Rockbuster Stealth LLC
Data Dictionary

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1. ER Diagram

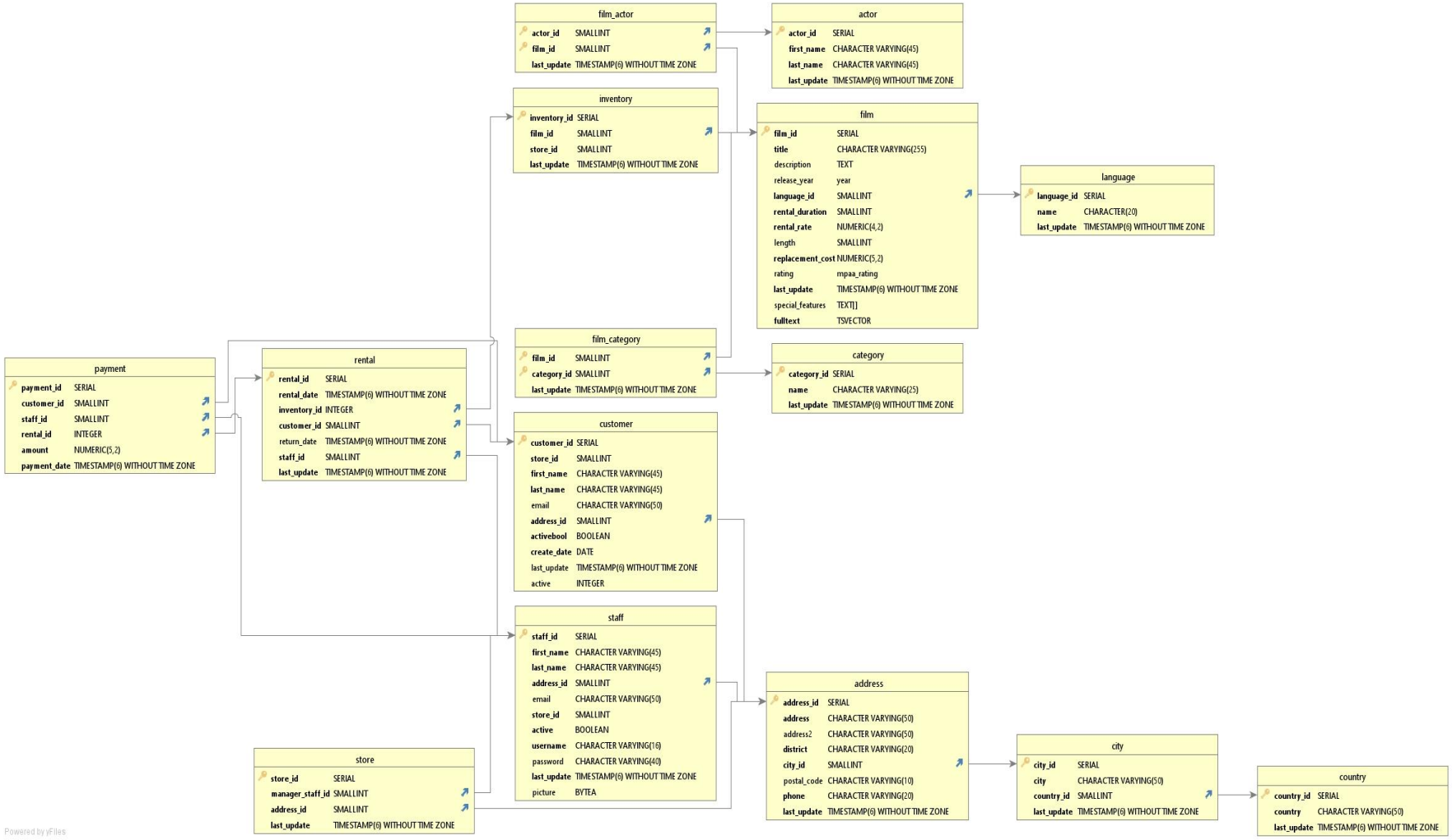

Figure 1. DbVisualizerERD from the Rockbuster database

2. The fact and the dimension tables in the Rockbuster schema

2-1. Rental Fact Table

Table	Column	Data Type	Description
Rental **Fact table**	*rental_id*	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the rental records.
	rental_date	TIMESTAMP (6)	Date and time when a film was rented at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone.
	inventory_id	INTEGER	**Foreign Key** to *inventory* table. A whole number which a film is stocked in the inventory by.
	customer_id	SMALLINT	**Foreign Key** to *customer* table. A whole number assigned to a customer as their ID
	return_date	TIMESTAMP (6)	Date and time when a film was returned at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone.
	staff_id	SMALLINT	**Foreign Key** to *staff* table. A whole number assigned to the employee who rented the film.
	last_update	TIMESTAMP (6)	Date and time when the *rental* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-2. Category Dimension Table

