

# ROCKBUSTER STEALTH LLC

## Data Dictionary

Consolidated view of structure and organization of database  
and details about each table in database

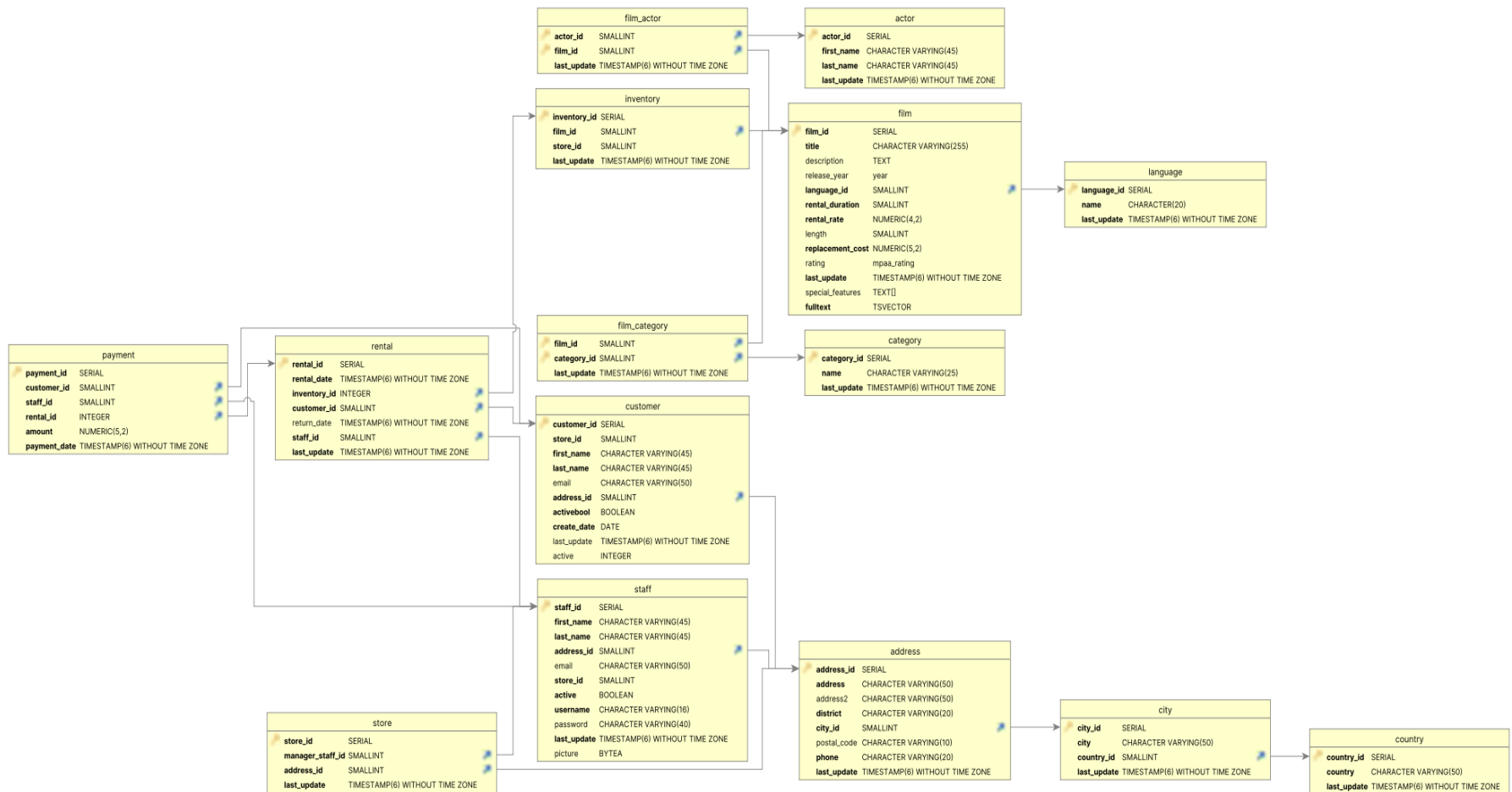
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## 1. ERD (Entity Relationship Diagram)






