Book Store Management System

CIS 552: Database Design (Online – Summer ’24)

Vaishnavi Paineni

Introduction

The Book Store Management System is a comprehensive solution designed to streamline and automate the operations of an online bookstore. This project leverages MongoDB, a NoSQL database, to efficiently handle the diverse and dynamic nature of book data, including information on authors, genres, and customer reviews. The flexibility of MongoDB's schema allows for seamless management of various data types and structures, ensuring that the database can evolve alongside the expanding inventory of books and user-generated content.

Planned Database-driven Application Requirements/Use-case(s)

The primary purpose of this system is to streamline inventory management, enhance the customer shopping experience, and provide robust administrative tools for managing orders and user accounts. Users can browse and search for books, place orders, and manage their personal profiles within the system. This system provides a search functionality to browse books by genre, authors or publishers. The system also supports user authentication, allowing customers to create accounts, place orders, and write reviews.

Use Cases:

- **Inventory Management:** Administrators can add, and delete book records, ensuring accurate tracking of stock levels and availability.
- **User Management:** The system allows users to create and manage their profiles, including updating personal information and viewing order history.
- **Order Management:** Customers can place orders for books, while administrators can manage orders.

Entities and Attributes:

Entity	Attributes
Book	BookID, Title, Author, Price, Genre, Published_Year, Publisher
User	UserID, Username, Email, UserType (e.g., Customer, Administrator)
Order	OrderID , UserID, OrderDate, BookID, Price, OrderStatus
Review	ReviewID, BookID, UserID, Rating, Comment, ReviewDate

The **Book** table stores details about each book available in the store.

The **User** table stores information about users, including customers and administrators.

The **Order** table records each order placed by customers.

The **Review** table captures user reviews and ratings for books.

Conclusion:

The Book Store Management System project aims to provide a robust and flexible solution for managing an online bookstore. By leveraging MongoDB's schema flexibility and the powerful querying capabilities of a NoSQL database, the system efficiently handles diverse data types and user interactions. This project not only streamlines inventory and order management but also enhances the customer experience through seamless browsing and review functionalities. The proposed system ensures scalability and adaptability to meet the growing needs of an expanding online bookstore.