Table	Column	Data Type	Description
Category **Dimension**	*category_id*	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the category records.
	name	CHARACTER VARYING (25)	Name of the film category. Must not exceed 25 characters.
	last_update	TIMESTAMP (6)	Date and time when the *category* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-3. Actor Dimension Table

Table	Column	Data Type	Description
Actor **Dimension**	*actor_id*	SERIAL	Primary Key (Surrogate Key), Identity auto increment column for the actor records.
	first_name	CHARACTER VARYING (45)	First name of the actor. Must not exceed 45 characters.
	last_name	CHARACTER VARYING (45)	Last name of the actor. Must not exceed 45 characters.
	last_update	TIMESTAMP (6)	Date and time when the *actor* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-4. Address Dimension Table

Table	Column	Data Type	Description
Address **Dimension**	*address_id*	SERIAL	Primary Key (Surrogate Key), Identity auto increment column for the address records.
	address	CHARACTER VARYING (50)	First street address line. Must not exceed 50 characters.
	address2	CHARACTER VARYING (50)	Second street address line. Must not exceed 50 characters.
	district	CHARACTER VARYING (20)	Name of the district. Must not exceed 20 characters.
	city_id	SMALLINT	Foreign Key to *city* table. A unique identification number for the city.
	postal_code	CHARACTER VARYING (10)	Postal code for the street address. Must not exceed 10 characters.
	phone	CHARACTER VARYING (20)	Telephone number identification number. Must not exceed 20 characters.
	Last_update	TIMESTAMP (6)	Date and time when the *address* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-5. City Dimension Table

Table	Column	Data Type	Description
City **Dimension**	city_id	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the city records.
	city	CHARACTER VARYING (50)	Name of the city. Must not exceed 50 characters.
	country_id	SMALLINT	**Foreign Key** to *country* table. A unique identification number for the country.
	last_update	TIMESTAMP (6)	Date and time when the *city* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-6. Country Dimension Table

Table	Column	Data Type	Description
Country **Dimension**	country_id	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the country records.
	country	CHARACTER VARYING (50)	Name of the country. Must not exceed 50 characters.
	last_update	TIMESTAMP (6)	Date and time when the *country* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-7. Film Dimension Table

Table	Column	Data Type	Description
Film **Dimension**	*film_id*	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the film records.
	title	CHARACTER VARYING (255)	Title of the film. Must not exceed 255 characters.
	description	TEXT	Text field for the description of film
	release_year	year	Year the film was released in
	language_id	SMALLINT	**Foreign Key** to *language* table. A unique identification number for the language of film which actors speak in.
	rental_duration	SMALLINT	Number of days which the film got rented by the customer
	rental_rate	NUMERIC (4,2)	Cost of renting the film with two decimal numbers.
	length	SMALLINT	Duration of the film
	replacement_cost	NUMERIC (5,2)	Cost of replacing the film in case of being lost or broken with two decimal numbers.
	rating	Mpaa_rating	Rate of the film in Motion Picture Association Rating System
	last_update	TIMESTAMP (6)	Date and time when the *film* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.
	special_features	TEXT []	Explains some bold features which is include in the film like Trailers, Behind the scenes, Deleted scenes, …
	fulltext	TSVECTOR	Some sorted text elements which improve searching the title of the film

2-8. Customer Dimension Table

Table	Column	Data Type	Description
Customer **Dimension**	*customer_id*	SERIAL	Primary Key (Surrogate Key), Identity auto increment column for the customer records.
	store_id	SMALLINT	Foreign Key to *store* table. A unique identification number for the store.
	first_name	CHARACTER VARYING (45)	First name of the customer. Must not exceed 45 characters.
	last_name	CHARACTER VARYING (45)	Last name of the customer. Must not exceed 45 characters.
	email	CHARACTER VARIYING (50)	Email address of the customer. Must not exceed 50 characters.
	address_id	SMALLINT	Foreign Key to address table. A unique identification number for the customer's address.
	activebool	BOOLEAN	false = customer is no longer active, true= customer is actively renting or purchasing the films. By default, all the records have been set to "true"
	create_date	DATE	The date when customer's account was created on.
	last_update	TIMESTAMP (6)	Date and time when the *customer* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.
	active	INTEGER	0 = inactive, customer is no longer active, 1= active, customer is actively renting or purchasing the films. Default=1