## 2. Fact Tables

|   |             |   |             |
|---|-------------|---|-------------|
|  | Primary key |  | Linked to   |
|  | Foreign key |  | Linked from |





### 2.1 Table: Payment

|   | Columns      | Data type                         | Description  |
|---|--------------|-----------------------------------|--|
|  | payment_id   | SERIAL                            | Primary key, integer, unique value to identify payment   |
|  | customer_id  | SMALLINT                          | Foreign key, small integer, unique number used to identify the customer                              |
|  | staff_id     | SMALLINT                          | Foreign key, small integer, unique number used to identify the personnel member of Rockbuster        |
|  | rental_id    | INTEGER                           | Foreign key, larger integer, unique number used to identify the rental transaction                   |
|   | amount       | NUMERIC(5,2)                      | Monetary amount, number with max 5 digits, including and 2 digits in fraction part; max value 999.99 |
|   | payment_date | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)                             |

Linked to

|   | Table    | Join  |
|---|----------|---|
|  | rental   | <b>payment.rental_id=rental.payment_id</b>      |
|  | customer | <b>payment.customer_id=customer.customer_id</b> |
|  | staff    | <b>payment.staff_id=staff.staff_id</b>          |

### 2.2 Table: Rental

|   | Columns      | Data type                         | Description   |
|---|--------------|-----------------------------------|---|
|  | rental_id    | SERIAL                            | Primary key, integer, unique number used to identify the rental transaction   |
|   | rental_date  | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec) used to indicate the date and time the rent has started                    |
|  | inventory_id | INTEGER                           | Foreign key, larger integer, unique number used to identify a film or item to be rented by customers  |
|  | customer_id  | SMALLINT                          | Foreign key, small integer, unique number used to identify the customer   |
|   | return_date  | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec). The date and time set as a deadline when the rental items to be returned. |
|  | staff_id     | SMALLINT                          | Foreign key, small integer, unique number used to identify the personnel member of Rockbuster   |
|   | last_update  | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)  |

Linked to

|   | Columns   | Join   |
|---|-----------|--|
| ➔ | inventory | <b>rental.inventory_id</b> =inventory.inventory_id |
| ➔ | customer  | <b>rental.customer_id</b> =customer.customer_id    |
| ➔ | staff     | <b>rental.staff_id</b> =staff.staff_id             |

Linked from

|   | Columns | Join                                       |
|---|---------|--|
| ➔ | payment | <b>rental.rental_id</b> =payment.rental_id |

## 3. Dimension Tables

### 3.1 Table: Inventory

|   | Columns      | Data type                         | Description  |
|---|--------------|-----------------------------------|--|
| 🔑 | inventory_id | SERIAL                            | Primary key, larger integer, unique number used to identify a film or item to be rented by customers |
| 🔑 | film_id      | SMALLINT                          | Foreign key, integer, unique number used to identify each film and connect to Film table             |
|   | store_id     | SMALLINT                          | Small integer, unique number used to identify the store in Rockbuster classification                 |
|   | last_update  | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)                             |

Linked to

|   | Columns | Join                                   |
|---|---------|--|
| ➔ | film    | <b>inventory.film_id</b> =film.film_id |

Linked from


|   | Columns | Join   |
|---|---------|--|
| ➔ | rental  | <b>inventory.inventory_id</b> =rental.inventory_id |

