |
|         | amount       | NUMERIC(5,2)     | Transaction amount  |
|         | payment_date | TIMESTAMP(6)     | Date of transaction |
|         |              | WITHOUT TIMEZONE |                     |

| TABLE    | JOIN                                       |
|----------|--|
| customer | payment.customer_id = customer.customer_id |
| staff    | payment.staff_id = staff.staff_id          |
| rental   | payment.rental_id = rental.rental_id       |

#### LINKED FROM

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

#### rental

| Terrear |              |                   |                          |
|---------|--------------|-------------------|--------------------------|
| KEY     | COLUMNS      | DATA TYPE         | DESCRIPTION              |
| PK      | rental_id    | SERIAL            | Unique rental identifier |
|         | rental_date  | TIMESTAMP(6)      | Date of rental           |
|         |              | WITHOUT TIME ZONE |                          |
| FK      | inventory_id | INTEGER           | Unique inventory         |
|         |              |                   | identifier               |
| FK      | customer_id  | SMALLINT          | Unique customer          |
|         |              |                   | identifier               |
|         | return_date  | TIMESTAMP(6)      | Date of return           |
|         |              | WITHOUT TIME ZONE |                          |
| FK      | staff_id     | SMALLINT          | Unique staff member      |
|         |              |                   | identifier               |
|         | last_update  | TIMESTAMP(6)      | Date of last update      |
|         |              | WITHOUT TIME ZONE |                          |

#### LINKS TO

| TABLE     | JOIN   |
|-----------|--|
| inventory | rental.inventory_id = inventory.inventory_id |
| customer  | rental.customer_id = customer.customer_id    |
| staff     | rental.staff_id = staff.staff_id             |

#### LINKED FROM

| TABLE   | JOIN                                 |
|---------|--------------------------------------|
| payment | rental.rental id = payment.rental id |

# **DIMENSION TABLES**

### film actor

| KEY | COLUMNS  | DATA TYPE | DESCRIPTION             |
|-----|----------|-----------|-------------------------|
| PK  | actor_id | SMALLINT  | Unique actor identifier |
| PK  | film_id  | SMALLINT  | Unique film identifier  |

| last_update | TIMESTAMP (6)     | Date of last update |
|-------------|-------------------|---------------------|
|             | WITHOUT TIME ZONE |                     |

| TABLE | JOIN                                 |
|-------|--------------------------------------|
| actor | film_actor.actor_id = actor.actor_id |
| film  | film_actor.film_id = film.film_id    |

### LINKED FROM

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

#### actor

| COLUMNS     | DATA TYPE             | DESCRIPTION             |
|-------------|-----------------------|-------------------------|
| actor_id    | SERIAL                | Unique actor identifier |
| first_name  | CHARACTER VARYING(45) | First name of actor     |
| last_name   | CHARACTER VARYING(45) | Last name of actor      |
| last_update | TIMESTAMP(6) WITHOUT  | Date of last update     |
|             | TIME ZONE             |                         |

## LINKS TO

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

#### LINKED FROM

| TABLE      | JOIN                                 |
|------------|--------------------------------------|
| film_actor | actor.actor_id = film_actor.actor_id |

#### inventory

| KEY | COLUMNS      | DATA TYPE         | DESCRIPTION             |
|-----|--------------|-------------------|-------------------------|
| PK  | inventory_id | SERIAL            | Unique inventory        |
|     |              |                   | identifier              |
| FK  | film_id      | SMALLINT          | Unique film identifier  |
|     | store_id     | SMALLINT          | Unique store identifier |
|     | last_update  | TIMESTAMP(6)      | Date of last update     |
|     |              | WITHOUT TIME ZONE |                         |

### LINKS TO

| TABLE | JOIN                             |
|-------|----------------------------------|
| film  | inventory.film_id = film.film_id |

### LINKED FROM

| TABLE  | JOIN   |
|--------|--|
| rental | inventory.inventory_id = rental.inventory_id |

