ROCKBUSTER STEALTH LLC

Movie Rental Company

A movie rental company is planning to launch an online video rental service and needs analyses on their existing customer database to help them develop an effective launching strategy.

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Tableau Storyboard │ Github Repository

Data Dictionary

Project Overview

Customer's historical pattern Analysis

- Descriptive analyses of movie sales
- Customer behavior and loyalty investigation
- Customer geographical distribution

Data

- Dataset: 15 Tables from Rockbuster (TAR file)
- Film-relevant: Titles, Categories, Languages, Actors, Inventory
- Customer-relevant: Rental, Payment, Stores, Address, City, Country, Staffs

Skills

- SQL • Relational database management systems (RDBMS) • Database querying • Filtering • Cleaning and summarizing • Joining tables • Subqueries • Common table expressions • Data dictionary • Tableau • Excel

Data Dictionary

Apply DB Visualizer to investigate the relationship among datasheets and further segment them into fact and dimension tables
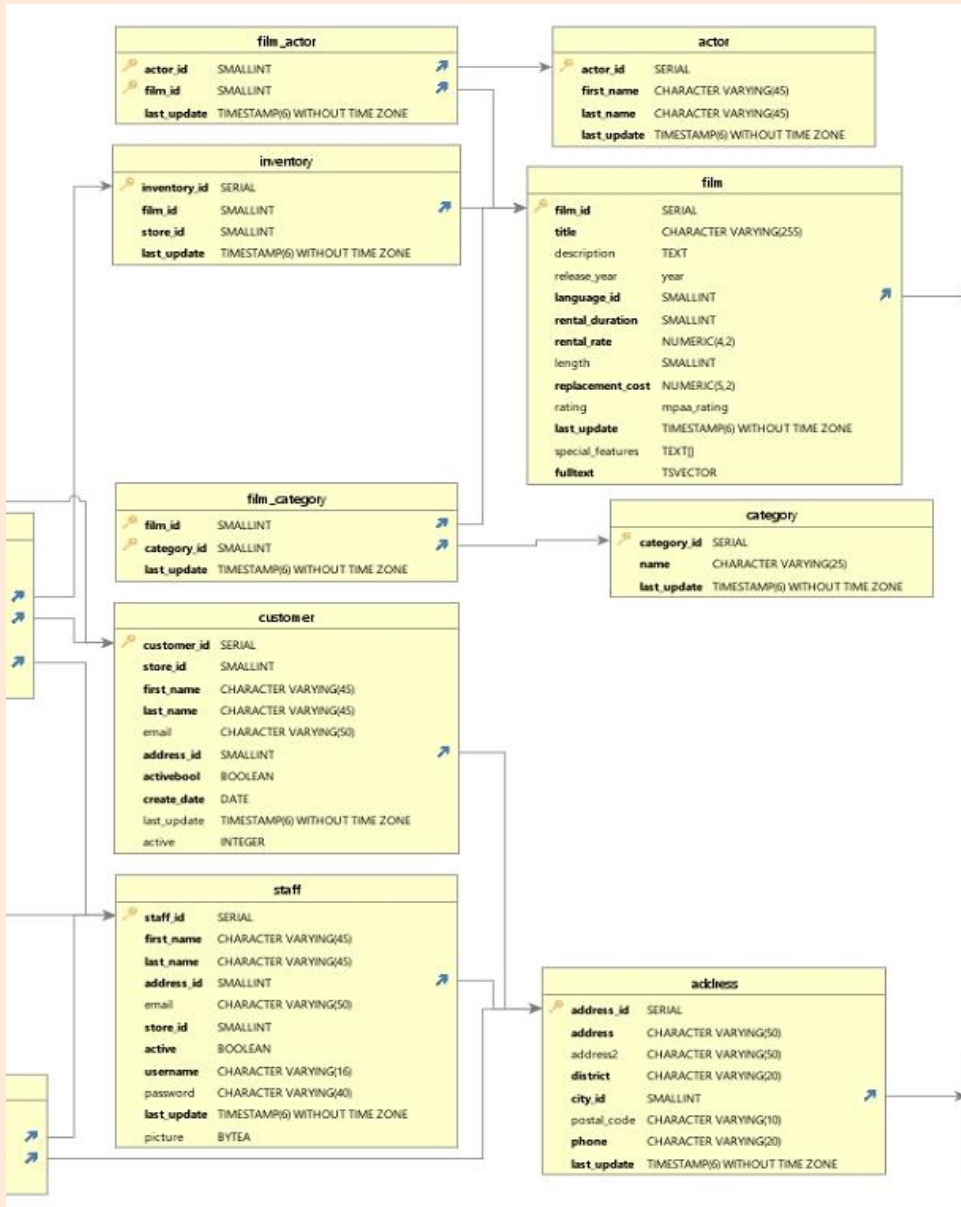
2. Fact tables

