

# ROCKBUSTER STEALTH LLC

Data Dictionary



VASCO FERNANDES @ CAREER FOUNDRY

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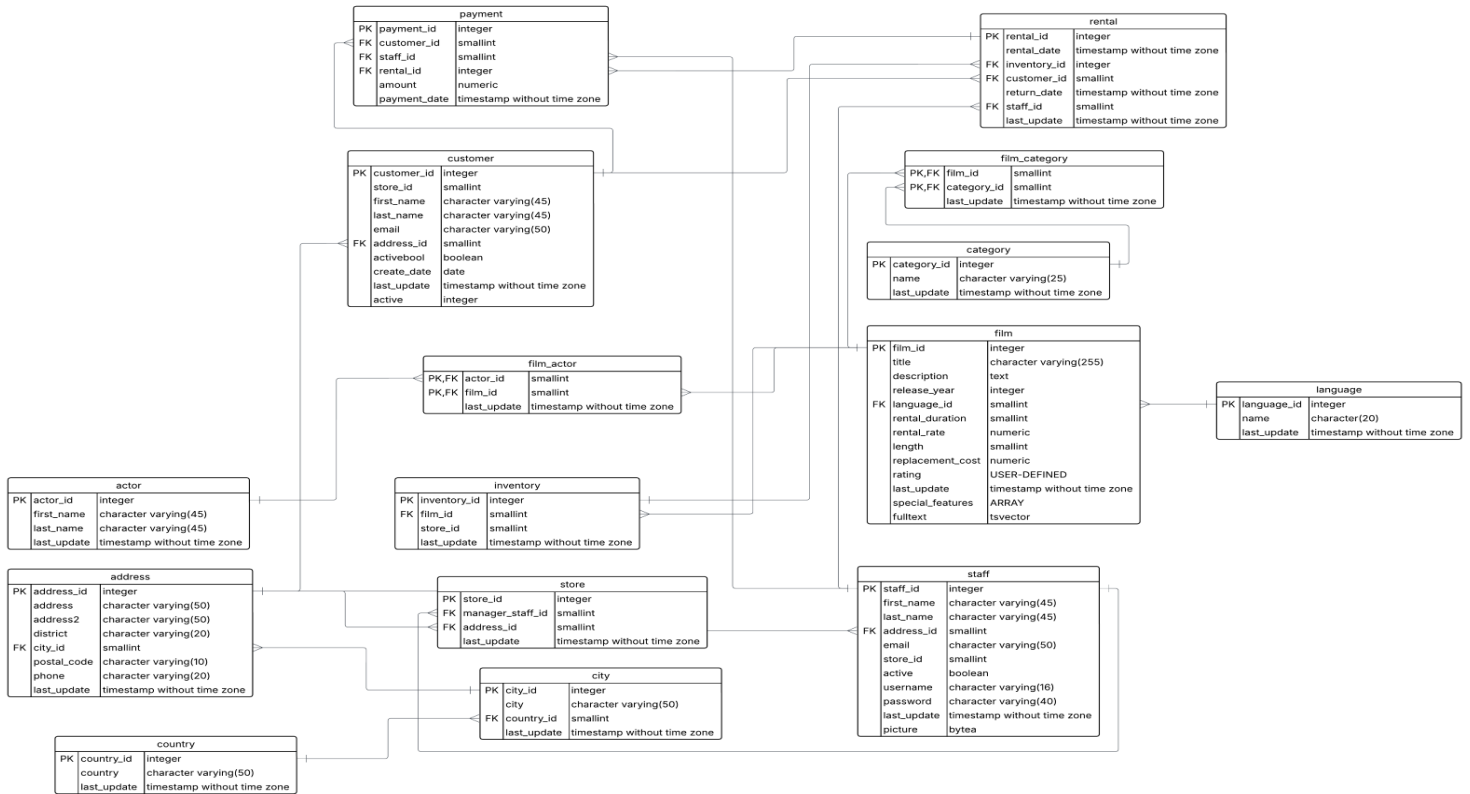
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## 1. Rockbuster Stealth LLC

RockBuster Stealth LLC is a fictional movie rental company that wants launch a streaming online service, and wants a data-driven strategy for that launch. The current Database stores past business data, from film catalog to customers, their rentals and payments, and more.

This document provides the overview of the structure of that Database, presenting an Entity Relationship Diagram, as well as a Data Dictionary.

