Biblio Connect: Integrated Library and Literary Social Network

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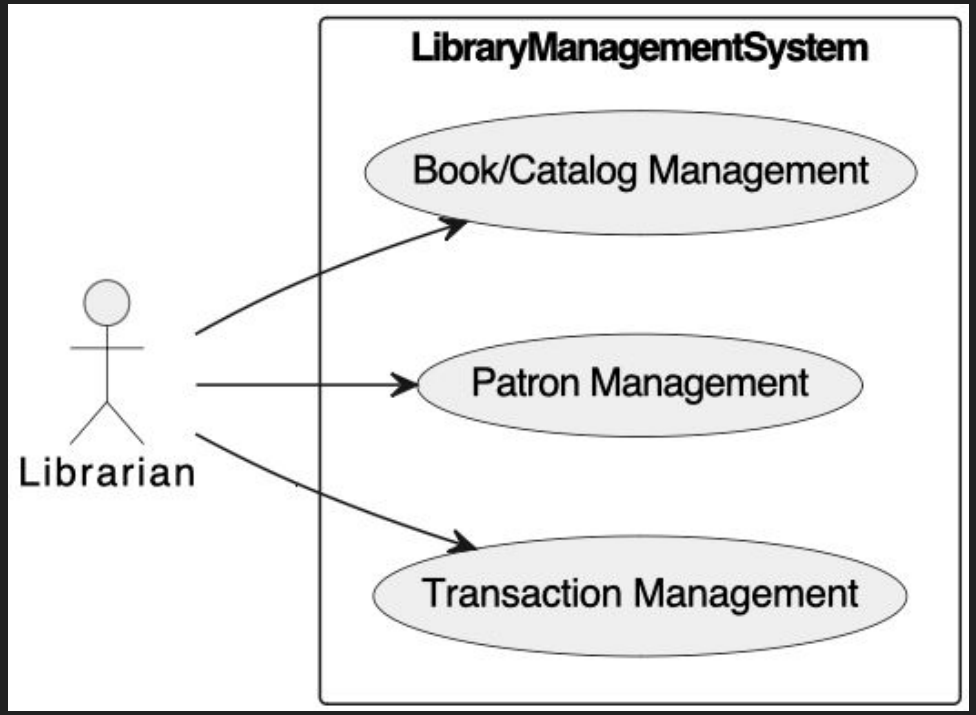
