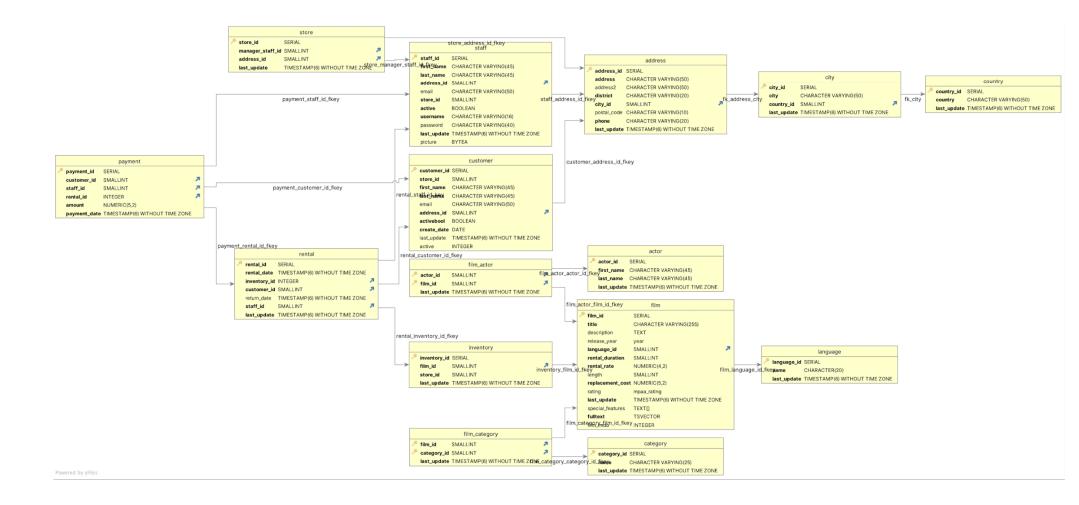


27/07/2023

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## 1. Entity Relationship Diagram



# 2. Fact Tables

# 2.1 Payment Table

<b>Primary Key</b>	Name	Data type	N	Description/ Attributes
<u></u>	payment_id	serial		unique payment identifier
	customer_id Smallint			unique customer identifier
staff_id Smallint			unique staff identifier	
rental_id Integer			unique rental identifier	
	amount numeric(5,2)			cost in numerical value
	payment_date	timestamp without time zone		time & date of payment without time zone

## Links to:

Table	Join	Description	
customer	Payment.customer_id=Customer.customer_id	Foreign key reference to customer table	
rental	Payment.rental_id=Rental.rental_id	Foreign key reference to rental table	
staff	Payment.staff_id=Staff.staff_id	Foreign key reference to staff table	

Links from: There are no links from tables.

# Unique Keys:

Column		Column	Description		
0	payment_id		unique identifier for payment		
•	-	customer_id	unique identifier for customer		
•	-	rental_id	unique identifier for rental		
•	-	staff_id	unique identifier for staff		

## 2.2 Rental Table

Primary Key	Name	Data Type	N	Description/ Attributes	
<b>9</b>	rental_id	serial		unique rental identifier	
	rental_date timestamp without time zone			date the film was rented	
inventory_id Integer			unique inventory identifier		
customer_id Small int			unique customer identifier		
return_date timestamp witho		timestamp without time zone	N	date the film was returned	
staff_id Small int			unique staff identifier		
	last_update	date timestamp without time zone		time when the information was last updated	

#### Links To:

Table	Join	Description	
customer rental.customer_id=customer.customer_id		Foreign key reference to customer table	
inventory	rental.inventory_id=inventory.inventory_id	Foreign key reference to inventory table	
staff	rental.staff_id=staff.staff_id	Foreign key reference to staff table	

#### Links from:

Table	Join	Description
payment	rental.rental_id=payment.rental_id	foreign key reference to payment table

## Unique Keys:

Column		Description		
- rental_id u		unique identifier for rental		
•	customer_id	unique identifier for customer		
•	inventory_id	unique identifier for inventory		
•	staff_id	unique identifier for staff		

## 3. Dimension Tables

## 3.1 Actor Table

Primary Key	Name	Data Type	N	Description/ Attributes
<u></u>	actor_id	serial		unique actor identifier
	first_name	character varying (45)		actor's first name
	last_name	character varying (45)		actor's last name
	last_update	timestamp without time zone		date actor was last updated

Links to: There are no links to tables.

