

Relational Database, 2017

DATA DICTIONARY



Suki Habibe
Rockbuster Stealth LLC

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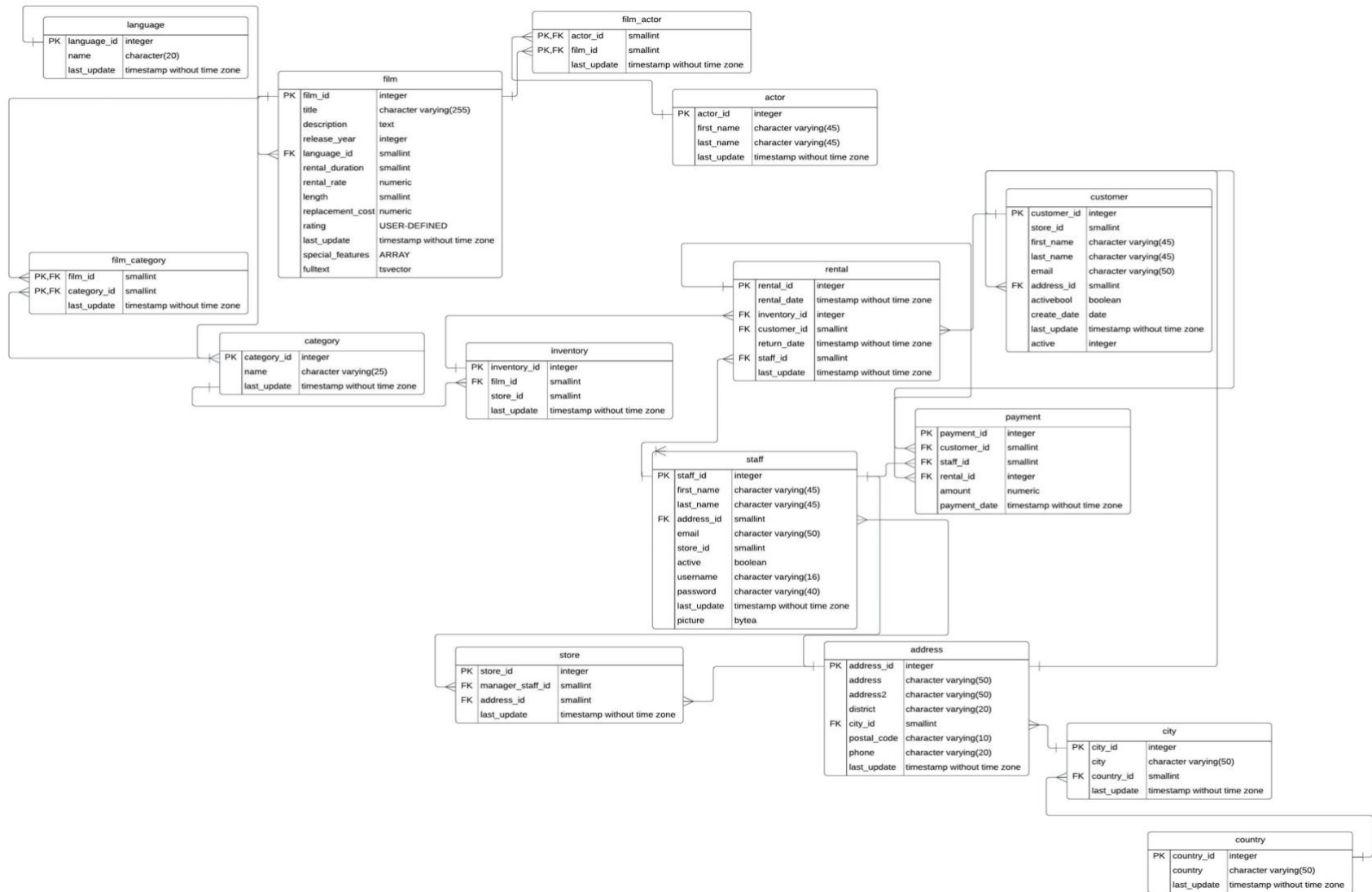
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1. Introduction

Rockbuster Stealth LLC is a movie rental company. The Data base supports rental and payment transactions, inventory keeping, and detail information about the movies in inventory, the staff, the and its customers.