2-9. Language Dimension Table

Table	Column	Data Type	Description
Language **Dimension**	*language_id*	SERIAL	Primary Key (Surrogate Key), Identity auto increment column for the language records.
	name	CHARATER VARYING (20)	Name of the language. Must not exceed 20 characters.
	last_update	TIMESTAMP (6)	Date and time when the *language* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-10. Film_actor Dimension Table

Table	Column	Data Type	Description
Film_actor **Dimension**	*actor_id*	SMALLINT	**Primary Key (Composite Key),** Identity auto increment column for the actor records.
	film_id	SMALLINT	**Primary Key (Composite Key),** Identity auto increment column for the film records.
	last_update	TIMESTAMP (6)	Date and time when the *film_actor* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-11. Film_category Dimension Table

Table	Column	Data Type	Description
Film_category **Dimension**	*film_id*	SMALLINT	**Primary Key (Composite Key),** Identity auto increment column for the film records.
	category_id	SMALLINT	**Primary Key (Composite Key),** Identity auto increment column for the category records.
	last_update	TIMESTAMP (6)	Date and time when the *film_category* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-12. Inventory Dimension Table

Table	Column	Data Type	Description
Inventory **Dimension**	*inventory_id*	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the inventory records.
	film_id	SMALLINT	**Foreign Key** to *film* table. A unique identification number for the film
	Store_id	SMALLINT	**Foreign Key** to *store* table. A unique identification number for the store
	last_update	TIMESTAMP (6)	Date and time when the *inventory* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-13. Payment Fact Table

Table	Column	Data Type	Description
Payment **Fact**	*payment_id*	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the payment records.
	customer_id	SMALLINT	**Foreign Key** to *customer* table. A unique identification number for the customer
	staff_id	SMALLINT	**Foreign Key** to *staff* table. A unique identification number for the staff
	rental_id	INTEGER	**Foreign Key** to *rental* table. A unique identification number for the rental
	amount	NUMERIC (5,2)	Amount of the payment with two decimal numbers
	payment_date	TIMESTAMP (6)	Date and time when the *payment* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-14. Store Dimension Table

Table	Column	Data Type	Description
Store **Dimension**	*store_id*	SERIAL	**Primary Key (Surrogate Key),** Identity auto increment column for the store records.
	manager_staff_id	SMALLINT	Unique identification number of the store manager. This can be a **foreign key** to *staff* table.
	address_id	SMALLINT	**Foreign Key** to address table. A unique identification number for the store address.
	last_update	TIMESTAMP (6)	Date and time when the *store* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.

2-15. Staff Dimension Table

Table	Column	Data Type	Description
Staff **Dimension**	*staff_id*	SERIAL	Primary Key (Surrogate Key), Identity auto increment column for the staff records.
	first_name	CHARACTER VARYING (45)	First name of the staff. Must not exceed 45 characters.
	last_name	CHARACTER VARYING (45)	Last name of the staff. Must not exceed 45 characters.
	address_id	SMALLINT	Foreign Key to *address* table. A unique identification number for the employee's address.
	email	CHARACTER VARIYING (50)	Email address of the staff. Must not exceed 50 characters.
	store_id	SMALLINT	Foreign Key to *store* table. A unique identification number of the store which the staff works for.
	active	BOOLEAN	false = staff is no longer active, true= staff is actively working at the company. By default, all the records have been set to "true"
	username	CHARACTER VARIYING (16)	Username that a staff can log into the company's system
	password	CHARACTER VARIYING (40)	Password of the staff which matches their username to log into the system
	last_update	TIMESTAMP (6)	Date and time when the *customer* table was updated at. Formatted as (YYYY-MM-DD HH:mm:ss). Does not include the time zone. It shows the same time for all records.
	picture	BYTEA	Personnel picture of the employee in Binary format

3. Primary and foreign key matrix in Ruckbuster schema

Tables	Actor	Address	Category	City	Country	Customer	Film	Film_ actor	Film_ category	Inventory	Language	Payment	Rental	Staff	Store
Actor	actor_id														
Address		address_id		city_id											
Category			category_ id												
City				city_id	country_id										
Country					country_id										
Customer		**address_id**				customer_id									
Film							film_id				**Language_id**				
Film_actor	actor_id						film_id	actor_id + film_id							
Film_category			category_ id				film_id		film_id+ category_id						
Inventory							film_id			inventory_id					
Language											language_id				
Payment						customer_id						payment_id	rental_id	staff_id	
Rental						Customer_id				inventory_id			rental_id	staff_id	
Staff		address_id												staff_id	
Store		address_id												Manag er_staf f_id	store_id