#### Links from:

Table	Join	Description
film_actor	actor.actor_id=film_actor.actor_id	foreign key reference to film_actor table

# Unique Keys:

Column		Description		
<b>3</b>	actor_id	unique actor identifier		

## 3.2 Address Table:

Primary Key	Name	Data type	N	Description/ Attributes
<del></del>	address_id	serial		unique address identifier
address		character varying (50)		first line of address
address2		charactervarying (50)	N	second line of address
district		character varying (20)		address district
	city_id	smallint		unique city identifier
	postal_code	character varying (10)	N	post code for the address
	phone	character varying (20)		phone number for the address
	last_update	timestamp without time zone		last time address was updated

Table	Join	Description
city	city.city_id=address.city_id	Foreign key that references the city table

## Links from:

Table	Join	Description
store	store.address_id=address.address_id	Foreign key that references the store table
staff	staff.address_id=address.address_id	Foreign key that references the staff table
customer	customer.address_id=address.address_id	Foreign key that references the customer table

# Unique Keys:

	Column	Description	
<u></u>	address_id	unique address identifier	
•	city_id	unique city identifier associated with address	

# 3.3 Category table:

Primary Key	Name	Data type	N	Description/ Attributes
<del></del>	category_id	serial		unique category identifier
	name	cha racter varying (25)		name of the category
	last_update	timestamp without time zone		last time category was updated

## Links to: There are no links to tables.

## Links from:

Table	Join	Description
film_category	film_category.category_id=category.category_id	Foreign key that references the film_category table

# Unique Keys:

	Column	Description
<b>3</b>	category_id	unique category identifier

# 3.4 City table:

Primary Key	Name	Data type	N	Description/ Attributes
<del></del>	city_id	serial		unique city identifier
	city	character varying (50)		name of the city
	country_id	smallint		unique country identifier
	last_update	timestamp without time zone		last time city was updated

Table	Join	Description
country	country.country_id=city.country_id	Foreign key reference to country table

## Links from:

Table	Join	Description
address	address.city_id=city.city_id	Foreign key reference to address table

# Unique keys:

	Column	Description
<b></b>	city_id	unique city identifier
•	country_id	unique country identifier associated with city

# 3.5 Country table:

Primary Key	Name	Data type	N	Description/ Attributes
<u></u>	country_id	serial		unique country identifier
	country	character varying (50)		name of the country
	last_update	timestamp without time zone		last time country was updated

Links to: There are no links to tables.

## Links from:

Table	Join	Description
city	city.country_id=country.country_id	Foreign key reference to city table

## Unique Keys:

	Column	Description	
<u></u>	country_id	unique country identifier	

# 3.6 Customer table:

<b>Primary Key</b>	Name	Data type		Description/ Attributes
<del></del>	customer_id	serial		unique customer identifier
	store_id	smallint		unique store identifier
	first_name	character varying (45)		customer's first name
	second_name	character varying (45)		customer's second name
	e-mail character varying (50)		N	customers e-mail address
	address_ id smallint			unique address identifier
	activebool boolean			whether customer is active or not
	create_date date			date customer's file was created
	last_update timestamp without time zone		N	last time customer details were updated
	active Integer		N	active status represented by 0 or 1

Table	Join	Description
address	address.address_id=customer.address_id	Foreign key reference to address table

## Links from:

Table	Join	Description	
rental	rental.customer_id=customer.customer_id	Foreign key reference to rental table	
payment	payment.customer_id=customer.customer_id	Foreign key reference to payment table	

# Unique keys:

	Column	Description
<u></u>	customer_id	unique customer identifier
•	address_id	unique address identifier associated with customer

## 3.7 Film table:

Primary				
Key	Name	Data type	N	Description/ Attributes
<del></del>	film_id	serial		unique film identifier
	title	character varying (255)		title of the film
	description	text	N	film description
	release_year	Integer	N	year the film was released
	language_id	smallint		unique language identifier
	rental_duration	smallint		duration of the film rental
	rental_rate	numeric(4,2)		cost of renting the film
	length	smallint	N	length of the film
	replacement_cost	numeric(5,2)		cost of replacing the film
	rating	mpaa_rating	N	film rating
	last_update	timestamp without time zone		last time the film profile was updated
	special_features	text	N	special features a bout the film
	fulltext	tsvector		index, information about words and their location

#### Links to:

Table	Join	Description
language	language.language_id=film.language_id	Foreign key reference to language table

#### Links from:

Table	Join	Description
inventory	inventory.film_id=film.film_id	Foreign key reference to inventory table
film_category	film_category.film_id=film.film_id	Foreign key reference to film_category table
film_actor	film_actor.film_id=film.film_id	Foreign key reference to film_actor table