## 2. Entity Relationship Diagram



### 3. Fact Tables

#### 3.1. Table: payment

##### Columns

column_name	is_key	data_type	nullable	column_description
payment_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
customer_id	FK	smallint(16)	NOT NULL	Foreign key from customer table
staff_id	FK	smallint(16)	NOT NULL	Foreign key from staff table
rental_id	FK	integer(32)	NOT NULL	Foreign key from rental table
amount		numeric(5,2)	NOT NULL	Value paid in this transaction
payment_date		timestamp w/o TZ(6)	NOT NULL	Date/time when the payment occurred

##### Links to

table	join	description
customer	payment.customer_id = customer.customer_id	Foreign key constraint referencing customer.customer_id
staff	payment.staff_id = staff.staff_id	Foreign key constraint referencing staff.staff_id
rental	payment.rental_id = rental.rental_id	Foreign key constraint referencing rental.rental_id

#### 3.2. Table: rental

##### Columns

column_name	is_key	data_type	nullable	column_description
rental_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
rental_date		timestamp w/o TZ(6)	NOT NULL	Date/time when the rental was requested
inventory_id	FK	integer(32)	NOT NULL	Foreign key from inventory table.
customer_id	FK	smallint(16)	NOT NULL	Foreign key from customer table
return_date		timestamp w/o TZ(6)	NULL	Date/time when the rented movie was returned
staff_id	FK	smallint(16)	NOT NULL	Foreign key from staff table
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

## Links to

table	join	description
customer	rental.customer_id = customer.customer_id	Foreign key constraint referencing customer.customer_id
inventory	rental.inventory_id = inventory.inventory_id	Foreign key constraint referencing inventory.inventory_id
staff	rental.staff_id = staff.staff_id	Foreign key constraint referencing staff.staff_id

## Linked from

table	join	description
payment	rental.rental_id = payment.rental_id	Foreign key constraint referencing payment.rental_id

## 4. Dimension Tables

### 4.1. Table: actor

#### Columns

column_name	is_key	data_type	nullable	column_description
actor_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
first_name		character varying(45)	NOT NULL	Actor first name
last_name		character varying(45)	NOT NULL	Actor last name
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

#### Linked from

table	join	description
film_actor	actor.actor_id = film_actor.actor_id	Foreign key constraint referencing film_actor.actor_id

### 4.2. Table: address

#### Columns

column_name	is_key	data_type	nullable	column_description
address_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
address		character varying(50)	NOT NULL	First line of the address
address2		character varying(50)	NULL	Second line of the address
district		character varying(20)	NOT NULL	district of the address
city_id	FK	smallint(16)	NOT NULL	City of the address. Foreign key from city table.
postal_code		character varying(10)	NULL	Postal Code of the address
phone		character varying(20)	NOT NULL	Phone number associated with that address
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

#### Links to

table	join	description
city	address.city_id = city.city_id	Foreign key constraint referencing city.city_id

Linked from

table	join	description
customer	address.customer_id = customer.customer_id	Foreign key constraint referencing customer.customer_id
store	address.store_id = store.store_id	Foreign key constraint referencing store.store_id
staff	address.staff_id = staff.staff_id	Foreign key constraint referencing staff.staff_id

#### 4.3. Table: category

Columns

column_name	is_key	data_type	nullable	column_description
category_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
name		character varying(25)	NOT NULL	the name of the category that films may fit into
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

Linked from

table	join	description
film	category.category_id = film.category_id	Foreign key constraint referencing film.category_id

#### 4.4. Table: city

Columns

column_name	is_key	data_type	nullable	column_description
city_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
city		character varying(50)	NOT NULL	name of the city
country_id	FK	smallint(16)	NOT NULL	foreign key from country table. country where city is.
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record



## Links to

table	join	description
country	city.country_id = country.country_id	Foreign key constraint referencing country.country_id

## Linked from

table	join	description
address	city.city_id = address.city_id	Foreign key constraint referencing address.city_id

## 4.5. Table: country

### Columns

column_name	is_key	data_type	nullable	column_description
country_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
country		character varying(50)	NOT NULL	country name
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

## Linked from

table	join	description
city	country.country_id = city.country_id	Foreign key constraint referencing city.country_id

## 4.6. Table: customer

### Columns

column_name	is_key	data_type	nullable	column_description
customer_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
store_id		smallint(16)	NOT NULL	In theory, should be a foreign key from store table.
first_name		character varying(45)	NOT NULL	first name of the customer
last_name		character varying(45)	NOT NULL	last name of the customer
email		character varying(50)	NULL	customer's email
address_id	FK	smallint(16)	NOT NULL	customer address. foreign key to address table
activebool		boolean	NOT NULL	flags whether the customer is active or not
create_date		date(3)	NOT NULL	creation date of the customer record. not necessarily first rental.
last_update		timestamp w/o TZ(6)	NULL	date/time when the last write action occurred on the record
active		integer(32)	NULL	legacy field with active status as integer

### Links to

table	join	description
address	customer.address_id = address.address_id	Foreign key constraint referencing address.address_id

### Linked from

table	join	description
payment	customer.customer_id = payment.customer_id	Foreign key constraint referencing payment.customer_id
rental	customer.customer_id = rental.customer_id	Foreign key constraint referencing rental.customer_id