### film

| KEY | COLUMNS          | DATA TYPE         | DESCRIPTION             |
|-----|------------------|-------------------|-------------------------|
| PK  | film_id          | SERIAL            | Unique film identifier  |
|     | title            | CHARACTER         | Title of the film       |
|     |                  | VARYING(255)      |                         |
|     | description      | TEXT              | Description of the film |
|     | release_year     | year              | Year of release         |
| FK  | language_id      | SMALLINT          | Language of film        |
|     | rental_duration  | SMALLINT          | Duration of film rental |
|     | rental_rate      | NUMERIC(4,2)      | Rate of film rental     |
|     | length           | SMALLINT          | Length of film          |
|     | replacement_cost | NUMERIC(4,2)      | Cost of film            |
|     |                  |                   | replacement             |
|     | rating           | mpaa_rating       | Film rating             |
|     | last_update      | TIMESTAMP(6)      | Date of last update     |
|     |                  | WITHOUT TIME ZONE |                         |
|     | special_features | TEXT[]            | Features of film        |
|     | fulltext         | TSVECTOR          | Film index              |

### LINKS TO

| TABLE    | JOIN                                    |
|----------|---|
| language | film.language_id = language.language_id |

#### LINKED FROM

| TABLE     | JOIN                             |
|-----------|----------------------------------|
| inventory | film.film_id = inventory.film_id |

### language

| KEY | COLUMNS     | DATA TYPE         | DESCRIPTION         |
|-----|-------------|-------------------|---------------------|
| PK  | language_id | SERIAL            | Unique language     |
|     |             |                   | identifier          |
|     | name        | CHARACTER         | Name of language    |
|     | last_update | TIMESTAMP(6)      | Date of last update |
|     |             | WITHOUT TIME ZONE |                     |

### LINKS TO

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

#### LINKED FROM

| TABLE | JOIN                                    |
|-------|---|
| film  | language.language_id = film.language_id |

#### film category

| KEY | COLUMNS     | DATA TYPE                      | DESCRIPTION                |
|-----|-------------|--------------------------------|----------------------------|
| PK  | film_id     | SERIAL                         | Unique film identifier     |
| PK  | category_id | SMALLINT                       | Unique category identifier |
|     | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of last update        |

### LINKS TO

| TABLE    | JOIN  |
|----------|---|
| film     | film_category.film_id = film.film_id            |
| category | film_categorycategory_id = category.category_id |

### LINKED FROM

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

#### category

| COLUMNS     | DATA TYPE              | DESCRIPTION                |
|-------------|------------------------|----------------------------|
| category_id | SERIAL                 | Unique category identifier |
| name        | CHARACTER VARYING(255) | Name of category           |
| last_update | TIMESTAMP(6) WITHOUT   | Date of last update        |
|             | TIME ZONE              |                            |

### LINKS TO

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

#### LINKED FROM

| TABLE         | JOIN   |
|---------------|--|
| film_category | category.category_id = film_category.category_id |

#### customer

| KEY | COLUMNS     | DATA TYPE | DESCRIPTION             |
|-----|-------------|-----------|-------------------------|
| PK  | customer_id | SERIAL    | Unique customer         |
|     |             |           | identifier              |
|     | store_id    | SMALLINT  | Unique store identifier |

|    | first_name  | CHARACTER<br>VARYING(45) | Customer first name                |
|----|-------------|--------------------------|------------------------------------|
|    | last_name   | CHARACTER<br>VARYING(45) | Customer last name                 |
|    | email       | CHARACTER<br>VARYING(50) | Customer email                     |
| FK | address_id  | SMALLINT                 | Unique address identifier          |
|    | activebool  | BOOLEAN                  | Active/inactive customer indicator |
|    | create_date | DATE                     | Date of customer first created     |

| TABLE   | JOIN                                     |
|---------|--|
| address | customer.address_id = address.address_id |

### LINKED FROM

| TABLE  | JOIN                                      |
|--------|---|
| rental | customer.customer_id = rental.customer_id |

#### store

| KEY | COLUMNS          | DATA TYPE                      | DESCRIPTION                     |
|-----|------------------|--------------------------------|---------------------------------|
| PK  | store_id         | SERIAL                         | Unique store identifier         |
| FK  | manager_staff_id | SMALLINT                       | Unique staff manager identifier |
| FK  | address_id       | SMALLINT                       | Unique address identifier       |
|     | last_update      | TIMESTAMP(6) WITHOUT TIME ZONE | Date of last update             |