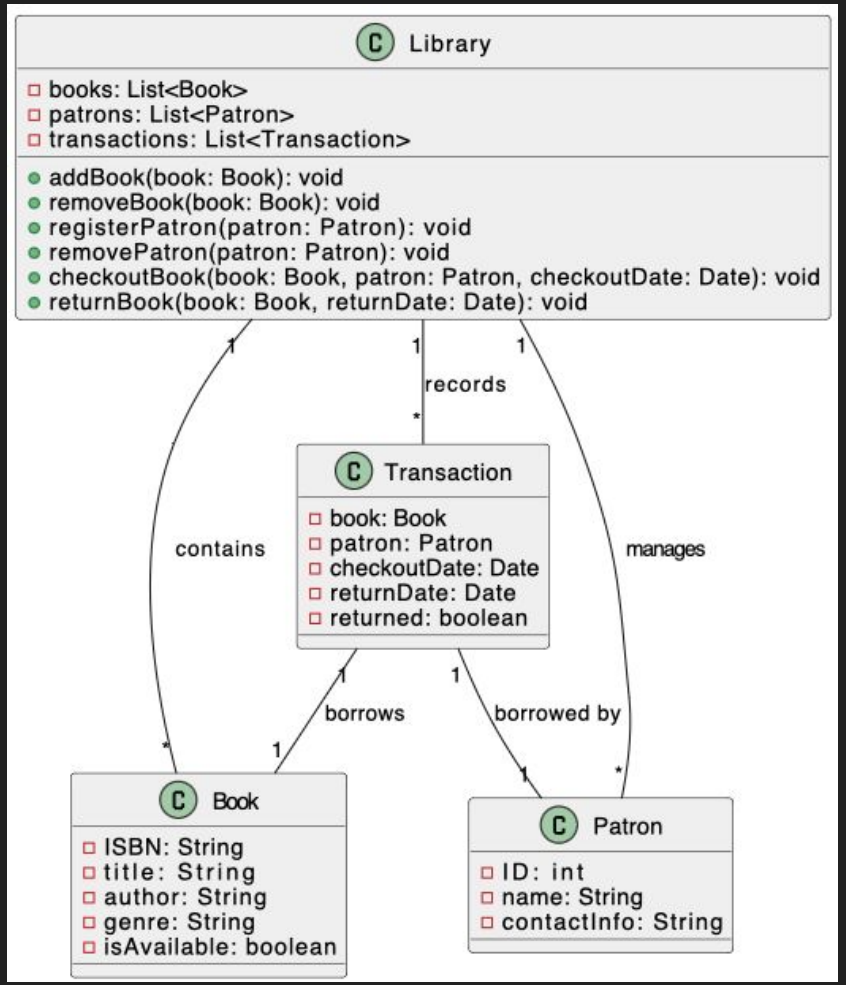
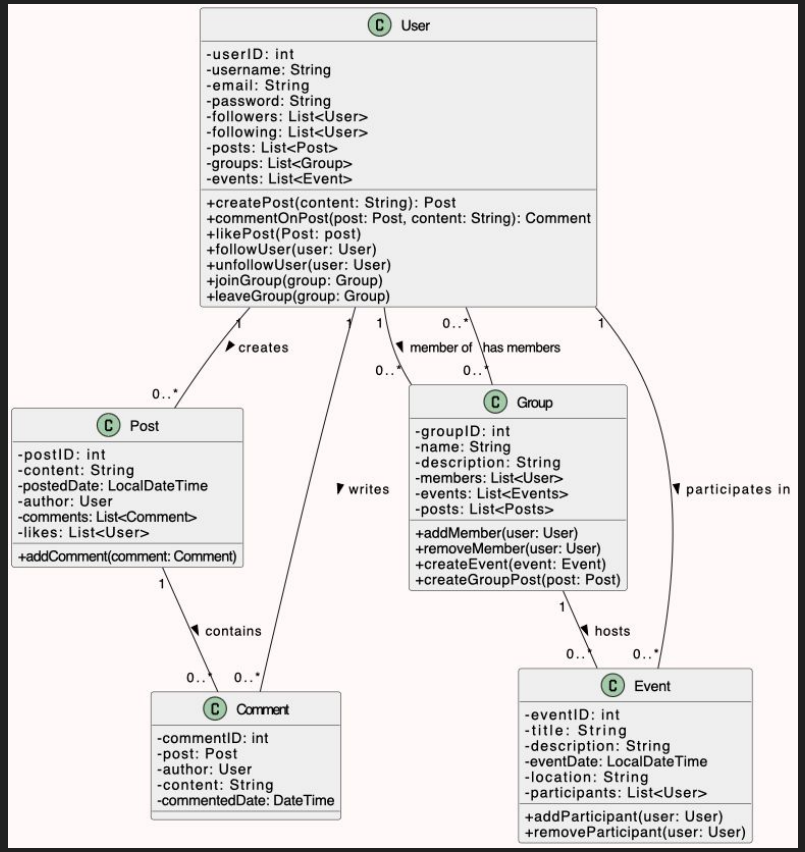
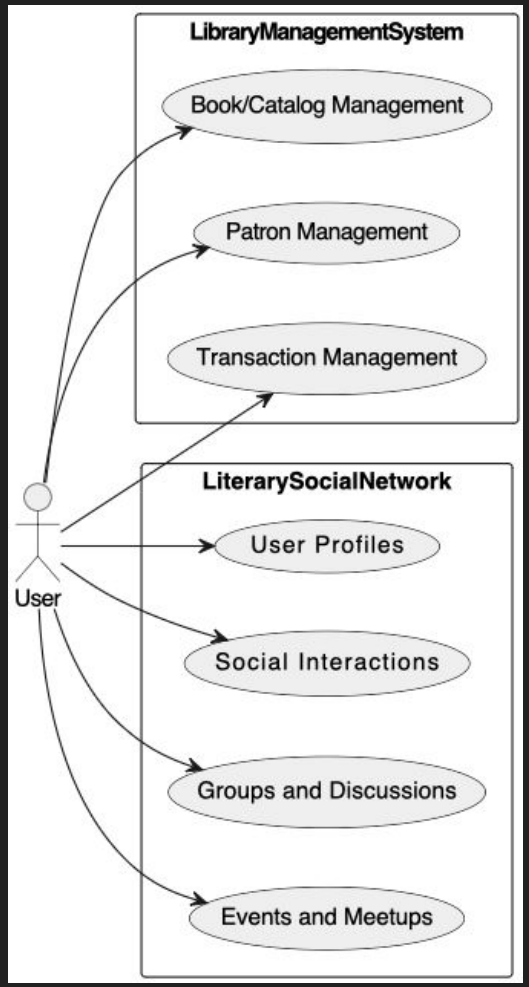
Design From Assignment 2