2.1 Payment

Columns

Key	Column	Data Type	Description
🔑	payment_id	SERIAL	Automatically generated identification number to individual payment
🔑	customer_id	SMALLINT	Unique identification number assigned to individual customer
🔑	staff_id	SMALLINT	Unique identification number assigned to individual staff member
🔑	rental_id	INTEGER	Unique identification number assigned to individual rental
	amount	NUMERIC(5.2)	Total amount paid
	payment_date	TIMESTAMP(6) WITHOUT TIME ZONE	Autogenerated latest updated date

3. Dimension tables

3.1 Category

Columns

Key	Column	Data Type	Description
🔑	category_id	SERIAL	Automatically generated identification number to individual genre
	name	CHARACTER VARYING (25)	Genre's name
	last_update	TIMESTAMP(6) WITHOUT TIME ZONE	Autogenerated latest updated date

Linked from

Key	Table	Join
➡️	film_category	film_category.category_id = category.category_id

SQL Coding & Output

Write INNER JOIN statements to extract the information of top 10 loyal customers

Query Editor   Query History   Scratch Pad

```
1   -- Who are our top 10 most loyal customers?
2
3   SELECT A.customer_id,
4          B.first_name,
5          B.last_name,
6          D.city,
7          E.country,
8          SUM(amount) AS total_amount_paid
9   FROM payment A
10  INNER JOIN customer B ON A.customer_id = B.customer_id
11  INNER JOIN address C ON B.address_id = C.address_id
12  INNER JOIN city D ON C.city_id = D.city_id
13  INNER JOIN country E ON D.country_ID = E.country_ID
14
15  GROUP BY A.customer_id,
16          B.first_name,
17          B.last_name,
18          E.country,
19          D.city
20  ORDER BY SUM(amount) DESC
21  LIMIT 10
22
```

last_name	city	country	Revenue
Hunt	Saint-Denis	Runion	$211.55
Seal	Cape Coral	United States	$208.58
Snyder	Santa Brbara dOeste	Brazil	$194.61
Kennedy	Apeldoorn	Netherlands	$191.62
Shaw	Molodetno	Belarus	$189.60
Collazo	Qomsheh	Iran	$183.63
Bradley	Memphis	United States	$167.67
Irby	Richmond Hill	Canada	$167.62
Dean	Tanza	Philippines	$166.61
Way	Valparai	India	$162.67

Conclusion
Insights and Recommendations

Insights

- Average movie rental duration is 5 days.
- Top 10 best sellers including Telegraph Voyage, Zorro Ark, and Wifi Turn represent 3% of total revenue.
- Top 10 worst sellers such as Duffel Apocalypse, Oklahoma Jumanji only represent 0.1 % of total revenue.
- **India, China, USA, Japan, and Mexicon** make up 35 % of Rockbuster's total customers.
- The top 5 genres (**Sports, Sci-Fi, Animation, Drama, Comedy**) make up 35 % of total revenue.

Recommendations

- At the beginning, only put 10 top sellers for online rental service to test the water.
- Increase media exposure or provide a discount to lure additional new customers for its top sellers. Discounts can help with pricing strategy improvement.
- Providing movies in **different language versions** and **recruiting global staffs** in concerning countries are required to expand Rockbuster's global markets.

Further Step

Track key metrics revealing how customers react to the rental service for a period and change marketing and pricing strategies according to the investigated result.