#### 4.7. Table: film

##### Columns

column_name	is_key	data_type	nullable	column_description
film_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
title		character varying(255)	NOT NULL	title of the film
description		text	NULL	short synopsis
release_year		integer(32)	NULL	year of release of the film
language_id	FK	smallint(16)	NOT NULL	original language spoken in the film. foreign key to language table.
rental_duration		smallint(16)	NOT NULL	expected duration of the rental for this film
rental_rate		numeric(4,2)	NOT NULL	unit value for each copy rented for this film
length		smallint(16)	NULL	film duration (in minutes)
replacement_cost		numeric(5,2)	NOT NULL	value that costs to replace a copy in inventory
rating		USER-DEFINED	NULL	Viewers rating according to Motion Picture Association of America
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record
special_features		ARRAY	NULL	array of text entries with features of the film
fulltext		tsvector	NOT NULL	special type of field optimized for text searches (is a sorted list of distinct lexemes, which are kind of normalized words to merge different words)

##### Links to

table	join	description
language	film.language_id = language.language_id	Foreign key constraint referencing language.language_id

##### Linked from

table	join	description
film_actor	film.film_id = film_actor.film_id	Foreign key constraint referencing film_actor.film_id
film_category	film.film_id = film_category.film_id	Foreign key constraint referencing film_category.film_id
inventory	film.film_id = inventory.film_id	Foreign key constraint referencing inventory.film_id

#### 4.8. Table: film\_actor

##### Columns

column_name	is_key	data_type	nullable	column_description
actor_id	FK,PK	smallint(16)	NOT NULL	Is both foreign key from table actor and part of a composite primary key of this table (a crossing table between film and actor tables, which basically includes the info if a certain actor entered in a certain film)
film_id	FK,PK	smallint(16)	NOT NULL	Is both foreign key from table film and part of a composite primary key of this table
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

##### Links to

table	join	description
actor	film_actor.actor_id = actor.actor_id	Foreign key constraint referencing actor.actor_id
film	film_actor.film_id = film.film_id	Foreign key constraint referencing film.film_id

#### 4.9. Table: film\_category

##### Columns

column_name	is_key	data_type	nullable	column_description
film_id	FK,PK	smallint(16)	NOT NULL	Is both foreign key from table film and part of a composite primary key of this table (a crossing table between film and category tables)
category_id	FK,PK	smallint(16)	NOT NULL	Is both foreign key from table category and part of a composite primary key of this table
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

##### Links to

table	join	description
category	film_category.category_id = category.category_id	Foreign key constraint referencing category.category_id
film	film_category.film_id = film.film_id	Foreign key constraint referencing film.film_id

#### 4.10. Table: inventory

##### Columns

column_name	is_key	data_type	nullable	column_description
inventory_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
film_id	FK	smallint(16)	NOT NULL	foreign key from film table. the film from where this copy is.
store_id		smallint(16)	NOT NULL	foreign key from store table. the store where this copy is based.
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

##### Links to

table	join	description
film	inventory.film_id = film.film_id	Foreign key constraint referencing film.film_id

##### Linked from

table	join	description
rental	inventory.inventory_id = rental.inventory_id	Foreign key constraint referencing rental.inventory_id

#### 4.11. Table: language

##### Columns

column_name	is_key	data_type	nullable	column_description
language_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
name		character(20)	NOT NULL	language name
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

##### Linked from

table	join	description
film	language.language_id = film.language_id	Foreign key constraint referencing film.language_id

## 4.12. Table: staff

### Columns

column_name	is_key	data_type	nullable	column_description
staff_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
first_name		character varying(45)	NOT NULL	first name of the staff member
last_name		character varying(45)	NOT NULL	last name of the staff member
address_id	FK	smallint(16)	NOT NULL	address of the staff member. foreign key to address table
email		character varying(50)	NULL	email of the staff member
store_id		smallint(16)	NOT NULL	In theory, should be a foreign key from store table.
active		boolean	NOT NULL	flags whether the staff member is active or not
username		character varying(16)	NOT NULL	username used by the staff member
password		character varying(40)	NULL	password used by the staff member
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record
picture		bytea	NULL	binary file with a picture of the staff member

### Links to

table	join	description
address	staff.address_id = address.address_id	Foreign key constraint referencing address.address_id

### Linked from

table	join	description
payment	staff.staff_id = payment.staff_id	Foreign key constraint referencing payment.staff_id
rental	staff.staff_id = rental.staff_id	Foreign key constraint referencing rental.staff_id

#### 4.13. Table: store

##### Columns

column_name	is_key	data_type	nullable	column_description
store_id	PK	integer(32)	NOT NULL	Primary key. Unique identifier (surrogate)
manager_staff_id	FK	smallint(16)	NOT NULL	foreign key to staff table. Identifies the manager of the store.
address_id	FK	smallint(16)	NOT NULL	Foreign key to address table. the address of the store.
last_update		timestamp w/o TZ(6)	NOT NULL	date/time when the last write action occurred on the record

##### Links to

table	join	description
address	store.address_id = address.address_id	Foreign key constraint referencing address.address_id
staff	store.staff_id = staff.staff_id	Foreign key constraint referencing staff.staff_id