

sakilla assignment

1. Business Context

Sakila Entertainment is transitioning from simple record-keeping to a data-driven strategy. Our current database is purely transactional, making it difficult for the executive team to get a clear picture of performance.

Your objective is to build an **Analytical Layer**. You must transform our raw data into specialized tables and reports that help us understand actor productivity, inventory leakage, customer loyalty, and store-level revenue.

Requirements for Success:

- **Accuracy:** All financial and count-based data must be exact.
- **Professionalism:** Results must be formatted for direct presentation to stakeholders.
- **Efficiency:** Queries should be written to run quickly, avoiding unnecessary data processing.

2. The Assignment

Part 1: The Talent Performance Layer

Goal: Create a permanent record of our most productive actors for the marketing department.

1. **Infrastructure Setup:** Create a new table to store "High-Impact Actors." It should include their ID, a single column for their full name, and a timestamp of when the record was added.
2. **Data Population:** Fill this table with actors who have appeared in more than 25 films. Ensure the names are standardized to all capital letters.
3. **Data Cleanup:** Update the timestamp for all records to the current moment. Then, remove any actors whose full names start with the letter 'Z' to comply with our new regional filtering rules.

Part 2: The Revenue Leakage Audit

Goal: Identify inventory that is currently out of the system and investigate customer behavior.

4. **The Unreturned Inventory Report:** Generate a list of all rentals that do not have a recorded return date.
 - For the report, replace the missing return date with a placeholder of '2026-01-01'.

- Show the customer's email, the film title, and which store the film belongs to.

5. Market Exclusion Analysis: Provide a list of customer IDs for individuals who have **never** rented a movie from the 'Horror' category.

Part 3: Customer Loyalty Segmentation

Goal: Categorize our customer base to prepare for a promotional mailing campaign.

6. Tier Assignment: Produce a report of all customers, showing their total rental count and a "Loyalty Status" label:

- **Elite:** Over 35 rentals.
- **Premium:** Between 20 and 35 rentals.
- **Standard:** Fewer than 20 rentals.

7. Geographic Synergy: Find the names of all cities that contain both a physical rental store and at least one active customer.

Part 4: Temporal & Catalog Analytics

Goal: Understand the "When" and "What" of our business operations.

8. Rental Timing Trends: Identify the peak rental periods. Show the name of the month and the name of the day of the week, the total number of rentals for those periods, and the average cost of those rentals (limited to two decimal places).

9. The "Compact" Catalog: Create a simplified view of our film library:

- The first 10 characters of the film description.
- The film title, but with all spaces replaced by underscores.
- A "Next Review Year" column, which is exactly one year after the last time the record was updated.

Part 5: Competitive Store Analysis

Goal: Rank performance across different physical locations.

10. Store Leaderboard: For each store, identify the top 5 films based on the total revenue they have generated. The report should show the Store ID, the Film Title, the Total Revenue, and their performance position (1 through 5) relative to other films in that specific store.