2. Entity Relationship Diagram (ERD)







3. Legend

| | |
|---|-------------|
|  | Primary Key |
|  | Foreign Key |

4. Fact Tables

4.1 Fact table: rental

Columns:

| Key | Name | Data type | Description |
|---|--------------|--------------------------------|--|
|  | rental_id | integer | Primary key for rental records. |
| | rental_date | time_stamp without timezone | Date the rental record took place. |
|  | inventory_id | integer | Unique code of the item rented. Foreign key links to inventory.inventory_id. |
|  | customer_id | smallint | Unique code of the customer in question. Foreign key links to customer.customer_id. |
| | return_date | time_stamp without timezone | Date the rented item is returned. |
|  | staff_id | smallint | Unique code for the staff member in charge of the rental transaction. Foreign key links to staff.staff_id. |

| Key | Name | Data type | Description |
|-----|-------------|-----------------------------|--|
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|---------|--------------------------------------|---|
| payment | rental.rental_id = payment.rental_id | FK rental_id: rental → payment Foreign key constraint referencing rental.rental_id |

Links from:




| Table | Join | Description |
|-----------|--|--|
| inventory | rental.inventory_id = inventory.inventory_id | FK inventory_id: inventory → rental Foreign key constraint referencing inventory.inventory_id |
| staff | rental.staff_id = staff.staff_id | FK staff_id: staff → rental Foreign key constraint referencing staff.staff_id |
| customer | rental.customer_id = customer.customer_id | FK customer_id: customer → rental Foreign key constraint referencing customer.customer_id |

Unique key:

| Column | Description |
|-----------|-------------------------------|
| rental_id | Primary Key: rental.rental_id |

4.2 Fact table: **inventory**

Columns:

| Key | Name | Data type | Description |
|---|--------------|-----------------------------|---|
|  | inventory_id | integer | Primary key for inventory item. |
|  | film_id | smallint | Unique code for the film. Foreign key links to film.film_id. |
|  | store_id | smallint | Unique code for the store. Foreign key links to store.store_id. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|--------|--|--|
| rental | Inventory.inventory_id = rental.inventory_id | FK inventory_id: inventory → rental Foreign key constraint referencing inventory.inventory_id |

Links from:





| Table | Join | Description |
|---------|-------------------------------------|---|
| film_id | Inventory.film_id = film.film_id | FK film_id: film → inventory Foreign key constraint referencing film.film_id |
| store | Inventory.store_id = store.store_id | FK store_id: store → inventory Foreign key constraint referencing store.store_id |

Unique key:

| Column | Description |
|--------------|-------------------------------------|
| inventory_id | Primary Key: inventory.inventory_id |

4.3 Fact table: **payment**

Columns:

| Key | Name | Data type | Description |
|---|--------------|-----------------------------|--|
|  | payment_id | integer | Primary key for payment records. |
|  | customer_id | smallint | Unique code of the customer in question. Foreign key links to customer.customer_id. |
|  | staff_id | smallint | Unique code for the staff member in charge of the rental transaction. Foreign key links to staff.staff_id. |
|  | rental_id | integer | Unique code for the rental record. Foreign key links to rental.rental_id. |
| | amount | numeric | Amount paid. |
| | payment_date | time_stamp without timezone | Date of payment. |

Links to: none

Links from:

| Table | Join | Description |
|--------|--------------------------------------|---|
| rental | payment.rental_id = rental.rental_id | FK rental_id: rental → payment Foreign key constraint referencing rental.rental_id |

| Table | Join | Description |
|----------|---|---|
| staff | payment.staff_id = staff.staff_id | FK staff_id: staff → payment Foreign key constraint referencing staff.staff_id |
| customer | payment.customer_id = customer.customer_id | FK customer_id: customer → payment Foreign key constraint referencing customer.customer_id |