# Unique keys:

		Column	Description
	<b>3</b>	film_id	Unique film identifier
ſ	•	language_id	Unique language identifier associated with film

# 3.8 Film\_actor table:

Primary Key	Name	Data type	N	Description/ Attributes
<b></b>	actor id	sma Ilint		unique actor identifier
<b></b>	film id	sma Ilint		unique film identifier
	last_update	timestamp without time zone		last time the film_actor was updated

#### Links to:

Table	Join	Description	
film	film.film_id=film_actor.film_id	Foreign key reference to film table	
actor	actor.actor_id=film_actor.actor_id	Foreign key reference to actor table	

Links from: There are no links from tables.

## Unique keys:

	Column	Description
<u>~</u> / <del>~</del>	actor_id	unique actor identifier and also foreign key
<u>~</u> / <del>~</del>	film_id	unique film identifier and also foreign key

# 3.9 Film\_category table:

Primary Key	Name	Data type	N	Description/ Attributes
•	film_id	smallint		unique film identifier
<u></u>	category_id	smallint		unique category identifier
	last_update	timestamp without time zone		last time the film category was updated

# Links to:

Table	Join	Description
film	film.film_id=film_category.film_id	Foreign key reference to film table
category	category.category_id=film_category.category_id	Foreign key reference to category table

Links from: There are no links from tables.

# Unique keys:

	Column	Description
<u>~</u> / <del>~</del>	film_id	unique film identifier and also foreign key
<u>~</u> / <del>~</del>	category_id	unique category identifier and also foreign key

# 3.10 Inventory table:

<b>Primary Key</b>	Name	Data type	N	Description/ Attributes
<u></u>	inventory_id	Integer		unique film identifier
	film_id	smallint		unique film identifier
	store id	smallint		unique store identifier
	last_update	timestamp without time zone		last time the film inventory was updated

## Links to:

Table	Join	Description
film	film.film_id=inventory.film_id	Foreign key reference to film table

## Links from:

Table	Join	Description
rental	rental.inventory_id=inventory.inventory_id	Foreign key reference to rental table

# Unique keys:

	Column	Description	
<b></b>	inventory_id	Unique inventory identifier	
•	film_id	Unique film identifier associated with inventory	

# 3.11Language table:

Primary Key	Name	Data type	N	Description/ Attributes
<u></u>	language_id	serial		unique film identifier
	name	character varying (20)		name of the language
	last_update	timestamp without time zone		last time the language was updated

Links to: There are no links to tables.

#### Links from:

Table	Join	Description
film	film.language_id=language.language_id	Foreign key reference to film table

# Unique keys:

	Column	Description
<u></u>	language_id	Unique language identifier

## 3.12 Staff table:

Primary Key	Name	Data type	N	Description/ Attributes
<u></u>	staff_id	serial		unique staff identifier
	first_name	character varying (45)		staff's first name
	last_name	character varying (45)		staff's last name
	address_id	smallint		unique address identifier
	email	character varying (50)	N	staff's email address
	store_id	smallint		unique store identifier
	active	boolean		staff's employment status
	username	character varying (16)		staff's user name
	password	character varying (40)	N	staff's password
	last_update	timestamp without time zone		last time the staff information was updated
	picture	bytea	N	staff's picture

#### Links to:

Table	Join	Description
address	address.address_id=staff.address_id	Foreign key reference to address table

## Links from:

Table	Join	Description
store	store.address_id=staff.address_id	Foreign key reference to staff table
rental	rental.staff_id=staff.staff_id	Foreign key reference to rental table
payment	payment.staff_id=staff.staff_id	Foreign key reference to payment table

# Unique keys:

	Column	Description
•	staff_id	Unique staff identifier
•	address_id	Unique staff address identifier associated with staff

## 3.13 Store table:

Primary Key	Name	Data Type	N	Description/ Attributes
<u></u>	store id	serial		unique store identifier
	manager_staff_id	smallint		unique identifier of staff that manages the store
	address_id	smallint		unique store's address identifier
	last_update	timestamp without time zone		last time the store information was updated

Table	Join	Description
staff	staff.staff_id=store.manager_staff_id	Foreign key reference to staff table
address	address.address_id=store.address_id	Foreign key reference to address table

Links from: There are no links from tables.

## Unique keys:

	Column	Description
<u></u>	strore_id	unique store identifier
•	manager_staff_id	unique identifier of staff that manages the store
•	address_id	unique store's address identifier