



ROCKBUSTER STEALTH LLC

Global Planning 2020

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The diagram illustrates the database schema for a movie rental system. The tables and their attributes are as follows:

- 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)
 - staff_id (SMALLINT)
 - last_update (TIMESTAMP(6) WITHOUT TIME ZONE)
- store**:
 - store_id (SERIAL)
 - manager_staff_id (SMALLINT)
 - address_id (SMALLINT)
 - last_update (TIMESTAMP(6) WITHOUT TIME ZONE)
- film_actor**:
 - actor_id (SMALLINT)
 - film_id (SMALLINT)
 - 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_category**:
 - film_id (SMALLINT)
 - category_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)
 - activated (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)
 - store_id (SMALLINT)
 - active (BOOLEAN)
 - username (CHARACTER VARYING(30))
 - password (CHARACTER VARYING(40))
 - last_update (TIMESTAMP(6) WITHOUT TIME ZONE)
 - picture (BYTEA)
- 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)
- category**:
 - category_id (SERIAL)
 - name (CHARACTER VARYING(25))
 - 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)
- language**:
 - language_id (SERIAL)
 - name (CHARACTER(20))
 - last_update (TIMESTAMP(6) WITHOUT TIME ZONE)

Relationships are defined as follows:

- payment** to **rental**: 1:M relationship.
- rental** to **inventory**: 1:M relationship.
- rental** to **customer**: 1:M relationship.
- rental** to **staff**: 1:M relationship.
- inventory** to **film**: 1:M relationship.
- film** to **category**: 1:M relationship.
- customer** to **address**: 1:M relationship.
- staff** to **address**: 1:M relationship.
- address** to **city**: 1:M relationship.
- city** to **country**: 1:M relationship.
- language** to **film**: 1:M relationship.

Column	Data type	Description	Links	Key
Rental ID	serial	Unique identifier for each rental transaction	← payment	PK
rental date	Timestamp(6)without timezone	Date of rental occurred		
Inventory ID	Integer	Unique identifier for inventory	→ inventory	FK
Customer_id	Smallint	Unique identifier of customer	→ customer	FK
Return_date	Timestamp(6)without timezone	Date of item be returned		
Staff_id	Smallint	Unique identifier for Staff	→ staff	FK
Last update	Timestamp(6)without timezone	Date and time of record last updated		

Column	Data type	Description	Links	Key
Payment_id	serial	Unique identifier of a payment		PK
Customer_id	Smallint	Unique identifier of a customer	→ customer	FK
Staff_id	Smallint	Unique identifier of a staff member	→ staff	FK
Rental_id	Integer	Unique identifier of a rental	→ rental	FK
Amount	Numeric(5,2)	Price of the rental		
Payment_date	Timestamp(6)without timezone	Date of the payment		

Customer

Column	Data type	Description	Links	Key
Customer_id	serial	Unique identifier of a customer	← payment ,rental	PK
Store_id	Smallint	Unique identifier of a store		
first_name	character varying(45)	First name of the customer		
last_name	character varying(45)	Last name of the customer		
Email	character varying(50)	Email of the customer		
address_id	smallint	Address of the customer	→ address	FK
activebool	boolean	Active or not		
create_date	date	Date of being created		
last_update	timestamp without time zone	Date and time of record last updated		
active	integer	Active or not		

Staff

Column	Data type	Description	Links	Key
staff_id	serial	Unique identifier of a staff	← payment ,rental,store	PK
first_name	character varying(45)	First name of the customer		
last_name	character varying(45)	Last name of the customer		
address_id	Smallint	Address of the customer	→ address	FK
Email	character varying(50)	Email of the customer		
Store_id	Smallint	Unique identifier of a store		
active	boolean	Active or not		
username	character varying(16)	User_name of the staff		
password	character varying(40)	Password of the staff		
last_update	timestamp without time zone	Date and time of record last updated		
picture	bytea	Photo of the staff		

Store

Column	Data type	Description	Links	Key
store_id	serial	Unique identifier of a store	← inventory, staff	PK
manager_staff_id	Smallint	Unique identifier of the store manager	→ staff	FK
address_id	Smallint	store address		
last_update	timestamp without time zone	Date and time of record last updated		

Address

Column	Data type	Description	Links	Key
address_id	serial	Unique identifier of an address	← customer ,staff,store	PK
address	character varying(50)	Address details		
address2	character varying(50)	Extra address details		
district	character varying(20)	District 's name		
city_id	Smallint	Unique identifier for the city	→ city	FK
postal_code	character varying(10)	Postal code details		
phone	character varying(20)	Phone number details		
last_update	timestamp without time zone	Date and time of record last updated		

City

Column	Data type	Description	Links	Key
city_id	serial	Unique identifier for the city	← address	PK
city	character varying(50)	city details		
country_id	smallint	Unique identifier for the country		
last_update	timestamp without time zone	Date and time of record last updated		

Country

Column	Data type	Description	Links	Key
country_id	serial	Unique identifier of a country	← city	PK
country	character varying(50)	Name of the country		
last_update	timestamp without time zone	Date and time of record last updated		

Film category

Column	Data type	Description	Links	Key
film_id	smallint	Unique identifier of a film	→ film	PK,FK
category_id	smallint	Unique identifier of a category	→ category	PK, FK
last_update	timestamp without time zone	Date and time of record last updated		

Category

Column	Data type	Description	Links	Key
category_id	serial	Unique identifier of a category	← film category	PK
name	character varying(25)	Name of the category		
last_update	timestamp without time zone	Date and time of record last updated		

Inventory

Column	Data type	Description	Links	Key
inventory_id	serial	Unique identifier of an inventory	← rental	PK
film_id	smallint	Unique identifier of a film	→ film,store	FK
store_id	smallint	Unique identifier of a store		
last_update	timestamp without time zone	Date and time of record last updated		

Film

Column	Data type	Description	Links	Key
film_id	serial	Unique identifier of a film	← film category,film actor,inventory	PK
title	character varying(255)	Movie title		
description	text	Movie description		
release_year	integer	Year that the movie came out		
language_id	smallint	Unique identifier of the language	→ language	FK
rental_duration	smallint	How long the movie has been rented		
rental_rate	numeric	Data of rental occurred		
length	smallint	movie duration		
replacement_cost	numeric	Costs to replace the rental movie		
rating	mpaa-rating	Which age groups can watch the movie		
last_update	timestamp without time zone	Date and time of record last updated		
special_features	text	Special features of the movie		
fulltext	tsvector	Text of the movie		

Language

Column	Data type	Description	Links	Key
language_id	serial	Unique identifier of the language	← film	PK
name	Character (20)	Name of the language		
last_update	timestamp without time zone	Date and time of record last updated		

Film actor

Column	Data type	Description	Links	Key
actor_id	smallint	Unique identifier of the actor	→ actor	PK,FK
film_id	smallint	Unique identifier of the film	→ film	PK,FK
last_update	timestamp without time zone	Date and time of record last updated		

Actor

Column	Data type	Description	Links	Key
actor_id	serial	Unique identifier of the actor	← film actor	PK
first_name	character varying(45)	First name of the actor		
last_name	character varying(45)	Last name of the actor		
last_update	timestamp without time zone	Date and time of record last updated		

Index

Index	
PK	Primary Key
FK	Foreign Key
→	links to
←	links from