Unique key:


| Column | Description |
|------------|---------------------------------|
| payment_id | Primary Key: payment.payment_id |

5. Dimension Tables

5.1 Dimension table: **film**

Columns:

| Key | Name | Data type | Description |
|---|---------|-----------|-----------------------------|
|  | film_id | integer | Primary key for film title. |

| Key | Name | Data type | Description |
|---|------------------|-----------------------------|---|
| | title | character varying(255) | Title of the film. |
| | description | text | Small description of the storyline in the film. |
| | release_year | integer | Year the film was released. |
|  | language_id | smallint | Unique code of the language of the film. Foreign key links to language.language_id. |
| | rental_duration | smallint | The number of days the item was rented. |
| | rental_rate | numeric | The amount of the daily rental rate. |
| | length | smallint | The length of the film. |
| | replacement_cost | numeric | The amount it costs to replace this item. |
| | rating | USER-DEFINED | The rating of the film for “age-appropriateness”. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |
| | special_features | ARRAY | List of “Trailers, commentaries, behind the scenes, deleted scenes” if available. |
| | fulltext | tsvector | Search keywords for the film. |

Links to:

| Table | Join | Description |
|------------|--------------------------------------|--|
| category | film.film_id = category.film_id | FK film_id: film → category Foreign key constraint referencing film.film_id |
| film_actor | film.film_id = film_actor.film_id | FK film_id: film → film_actor Foreign key constraint referencing film.film_id |

Links from:



| Table | Join | Description |
|----------|--|--|
| language | film.language_id = language.language_id | FK language_id: language → film Foreign key constraint referencing language.language_id |

Unique key:

| Column | Description |
|---------|---------------------------|
| film_id | Primary Key: film.film_id |

5.2 Dimension table: **film_category**

Columns:

| | Name | Data type | Description |
|--|-------------|--------------------------------|--|
|  | film_id | smallint | Unique code of the film. Foreign key links to film.film_id, used as part of combination key. |
|  | category_id | smallint | Unique code of category. Foreign key links to category.category_id, used as part of combination key. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to: none

Links from:


| Table | Join | Description |
|-------------|--|---|
| film_id | film_category.film_id = film.film_id | FK film_id: film → film_category Foreign key constraint referencing film.film_id |
| category_id | film_category.category_id = category.category_id | FK category_id: category → film_category Foreign key constraint referencing film.film_id |

Unique key:

| Column | Description |
|-----------------------|--|
| film_id + category_id | Combination Key: film_category.film_id+category_id |

5.3 Dimension table: **category**

Columns:

| | Name | Data type | Description |
|--|-------------|-----------------------------|--|
|  | category_id | integer | Primary key for categories. |
| | name | character varying(255) | Name of category. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|---------------|--|--|
| film_category | category.category_id = category_film.category_id | FK category_id: category → film_category |

| Table | Join | Description |
|-------|------|---|
| | | Foreign key constraint referencing category.category_id |

Links from:


| Table | Join | Description |
|-------|---------------------------------|--|
| film | category.film_id = film.film_id | FK film_id: film → category Foreign key constraint referencing film.film_id |

Unique key:

| Column | Description |
|-------------|-----------------------------------|
| category_id | Primary Key: category.category_id |

5.4 Dimension table: **language**

Columns:

| | Name | Data type | Description |
|---|-------------|-----------------------------|--|
|  | language_id | integer | Primary key for languages. |
| | name | character (20) | Name of language. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|-------|--|--|
| film | language.language_id = film.language_id | FK language_id: language → film Foreign key constraint referencing language.language_id |



Links from: none

Unique key:

| Column | Description |
|-------------|-----------------------------------|
| language_id | Primary Key: language.language_id |