### 3.2 Table: Film




|   | Columns         | Data type                 | Description  |
|---|-----------------|---------------------------|--|
| 🔑 | film_id         | SERIAL                    | Primary key, unique number used to identify each film as a rental item                           |
|   | title           | CHARACTER<br>VARYING(255) | Film title, fixed-length character with max 255 characters, including spaces                     |
|   | description     | TEXT                      | Film synopsis with unlimited length  |
|   | release_year    | year                      | Integer, the year the film was released  |
| 🔑 | language_id     | SMALLINT                  | Foreign key, unique number used to identify the language of film audio; linked to Language table |
|   | rental_duration | SMALLINT                  | Small integer, the number of days the item was rented for  |

| Columns |                  | Data type                         | Description  |
|---------|------------------|-----------------------------------|--|
|         | rental_rate      | NUMERIC(4,2)                      | Rating, number with max 4 digits, including and 2 digits in fraction part;   |
|         | length           | SMALLINT                          | Small integer, the length of film (minutes)  |
|         | replacement_cost | NUMERIC(5,2)                      | The cost the customer can be charged in case of lost or damage of rental item. Monetary amount, number with max 5 digits, including and 2 digits in fraction part. |
|         | rating           | mpaa_rating                       | Film rating introduced by Movie Picture Association  |
|         | last_update      | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)   |
|         | special_features | TEXT[]                            | Extra videos related to the film available for audience  |
|         | fulltext         | TSVECTOR                          | Text-searchable data where we can use a word as an index   |


Linked to

| Columns   |          | Join  |
|---|----------|---|
|  | language | <b>film.language_id</b> =language.language_id |


Linked from

| Columns   |               | Join                                       |
|---|---------------|--|
|    | inventory     | <b>film.film_id</b> =inventory.film_id     |
|   | film_actor    | <b>film.film_id</b> =film_actor.film_id    |
|  | film_category | <b>film.film_id</b> =film_category.film_id |



### 3.3 Table: Language

| Columns   |             | Data type                         | Description  |
|---|-------------|-----------------------------------|--|
|  | language_id | SERIAL                            | Primary key, unique number used to identify the language in this table   |
|   | name        | CHARACTER(20)                     | The name of the language of the film audio                               |
|   | last_update | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec) |



Linked from

| Columns   |      | Join  |
|---|------|---|
|  | film | <b>language.language_id</b> =film.language_id |


### 3.4 Table: Film actor

| Columns   |             | Data type                         | Description   |
|---|-------------|-----------------------------------|---|
|  | actor_id    | SMALLINT                          | Composite key, unique number used to identify the actor in this database. Foreign key connecting linked to Actor table. |
|  | film_id     | SMALLINT                          | Composite key, unique number used to identify the film in this database. Foreign key connecting linked to Film table.   |
|   | last_update | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)  |


Linked to

| Columns   |       | Join                                       |
|---|-------|--|
|  | actor | <b>film_actor</b> .actor_id=actor.actor_id |
|  | film  | <b>film_actor</b> .film_id=film.film_id    |



### 3.5 Table: Actor

|   | Columns     | Data type                      | Description  |
|---|-------------|--------------------------------|--|
|  | actor_id    | SERIAL                         | Primary key, unique number used to identify the actor in this database.  |
|   | first_name  | CHARACTER VARYING(45)          | Actor's first name, max 45 characters                                    |
|   | last_name   | CHARACTER VARYING(45)          | Actor's last name, max 45 characters                                     |
|   | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec) |

Linked from

| Columns  | Join                                       |
|--|--|
|  film_actor | <b>actor</b> .actor_id=film_actor.actor_id |


### 3.6 Table: Film category

|   | Columns     | Data type                      | Description  |
|---|-------------|--------------------------------|--|
|  | film_id     | SMALLINT                       | Composite key, unique number used to identify the film in this database. Foreign key connecting linked to Film table.              |
|  | category_id | SMALLINT                       | Composite key, unique number used to identify the film category in this database. Foreign key connecting linked to Category table. |
|   | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)   |


Linked to

| Columns |          | Join   |
|---------|----------|--|
| ➤       | film     | <b>film_category</b> .film_id=film.film_id             |
| ➤       | category | <b>film_category</b> .category_id=category.category_id |

### 3.7 Table: Category

|   | Columns     | Data type                      | Description  |
|---|-------------|--------------------------------|--|
|  | category_id | SERIAL                         | Primary key, unique number used to identify the film category            |
|   | name        | CHARACTER VARYING(25)          | The name of the film category, max 25 characters                         |
|   | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec) |

