ASSIGNMENT 6 FINAL PROJECT DESCRIPTION

Database Description

The Book Recommendation System database is designed to provide an efficient platform for book enthusiasts to discover, review, and manage books while connecting with a like-minded community. This database supports essential functionalities such as book cataloging, personalized recommendations, review and rating submissions, and reading list management.

The primary purpose of the database is to enable users to explore new books based on their preferences, past reading history, and reviews from other readers. The system enhances the reading experience through advanced filtering, community-driven insights, and robust recommendation algorithms.

Key Features and Use Cases:

1. **Book Cataloging:** The database stores comprehensive details about books, including their title, author, genre, publication year, and a brief synopsis. This allows users to search and filter books effortlessly.
2. **User Profiles:** Users can create profiles that capture their preferences, reading history, and favorite genres. This information forms the basis for personalized recommendations.
3. **Recommendation Engine:** By analyzing user profiles, ratings, and reviews, the database generates book suggestions tailored to individual preferences. This fosters discovery of new books and authors.
4. **Review and Rating System:** Users can submit detailed reviews and assign ratings to books. These contributions not only help other readers make informed choices but also improve recommendation accuracy.
5. **Reading List Management:** Users can create and manage reading lists, organizing books into personalized collections. Reading lists can contain multiple books, and users can mark their progress (e.g., read or unread).
6. **Community Engagement:** Users can connect with other readers, follow their activity, and gain inspiration from their reviews and book recommendations.

Entities and Relationships:

The database includes six key entities:

- **User:** Captures user-specific data such as UserID, username, preferences, and reading history. Users can create reading lists, write reviews, and receive recommendations.
- **Book:** Stores essential book information, including BookID, title, author, genre, publication year, and synopsis.

- **Review:** Links users and books through user-generated content, capturing ReviewID, Rating, and ReviewText.
- **Recommendation:** Facilitates book recommendations by associating users and books.
- **ReadingList:** Represents a user-defined collection of books, identified by ListID and associated with a UserID.
- **ReadingListBooks:** A bridge entity that resolves the many-to-many relationship between reading lists and books.

Key Relationships:

1. **Users write reviews** for books, forming a 1:N relationship between User and Review.
2. **Books are recommended** to users, creating an N:N relationship resolved via the Recommendation entity.
3. **Users create reading lists** (1:N), and each list can contain multiple books (N:N, resolved by ReadingListBooks).

Conclusion:

This database provides a comprehensive structure to meet the functional requirements of a Book Recommendation System. By integrating detailed book cataloging, personalized recommendations, user reviews, and reading list management, it creates a robust platform that fosters discovery, engagement, and community interaction for book enthusiasts.

ER DIAGRAM:

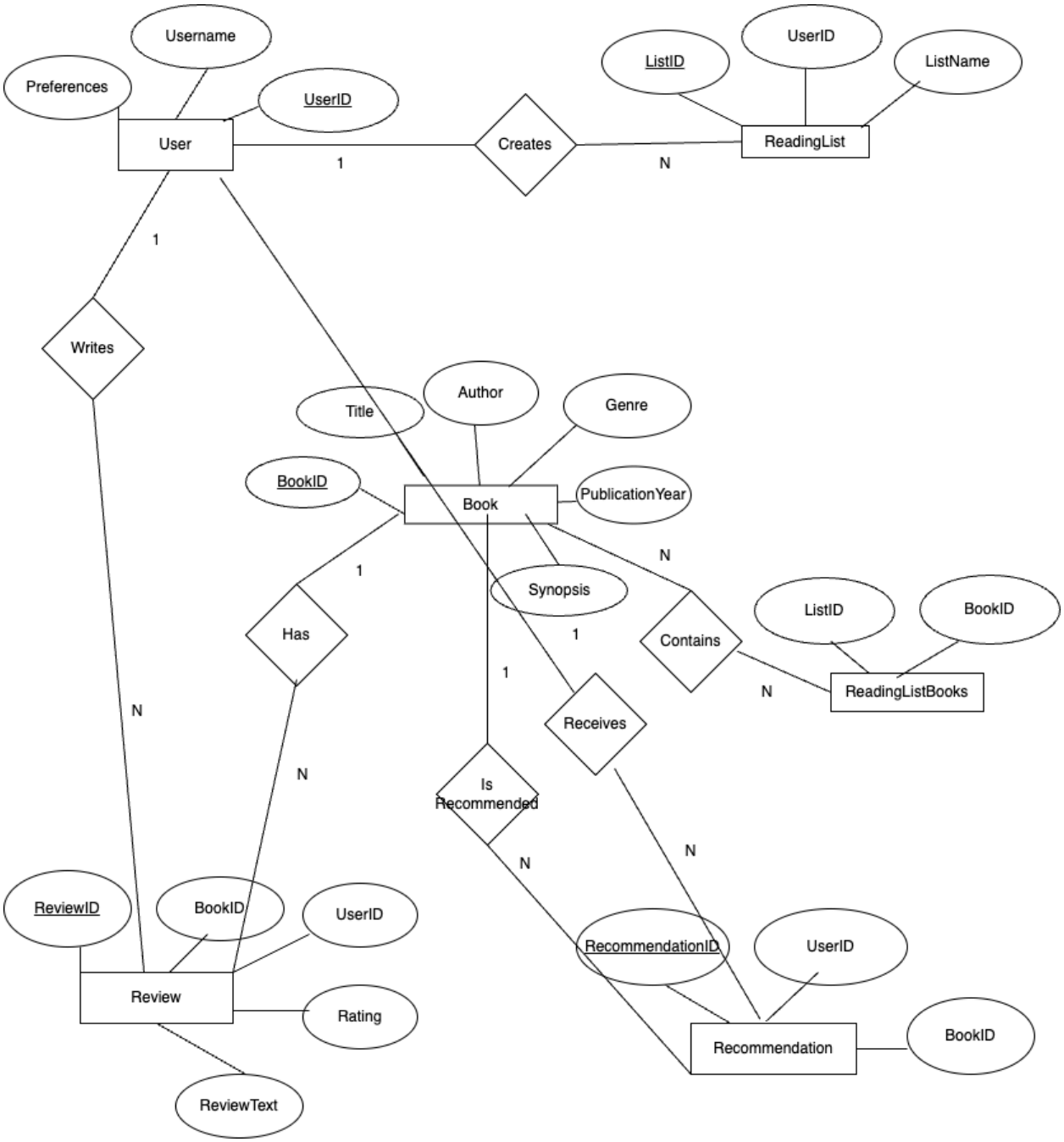

TABLE SCHEMA:

User

Preferences	Username	UserID

ReadingList

ListID	UserID	Listname

Book

BookID	Title	Author	Genre	PublicationYear	Synopsis

ReadingListBooks

ListID	BookID

Review

ReviewID	BookID	UserID	Rating	ReviewText

Recommendation

RecommendationID	UserID	BookID