5.5 Dimension table: **film_actor**

Columns

| | Name | Data type | Description |
|---|-------------|--------------------------------|---|
|  | actor_id | smallint | Unique code of actor. Foreign key links to actor.actor_id, used as part of combination key. |
|  | film_id | smallint | Unique code of film. Foreign key links to film.film_id, used as part of combination key. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to: none

Links from:


| Table | Join | Description |
|-------|--------------------------------------|--|
| actor | film_actor.actor_id = actor.actor_id | FK actor_id: actor → film_actor Foreign key constraint referencing actor.actor_id |
| film | film_actor.film_id = film.film_id | FK film_id: film → film_actor Foreign key constraint referencing film.film_id |

Unique key:

| Column | Description |
|--------------------|--|
| film_id + actor_id | Combination Key: film_actor.film_id+actor_id |

5.6 Dimension table: **actor**

Columns:

| | Name | Data type | Description |
|--|-------------|-----------------------------|--|
|  | actor_id | integer | Primary key for actors. |
| | first_name | character varying(45) | First name of actor. |
| | last_name | character varying(45) | Last name of actor. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|------------|---|--|
| film_actor | actor.actor_id = film_actor.actor_id | FK actor_id: actor → film_actor Foreign key constraint referencing actor.actor_id |




Links from: none

Unique key:

| Column | Description |
|----------|-----------------------------|
| actor_id | Primary Key: actor.actor_id |

5.7 Dimension table: **staff**

Columns:

| | Name | Data type | Description |
|---|------------|-----------------------|---|
|  | staff_id | integer | Primary key for staff members. |
| | first_name | character varying(45) | First name of staff member. |
| | last_name | character varying(45) | Last name of staff member. |
|  | address_id | smallint | Unique code of the address name. Foreign key links to address.address_id. |
| | email | character varying(50) | Email address of the staff member. |
|  | store_id | smallint | Unique code of the store the staff member is located at. Foreign key links to store.store_id. |
| | active | boolean | Identified by “True” or “False” if the employment is still active. |

| | Name | Data type | Description |
|--|-------------|--------------------------------|--|
| | username | character varying(16) | Staff member's log-in username. |
| | password | character varying(40) | Staff member's log-in password. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |
| | picture | bytea | Picture of the staffmember. |

Links to:

| Table | Join | Description |
|---------|--|---|
| store | staff.staff_id = store.manager_staff_id | FK staff_id: staff → store Foreign key constraint referencing staff.staff_id |
| rental | staff.staff_id = rental.staff_id | FK staff_id: staff → rental Foreign key constraint referencing staff.staff_id |
| payment | staff.staff_id = payment.staff_id | FK staff_id: staff → payment Foreign key constraint referencing staff.staff_id |

Links from:




| Table | Join | Description |
|---------|--|---|
| address | staff.address_id = address.address_id | FK address_id: address → staff Foreign key constraint referencing address.address_id |

Unique key:

| Column | Description |
|----------|-----------------------------|
| staff_id | Primary Key: staff.staff_id |

5.8 Dimension table: **store**

Columns:

| | Name | Data type | Description |
|---|------------------|-----------------------------|---|
|  | store_id | integer | Primary key of stores. |
|  | manager_staff_id | smallint | Unique code of the store's manager. Foreign key links to staff.staff_id. |
|  | address_id | smallint | Unique code of the address name. Foreign key links to address.address_id. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|----------|---------------------------------------|---|
| staff | store.store_id = staff.store_id | FK store_id: store → staff Foreign key constraint referencing store.store_id |
| customer | store.store_id = customer.store_id | FK store_id: store → staff Foreign key constraint referencing store.store_id |

Links from:




| Table | Join | Description |
|---------|--|--|
| address | store.address_id = address.address_id | FK address_id: address → store Foreign key constraint referencing address.address_id |

