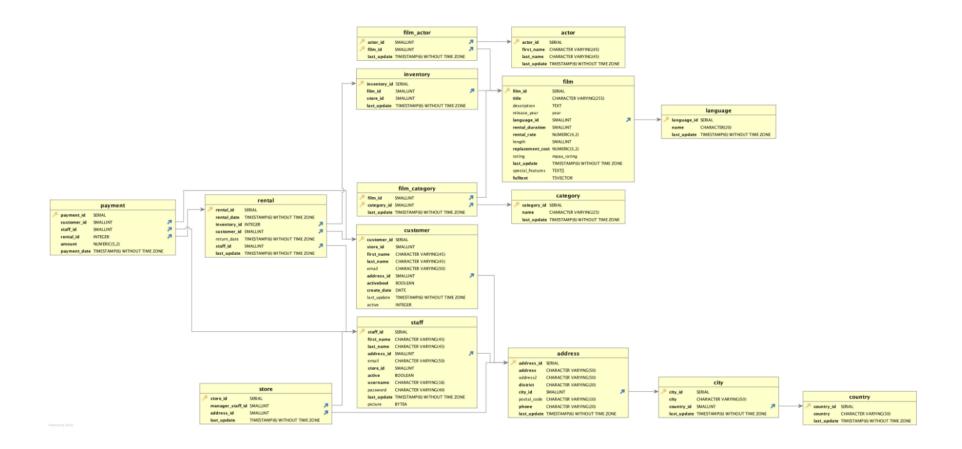


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Contents

1.	Data Structure – Entity Relationship Diagram	3
2.	Fact Tables	4
	2.1. Payment Table	4
	2.2. Rental Table	4
3.	Dimension Tables	6
	3.2. Actor Table	6
	3.3. Address Table	6
	3.4. Category Table	7
	3.5. City Table	7
	3.6. Country Table	8
	3.7. Customer Table	8
	3.8. Film Table	9
	3.9 Film_Actor Table	10
	3.10. Film_Category Table	10
	3.11. Inventory Table	10
	3.12 Language Table	11
	3.13 Staff Table	11
	3.14 Store Table	. 12

1. Data Structure – Entity Relationship Diagram



2. Fact Tables

2.1. Payment Table

Columns	Data type	Key	Description
payment_id	integer	PK	Identifier for each payment
customer_id	smallint	FK	Identifier for each customer
staff_id	smallint	FK	Identifier for each staff member
rental_id	integer	FK	Identifier for each rental
amount	numeric (5,2)		Amount paid for each rental
payment_date	timestamp without time zone		Date and time the payment was made

Linked to tables:

Table	Key	Join
customer	customer_id	payment.customer_id = customer.customer_id
rental	rental_id	payment.rental_id = rental.rental_id
Staff	staff_id	payment.staff_id = staff.staff_id

2.2. Rental Table

Columns	Data type	Key	Description
rental_id	integer	PK	Identifier for each rental
rental_date	timestamp without time zone		Date and time the movie was rented out
inventory_id	integer	FK	Identifier for each inventory
customer_id	smallint	FK	Identifier for each customer
return_date	timestamp without time zone		Date and time the movie was returned
staff_id	smallint	FK	Identifier for each staff member
payment_date	timestamp without time zone		Date and time the payment was made

Linked from table:

Table	Key	Join
payment	rental_id	rental.rental_id = payment.rental_id

Linked to tables:

Table	Key	Join
customer	customer_id	rental.customer_id = customer.customer_id
inventory	inventory_id	rental.inventory_id = rental.rental_id
staff	staff_id	rental.staff_id = staff.staff_id

3. Dimension Tables

3.2. Actor Table

Columns	Data type	Key	Description
actor_id	integer	PK	Identifier for each actor
first_name	varchar (45)		First name of an actor
last_name	varchar (45)		Last name of an actor
last_update	timestamp without time zone		Date and time the record was last updated

Linked from table:

Table	Key	Join
film_actor	actor_id	film_actor.actor_id = actor.actor_id

3.3. Address Table

Columns	Data type	Key	Description
address_id	integer	PK	Identifier for each address
address	varchar (50)		Number and street name of the address
address_2	varchar (50)		Additional line for address
district	varchar (20)		Name for the state, province, or region of the address
city_id	smallint	FK	City's identifier of the address
postal_code	varchar (10)		Postal code of the address
phone	varchar (20)		Phone number of the address
last_update	timestamp without time zone		Date and time the record was last updated

Linked from tables:

Table	Key	Join
customer	address_id	customer.address_id = address.address_id
staff	address_id	staff.address_id = address.address_id
store	address_id	store.address_id = address.address_id

Linked to table:

Table	Key	Join
city	city_id	address.city_id = city.city_id

3.4. Category Table

Columns	Data type	Key	Description
category_id	integer	PK	Identifier for each movie category
name	varchar (25)		Category of the movie
last_update	timestamp without time zone		Date and time the record was last updated

Linked from table:

Table	Key	Join
film_category	category_id	film_category.category_id = category.category_id