#### LINKS TO

| TABLE   | JOIN                                  |
|---------|---------------------------------------|
| staff   | store.staff_id = staff.staff_id       |
| address | store.address_id = address.address_id |

### LINKED FROM

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

#### staff

| KEY | COLUMNS   | DATA TYPE | DESCRIPTION |
|-----|-----------|-----------|-------------|
| NET | COLUIVINS | DAIATTE   | DESCRIPTION |

| PK | staff_id    | SERIAL            | Unique staff member identifier |
|----|-------------|-------------------|--------------------------------|
|    | first_name  | CHARACTER         | First name of staff            |
|    |             | VARYING(45)       | member                         |
|    | last_name   | CHARACTER         | Last name of staff             |
|    |             | VARYING(45)       | member                         |
| FK | address_id  | SMALLINT          | Unique address                 |
|    |             |                   | identifier                     |
|    | email       | CHARACTER         | Staff member email             |
|    |             | VARYING(50)       |                                |
|    | store_id    | SMALINT           | Unique store identifier        |
|    | active      | BOOLEAN           | Active/Inactive staff          |
|    |             |                   | member indicator               |
|    | username    | CHARACTER         | Staff member user              |
|    |             | VARYING(16)       | name                           |
|    | password    | CHARACTER         | Staff member password          |
|    |             | VARYING(40)       |                                |
|    | last_update | TIMESTAMP(6)      | Date of last update            |
|    |             | WITHOUT TIME ZONE |                                |
|    | picture     | BYTEA             | Staff member picture           |

| TABLE   | JOIN                                  |
|---------|---------------------------------------|
| address | staff.address_id = address.address_id |

#### LINKED FROM

| TABLE   | JOIN                              |  |
|---------|-----------------------------------|--|
| payment | staff.staff id = payment.staff id |  |

### address

| KEY | COLUMNS     | DATA TYPE   | DESCRIPTION            |
|-----|-------------|-------------|------------------------|
| PK  | address_id  | SERIAL      | Unique address         |
|     |             |             | identifier             |
|     | address     | CHARACTER   | Address first section  |
|     |             | VARYING(50) |                        |
|     | address2    | CHARACTER   | Address second section |
|     |             | VARYING(50) |                        |
|     | district    | CHARACTER   | Address district       |
|     |             | VARYING(20) |                        |
| FK  | city_id     | SMALLINT    | Unique city identifier |
|     | postal_code | CHARACTER   | Address postal code    |
|     |             | VARYING(10) |                        |

| phone       | CHARACTER<br>VARYING(20)       | Address phone number |
|-------------|--------------------------------|----------------------|
| last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of last update. |

| TABLE | JOIN                           |
|-------|--------------------------------|
| city  | address.city_id = city.city_id |

#### LINKED FROM

| TABLE | JOIN                                  |
|-------|---------------------------------------|
| staff | address.address_id = staff.address_id |
| store | address.address_id = store.address_id |

#### city

| KEY | COLUMNS     | DATA TYPE                      | DESCRIPTION               |
|-----|-------------|--------------------------------|---------------------------|
| PK  | city_id     | SERIAL                         | Unique city identifier    |
|     | city        | CHARACTER<br>VARYING(50)       | City name                 |
| FK  | country_id  | SMALLINT                       | Unique country identifier |
|     | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Date of last update       |

### LINKS TO

| TABLE   | JOIN                                 |
|---------|--------------------------------------|
| country | city.country_id = country.country_id |

#### LINKED FROM

| TABLE   | JOIN                           |
|---------|--------------------------------|
| address | city.city_id = address.city_id |

### country

| ,   |             |                                 |                           |
|-----|-------------|---------------------------------|---------------------------|
| KEY | COLUMNS     | DATA TYPE                       | DESCRIPTION               |
| PK  | country_id  | SERIAL                          | Unique country identifier |
|     | country     | CHARACTER<br>VARYING(50)        | Country name              |
|     | last_update | TIMESTAMP (6) WITHOUT TIME ZONE | Date of last update       |

LINKS TO

10

| TABLE | JOIN |
|-------|------|
| NA    | NA   |

### LINKED FROM

| TABLE | JOIN                                 |
|-------|--------------------------------------|
| city  | country.country_id = city.country_id |