Rockbuster

Data Dictionary

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Show me what you got!

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Definitions

- **ERD aka Entity Relationship Diagram**
  - Schematic diagram showing how all the tables in the database are linked
- **Key**
  - The way to identify and access pieces of data stored in a database
  - **Primary key**
    - Key that identifies individual pieces of data stored in a table with no NULL (missing) values
  - **Unique key**
    - Key that identifies individual (unique) pieces of data stored in a table
  - **Foreign key**
    - Key linking two tables together (useful!) by referring to the primary key of another table
- **Table**
  - Entity for storing data that includes columns, rows, and cells filled (hopefully) with information
  - **Fact table**
    - Table containing quantitative data, i.e., numbers, such as dates, payment amounts, measurements, metrics, country IDs, etc
  - **Dimension table**
    - Table containing qualitative data, i.e., names, descriptions, addresses, country names, other text-based information
- **Linking**
  - Connections between tables by way of shared information that *links* them together and makes data combinable
- **Columns**
  - Lists of values in tables that belong together and share a type, i.e., customer IDs, staff member first names
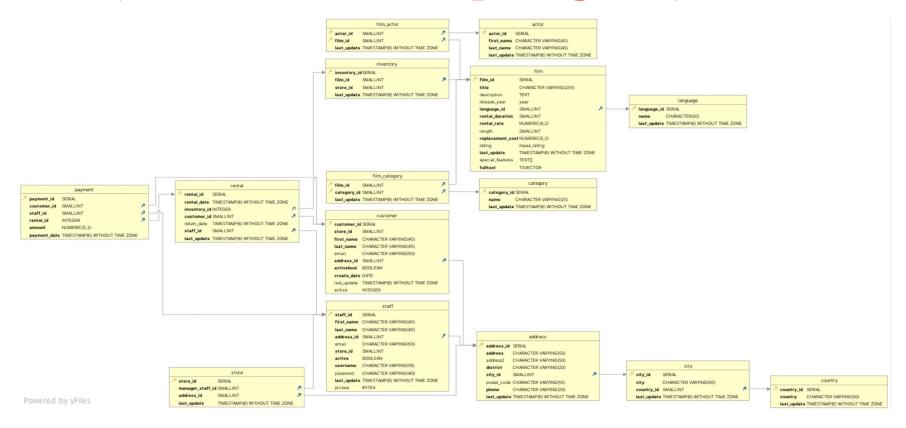
Symbols

Primary key

Key that identifies individual pieces of data stored in a table with no NULL (missing) values

Foreign key

Key linking two tables together (useful!) by referring to the primary key of another table

ERD (Entity Relationship Diagram)

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

store

store_id	SERIAL
manager_staff_id	SMALLINT
address_id	SMALLINT
last_update	TIMESTAMP(6) WITHOUT TIME ZONE

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

Fact tables — payment table

Keys	Columns	Data type	Description	Links to	Links from
Primary	payment_id	SERIAL	Unique payment identification number		
Foreign	customer_id	SMALLINT	Unique customer identification number	customer	
Foreign	staff_id	SMALLINT	Unique staff identification number	staff	
Foreign	rental_id	INTEGER	Unique rental identification number	rental	
	amount	NUMERIC(5,2)	Cost of movie rental		
	payment_date	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of payment		

Fact tables — rental table

Keys	Columns	Data type	Description	Links to	Links from
Primary	rental_id	SERIAL	Unique rental identification number		rental
	rental_date	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of rental		
Foreign	inventory_id	INTEGER	Unique movie identification number	inventory	
Foreign	customer_id	SMALLINT	Unique customer identification number	customer	
	return_date	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of rental return		
Foreign	staff_id	SMALLINT	Unique staff identification number	staff	
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — store table

Keys	Columns	Data type	Description	Links to	Links from
Primary	store_id	SERIAL	Unique store identification number		
Foreign	manager_staff_id	SMALLINT	Unique staff manager identification number	staff	
Foreign	address_id	SMALLINT	Unique store address identification number	address	
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — film_actor table

Keys	Columns	Data type	Description	Links to	Links from
Primary Foreign	actor_id	SMALLINT	Unique actor identification number	actor	
Primary Foreign	film_id	SMALLINT	Unique film identification number	film	
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — inventory table