Linked from

| Columns   |               | Join  |
|---|---------------|---|
|  | film_category | <b>category.category_id=film_category.category_id</b> |


### 3.8 Table: Customer

|   | Columns     | Data type                      | Description  |
|---|-------------|--------------------------------|--|
|  | customer_id | SERIAL                         | Primary key, unique number used to identify the customer in this database  |
|   | store_id    | SMALLINT                       | Small integer, unique number used to identify the store in Rockbuster classification   |
|   | first_name  | CHARACTER VARYING(45)          | Customer's first name, max 45 characters   |
|   | last_name   | CHARACTER VARYING(45)          | Customer's last name, max 45 characters  |
|   | email       | CHARACTER VARYING(50)          | Customer's email. Max 50 characters  |
|  | address_id  | SMALLINT                       | Foreign key, customer's address, linked to Address table   |
|   | activebool  | BOOLEAN                        | True or false statement to indicate the customer account status. Boolean data can hold three possible values: true, false or null. |
|   | create_date | DATE                           | The date when the customer account was created. Temporal date (yyyy-mm-dd)   |
|   | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)   |
|   | active      | INTEGER                        | Integer, a number to indicate whether the customer account is active or not  |
|   |             |                                |  |
|   | Staff       |                                |  |
|   | Columns     | Data type                      | Description  |
|   | staff_id    | SERIAL                         | Primary key, unique number used to identify the personnel member   |
|   | first_name  | CHARACTER VARYING(45)          | Employee's first name, max 45 characters   |
|   | last_name   | CHARACTER VARYING(45)          | Employee's last name, max 45 characters  |
|   | address_id  | SMALLINT                       | Foreign key, employee's address, linked to Address table   |
|   | email       | CHARACTER VARYING(50)          | Employee's email. Max 50 characters  |
|   | store_id    | SMALLINT                       | Small integer, unique number used to identify the store in Rockbuster classification   |
|   | active      | BOOLEAN                        | True or false statement to indicate the employee's status. Boolean data can hold three possible values: true, false or null.       |
|   | username    | CHARACTER VARYING(16)          | Employee's username / log-in ID for internal account, max 16 characters  |
|   | password    | CHARACTER VARYING(40)          | Employee's password used to log in to internal account, max 40 characters  |





| Columns |             | Data type                         | Description  |
|---------|-------------|-----------------------------------|--|
|         | last_update | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)           |
|         | picture     | BYTEA                             | Employee's picture. Bytea data type is used to store raw binary data, e.g. images. |




Linked to

| Columns   |         | Join   |
|---|---------|--|
|  | address | <b>customer</b> .address_id=address.address_id |



Linked from

| Columns   |         | Join   |
|---|---------|--|
|  | payment | <b>customer</b> .customer_id=payment.customer_id |
|  | rental  | <b>customer</b> .customer_id=rental.customer_id  |



### 3.9 Table: Store

| Columns   |                  | Data type                         | Description  |
|---|------------------|-----------------------------------|--|
|    | store_id         | SERIAL                            | Primary key, unique number used to identify the store in Rockbuster classification     |
|  | manager_staff_id | SMALLINT                          | Foreign key, unique number used to identify the manager staff, linked to Staff table   |
|  | address_id       | SMALLINT                          | Foreign key, unique number used to identify the store address, linked to Address table |
|   | last_update      | TIMESTAMP(6)<br>WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)               |

Linked to


| Columns   |         | Join  |
|---|---------|---|
|  | staff   | <b>store</b> .manager_staff_id=staff.staff_id |
|  | address | <b>store</b> .address_id=address.address_id   |