3.5. City Table

Columns	Data type	Key	Description
city_id	integer	PK	Identifier for each city
city	varchar (50)		Name of the city
country_id	smallint	FK	Country's identifier
last_update	timestamp without time zone		Date and time the record was last updated

Linked from table:

Table	Key	Join
address	city_id	address.city_id = city.city_id

Linked to table:

Table	Key	Join
country	country_id	city.country_id = country.country_id

3.6. Country Table

Columns	Data type	Key	Description
country_id	integer	PK	Identifier for each country
country	varchar (50)		Name of the country
last_update	timestamp without time zone		Date and time the record was last updated

Linked from table:

Table	Key	Join
city	country_id	country.country_id = city.country_id

3.7. Customer Table

Columns	Data type	Key	Description
customer_id	integer	PK	Identifier for each customer
store_id	smallint		Store's identifier
first_name	varchar (45)		First name of the customer
last_name	varchar (45)		Last name of the customer
email	varchar (50)		Email address of the customer
address_id	smallint	FK	Address identifier
activebool	boolean		True=active or False=inactive
create_date	date		Date when the customer account was created
last_update	timestamp without time zone		Date and time the record was last updated
active	integer		Identifier for boolean value identifying active and inactive customers

Linked from table:

Table	Key	Join
rental	customer_id	rental.customer_id = customer.customer_id
payment	customer_id	payment.customer_id = customer.customer.id

Linked to table:

Table	Key	Join
address	customer_id	customer.customer_id = address.customer_id

3.8. Film Table

Columns	Data type	Key	Description
film_id	integer	PK	Identifier for each movie
title	varchar (225)		Title of the movie
description	text		Short description of the movie content
release_year	integer		Year of the movie release
language_id	smallint	FK	Identifier for the language of the movie
rental_duration	smallint		Number of days the movie was rented
rental_rate	numeric (4,2)		Rental price
length	smallint		Length of the movie
replacement_cost	numeric (5,2)		Cost to replace the movie
rating	mpaa_rating		Rating based on Motion Picture Association system
last_update	timestamp without time zone		Date and time the record was last updated
special_features	text		Information about special features the movie includes
fulltext	tsvector		Data used for full-text search

Linked from tables:

Table	Key	Join
film_actor	film_id	film_actor.film_id = film.film_id
inventory	film_id	inventory.film_id = film.film_id
film_category	film_id	film_category.film_id = film.film_id

Linked to table:

Table	Key	Join
language	language_id	film.language_id = language.language_id

3.9 Film_Actor Table

Columns	Data type	Key	Description
actor_id	smallint	PK, FK	Identifier for each actor
film_id	smallint	PK, FK	Identifier for each movie
last_update	timestamp without time zone		Date and time the record was last updated

Linked to tables:

Table	Key	Join	
actor	actor_id	film_actor.actor_id = actor.actor_id	
film	flm_id	film_actor.film_id = film.film_id	

3.10. Film_Category Table

Columns	Data type	Key	Description
film_id	smallint	PK, FK	Identifier for each movie
category_id	smallint	PK, FK	Identifier for each movie category
last_update	timestamp without time zone		Date and time the record was last updated

Linked to tables:

Table	Key Join	
category	actor_id	film_actor.actor_id = actor.actor_id
film	flm_id	film_actor.film_id = film.film_id

3.11. Inventory Table

Columns	Data type	Key	Description
inventory_id	integer	PK	Identifier for each inventory
film_id	smallint	FK	Identifier for each movie
store_id	smallint		Identifier for each store
last_update	timestamp without time zone		Date and time the record was last updated

Linked from table:

Table	Key	Join
rental	inventory_id	rental.inventory_id = inventory.inventory_id

Linked to table:

Table	Key	Join
film	film_id	inventory.film_id = film.film_id

3.12 Language Table

Columns	Data type	Key	Description
language_id	integer	PK	Identifier for each language of the movie
name	character (20)		Language of the movie
last_update	timestamp without time zone		Date and time the record was last updated

Linked from table:

Table	Key	Join
film	language_id	film_language_id = language.language_id

3.13 Staff Table

Columns	Data type	Key	Description
staff_id	integer	PK	Identifier for each staff member
first_name	varchar (45)		First name of the staff member
last_name	varchar (45)		Last name of the staff member
address_id	smallint	FK	Identifier for the address
email	varchar (50)		Email address of the staff member
store_id	smallint		Identifier for the store
active	boolean		True=active or False=inactive
username	varchar (16)		Staff member's username
password	varchar (40)		Staff member's password

last_update	timestamp without time	Date and time the record was last updated
	zone	

Linked from table:

Table	Key	Join
payment	staff_id	payment.staff_id = staff.staff_id

3.14 Store Table

Columns	Data type	Key	Description
store_id	integer	PK	Identifier for each store
manager_staff_id	smallint	FK	Identifier for the store manager
address_id	smallint	FK	Address' identifier
last_update	timestamp without time zone		Date and time the record was last updated

Linked to tables:

Table	Key	Join
address	address_id	store.address_id = address.address_id
staff	manager_staff_id	store.manager_staff_id = staff.staff_id