Unique key:

| Column | Description |
|----------|-----------------------------|
| store_id | Primary Key: store.store_id |

5.9 Dimension table: **customer**

Columns:

| | Name | Data type | Description |
|--|-------------|-----------------------------|--|
|  | customer_id | integer | Primary key for customer accounts. |
|  | store_id | smallint | Unique code of the store the customer is member at. Foreign key links to store.store_id. |
| | 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 address of the customer. |
|  | address_id | smallint | Date and time the record was last updated. |
| | active_bool | boolean | Identified by “True” or “False” if the customer’s account is still active. |
| | create_date | date | Date the customer’s account was created. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |
| | active | integer | Identified by “1” or “0” if the customer’s account is still active. |

Links to:

| Table | Join | Description |
|---------|--|---|
| rental | customer.customer_id = rental.customer_id | FK customer_id: customer → rental Foreign key constraint referencing customer.customer_id |
| payment | customer.customer_id = payment.customer_id | FK customer_id: customer → payment Foreign key constraint referencing customer.customer_id |

Links from:



| Table | Join | Description |
|---------|--|--|
| store | customer.store_id = store.store_id | FK store_id: store → customer Foreign key constraint referencing store.store_id |
| address | customer.address_id = address.address_id | FK address_id: address → customer Foreign key constraint referencing address.address_id |

Unique key:

| Column | Description |
|-------------|-----------------------------------|
| customer_id | Primary Key: customer.customer_id |

5.10 Dimension table: **address**

Columns:

| | Name | Data type | Description |
|---|-------------|-----------------------------|---|
|  | address_id | integer | Primary key of the address name. |
| | address | character varying(50) | The address name and number. |
| | address2 | character varying(50) | Additional names for this address. |
| | district | character varying(20) | The district the address is in. |
|  | city_id | smallint | Unique code of the city this address is part of. Foreign key links to city.city_id. |
| | postal_code | character varying(10) | The postal code of the address. |
| | phone | character varying(20) | The phonenumber for this address. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|----------|--|--|
| staff | address.address_id = staff.address_id | FK address_id: address → staff Foreign key constraint referencing address.address_id |
| customer | address.address_id = customer.address_id | FK address_id: address → customer Foreign key constraint referencing address.address_id |
| store | address.address_id = store.address_id | FK address_id: address → store Foreign key constraint referencing address.address_id |

Links from:



| Table | Join | Description |
|-------|--------------------------------|---|
| city | address.city_id = city.city_id | FK city_id: city → address Foreign key constraint referencing city.city_id |

Unique key:

| Column | Description |
|------------|---------------------------------|
| address_id | Primary Key: address.address_id |

5.11 Dimension table: **city**

Columns:

| | Name | Data type | Description |
|---|-------------|-----------------------------|---|
|  | city_id | integer | Primary key for cities. |
| | city | character varying(50) | The city name. |
|  | country_id | smallint | Unique code of the country this city is part of. Foreign key to country.country_id. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|---------|-----------------------------------|---|
| address | city.city_id = address.city_id | FK city_id: city → address Foreign key constraint referencing city.city_id |

Links from:


| Table | Join | Description |
|---------|---|--|
| country | city.country_id = country.country_id | FK country_id: country → city Foreign key constraint referencing country.country_id |

Unique key:

| Column | Description |
|---------|---------------------------|
| city_id | Primary Key: city.city_id |

5.12 Dimension table: **country**

Columns:

| Key | Name | Data type | Description |
|---|-------------|--------------------------------|--|
|  | country_id | integer | Primary key for countries. |
| | country | character varying(50) | The country name. |
| | last_update | time_stamp without timezone | Date and time the record was last updated. |

Links to:

| Table | Join | Description |
|-------|---|--|
| city | country.country_id = city.country_id | FK country_id: country → city Foreign key constraint referencing country.country_id |

Links from: none

Unique key:

| Column | Description |
|------------|---------------------------------|
| country_id | Primary Key: country.country_id |