### 3.10 Table: Staff




| Columns   |            | Data type                | Description  |
|---|------------|--------------------------|--|
|  | staff_id   | SERIAL                   | Primary key, unique number used to identify the personnel member                     |
|   | first_name | CHARACTER<br>VARYING(45) | Employee's first name, max 45 characters   |
|   | last_name  | CHARACTER<br>VARYING(45) | Employee's last name, max 45 characters  |
|  | address_id | SMALLINT                 | Foreign key, employee's address, linked to Address table                             |
|   | email      | CHARACTER<br>VARYING(50) | Employee's email. Max 50 characters  |
|   | store_id   | SMALLINT                 | Small integer, unique number used to identify the store in Rockbuster classification |

| Columns |             | Data type                      | Description  |
|---------|-------------|--------------------------------|--|
|         | active      | BOOLEAN                        | True or false statement to indicate the employee's status. Boolean data can hold three possible values: true, false or null. |
|         | username    | CHARACTER VARYING(16)          | Employee's username / log-in ID for internal account, max 16 characters  |
|         | password    | CHARACTER VARYING(40)          | Employee's password used to log in to internal account, max 40 characters  |
|         | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)   |
|         | picture     | BYTEA                          | Employee's picture. Bytea data type is used to store raw binary data, e.g. images.   |



Linked to

| Columns   |         | Join                                       |
|---|---------|--|
|  | address | <b>staff.address_id=address.address_id</b> |


Linked from

| Columns   |         | Join   |
|---|---------|--|
|    | payment | <b>staff.staff_id=payment.staff_id</b>       |
|   | rental  | <b>staff.staff_id=rental.staff_id</b>        |
|  | store   | <b>staff.staff_id=store.manager_staff_id</b> |

### 3.11 Table: Address

| Columns   |             | Data type                      | Description  |
|---|-------------|--------------------------------|--|
|  | address_id  | SERIAL                         | Primary key, unique number used to identify the address in this table  |
|   | address     | CHARACTER VARYING(50)          | Any address in this database - line1 (street number and street name)   |
|   | address2    | CHARACTER VARYING(50)          | Any address in this database - line2, it can be used as a secondary address designator such as apartment number or building name |
|   | district    | CHARACTER VARYING(20)          | Any address in this database - district / state / region name  |
|  | city_id     | SMALLINT                       | Foreign key, small integer, unique number used to identify the city in this database, linked to City table                       |
|   | postal_code | CHARACTER VARYING(10)          | Any address in this database - postal code, max 10 characters  |
|   | phone       | CHARACTER VARYING(20)          | Phone number related to the address in this database, max 20 characters  |
|   | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)   |

Linked to

| Columns   |      | Join                                |
|---|------|-------------------------------------|
|  | city | <b>address.city_id=city.city_id</b> |

Linked from

| Columns |          | Join  |
|---------|----------|---|
| ↩       | store    | <b>address.address_id=store.address_id</b>    |
| ↩       | customer | <b>address.address_id=customer.address_id</b> |
| ↩       | staff    | <b>address.address_id=staff.address_id</b>    |

### 3.12 Table: City

|   | Columns     | Data type                      | Description   |
|---|-------------|--------------------------------|---|
| 🔑 | city_id     | SERIAL                         | Primary key, unique number used to identify the city in this database                             |
|   | city        | CHARACTER VARYING(50)          | City name in the address in this database   |
| 🔑 | country_id  | SMALLINT                       | Foreign key, unique number used to identify the country in this database, linked to Country table |
|   | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec)                          |

Linked to

| Columns |         | Join                                      |
|---------|---------|---|
| ➡       | country | <b>city.country_id=country.country_id</b> |

Linked from

| Columns |         | Join                                |
|---------|---------|-------------------------------------|
| ↩       | address | <b>city.city_id=address.city_id</b> |

### 3.13 Table: Country

|   | Columns     | Data type                      | Description  |
|---|-------------|--------------------------------|--|
| 🔑 | country_id  | SERIAL                         | Primary key, unique number used to identify the city in this database    |
|   | country     | CHARACTER VARYING(50)          | Country name in the address in this database                             |
|   | last_update | TIMESTAMP(6) WITHOUT TIME ZONE | Temporal data, store both date (yyyy-mm-dd) and time (hours:minutes:sec) |

Linked from

| Columns |      | Join                                      |
|---------|------|---|
| ↩       | city | <b>country.country_id=city.country_id</b> |