Keys	Columns	Data type	Description	Links to	Links from
Primary	inventory_id	SERIAL	Unique inventory identification number		rental
Foreign	film_id	SMALLINT	Unique film identification number	film	
	store_id	SMALLINT	Unique store identification number		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — film_category table

Keys	Columns	Data type	Description	Links to	Links from
Primary Foreign	film_id	SMALLINT	Unique film identification number	film	
Primary Foreign	category_id	SMALLINT	Category identification number	category	
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — customer table

Keys	Columns	Data type	Description	Links to	Links from
Primary	customer_id	SERIAL	Unique customer identification number		payment rental
	store_id	SMALLINT	Unique store identification number		
	first_name	CHARACTER VARYING (45)	Customer's first name		
	last_name	CHARACTER VARYING (45)	Customer's last name		
	email	CHARACTER VARYING (50)	Customer's email address		
Foreign	address_id	SMALLINT	Unique customer address identification number	address	
	activebool	BOOLEAN	Active true/false		
	create_date	DATE	Date customer's account created		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		
	active	INTEGER	Active 1/0		

Dimension tables — staff table

Keys	Columns	Data type	Description	Links to	Links from
Primary	staff_id	SERIAL	Unique staff identification number		rental payment store
	first_name	CHARACTER VARYING (45)	Staff member's first name		
	last_name	CHARACTER VARYING (45)	Staff member's last name		
Foreign	address_id	SMALLINT	Unique address identification number	address	
	email	CHARACTER VARYING (50)	Staff member's email address		
	store_id	SMALLINT	Unique store identification number		
	active	BOOLEAN	Active true/false		
	username	CHARACTER VARYING (16)	Staff member's username		
	password	CHARACTER VARYING (40)	Staff member's password		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		
	picture	BYTEA	Picture of staff member		

Dimension tables — actor table

Keys	Columns	Data type	Description	Links to	Links from
Primary	actor_id	SERIAL	Unique actor identification number		film_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 and time of last update of table		

Dimension tables — film table

Keys	Columns	Data type	Description	Links to	Links from
Primary	film_id	SERIAL	Unique film identification number		film_actor inventory film_category
	title	CHARACTER VARYING (255)	Name of film		
	description	TEXT	Description of film		
	release_year	YEAR	Year of film release		
Foreign	language_id	SMALLINT	Unique language identification number	language	
	rental_duration	SMALLINT	Duration of film rental		
	rental_rate	NUMERIC(4,2)	Price rate of rental		
	length	SMALLINT	Length of the film		
	replacement_cost	NUMERIC(5,2)	Cost to replace the film		
	rating	MPAA_RATING	Film's MPAA rating		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		
	special_features	TEXT[]	Film's special features		
	fulltext	TSVECTOR	Keywords about film		

Dimension tables — category table

Keys	Columns	Data type	Description	Links to	Links from
Primary	category_id	SERIAL	Unique category identification number		film_category
	name	CHARACTER VARYING (25)	Name of category		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — address table

Keys	Columns	Data type	Description	Links to	Links from
Primary	address_id	SERIAL	Unique address identification number		store staff customer
	address	CHARACTER VARYING (50)	Address		
	address2	CHARACTER VARYING (50)	Second line of address (can be empty)		
	district	CHARACTER VARYING (20)	District		
Foreign	city_id	SMALLINT	Unique city identification number	city	
	postal_code	CHARACTER VARYING (10)	Postal code of address		
	phone	CHARACTER VARYING (20)	Phone number		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — language table

Keys	Columns	Data type	Description	Links to	Links from
Primary	language_id	SERIAL	Unique language identification number		film
	name	CHARACTER (20)	Name of language		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — city table

Keys	Columns	Data type	Description	Links to	Links from
Primary	city_id	SERIAL	Unique city identification number		address
	city	CHARACTER VARYING (50)	Name of city		
Foreign	country_id	SMALLINT	Country identification number		country
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		

Dimension tables — country table

Keys	Columns	Data type	Description	Links to	Links from
Primary	country_id	SERIAL	Unique country identification number		city
	country	CHARACTER VARYING (50)	Name of country		
	last_update	TIMESTAMP (6) WITHOUT TIME ZONE	Date and time of last update of table		