Movie Review and Recommendation System (SQL-Based)

Role: SQL Developer Intern
Duration: July 2025

Introduction:

This project focuses on designing and implementing a **relational database system** for managing movie data, user ratings, and reviews. The objective was to analyze user feedback using SQL queries and generate **rule-based movie recommendations** based on rating trends, genre popularity, and user activity.

Abstract:

The project involved creating a **normalized MySQL database schema**, inserting realistic sample data, and writing structured SQL queries and views to analyze movie ratings and user behavior. Recommendations were generated using **aggregate functions, joins, and ranking logic**, providing insights such as top-rated movies, genre-wise popularity, and active users.

Tools Used:

- MySQL (MySQL Workbench)
- SQL (DDL, DML, Views, Joins, Aggregations)

Key Features:

- Relational database design for movies, users, ratings, and reviews
- SQL queries to compute:
  - Average movie ratings
  - Top-rated and most-reviewed movies
  - Genre-wise popularity analysis
  - User activity summaries
- SQL views to simplify recommendation queries and reporting
- Export of query results for reporting and analysis

Approach:

1. Designed database tables with primary and foreign key constraints
2. Inserted sample data representing real-world movie ratings and users
3. Developed SQL queries to analyze rating patterns and popularity trends
4. Created reusable SQL views for recommendations and reports
5. Exported results for presentation and documentation

Conclusion:

This project demonstrates how **SQL can be used to build a foundation, rule-based recommendation system** using structured queries and relational data analysis. While the recommendations are rule-based, the system provides a strong base that can be extended with **machine learning models or a front-end interface** in the future.