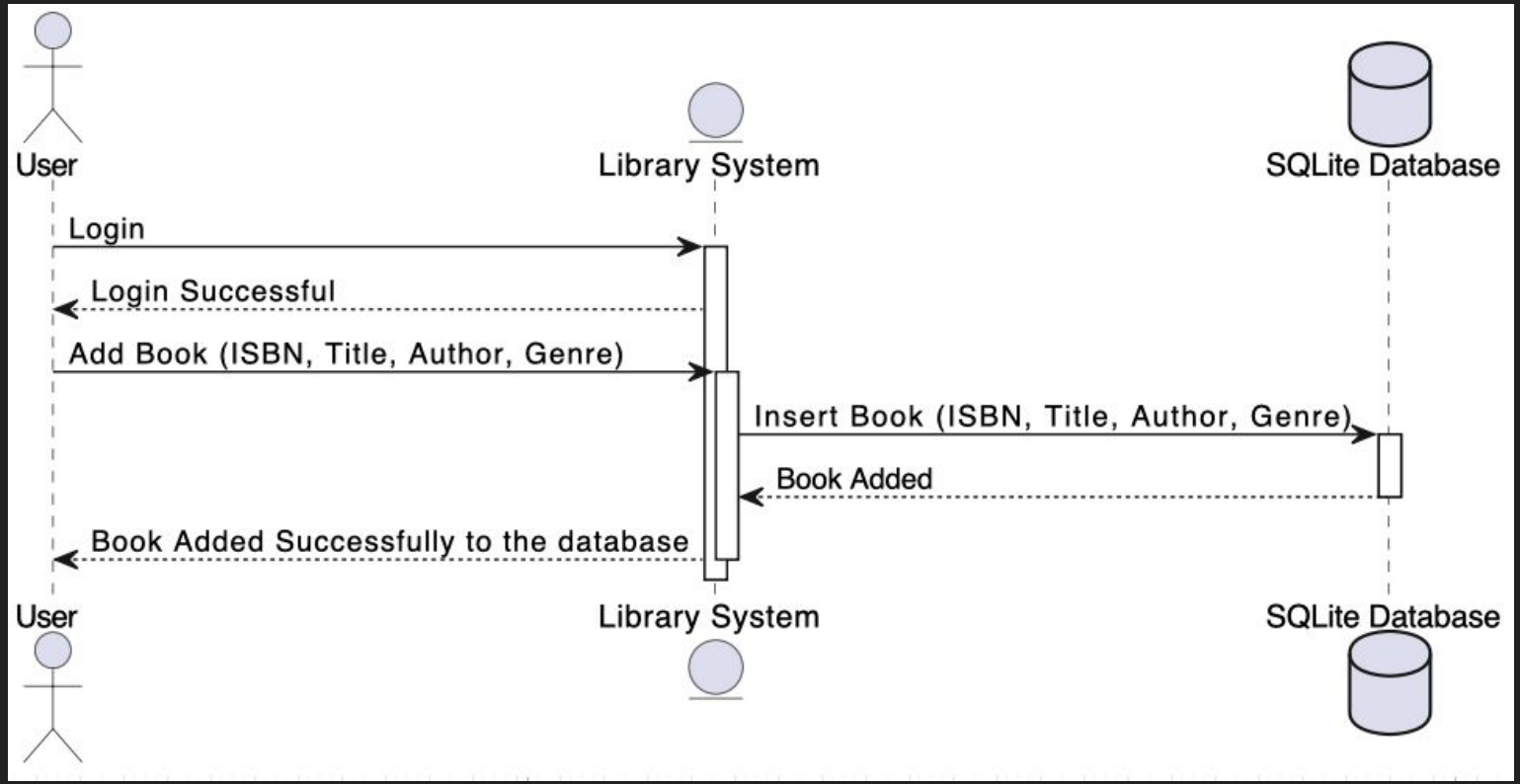


Design For Final Project





Sequence Diagram



Assignment #2 Recap: Library Management System

- Key Features:
  - Catalog management: Adding, updating, and deleting books.
  - Patron management: Adding, updating, and deleting library patrons.
  - Transaction management: Borrowing and returning books.
  - Search functionality: Finding books by title, author, or category.

- Architecture and Design Principles:
  - Utilized object-oriented principles such as encapsulation, composition, and polymorphism.
  - Followed a modular design approach for scalability and maintainability.

Literary Social Network Integration

- Rationale:
  - To enhance user engagement and community building among literary enthusiasts.
  - To provide a platform for users to share their thoughts, recommendations, and insights on books and literary topics.

- Benefits:
  - Fosters a sense of community among library patrons.
  - Encourages interaction and discussion around literary interests.
  - Provides opportunities for users to discover new books and authors through social connections.

Features Added

- User Registration and Authentication:
  - Allows users to create accounts and log in securely.
- Posting Messages:
  - Enables users to share thoughts, book reviews, and literary recommendations.
- Commenting on Posts:
  - Facilitates discussions and interactions among users.
- Liking Posts:
  - Provides a way for users to show appreciation for content shared by others.
- Joining Groups:
  - Allows users to connect with like-minded individuals and participate in group discussions.
- Posting in Groups:
  - Enables users to share content specifically within group contexts.
- Managing Group Events:
  - Lets users organize and participate in literary events, such as book clubs or author meetups.

Experience of Extending the System

- Discussion of Experience:
  - Extending the system from a library management solution to include social networking features was an ambitious undertaking.
  - It involved not only technical challenges but also considerations regarding user experience and system scalability.
  - The process required close collaboration between all of us to ensure that the integration was smooth and seamless.
  - Overall, the experience provided valuable insights into the complexities of software engineering and the importance of adaptability and innovation in meeting evolving user needs.

Experience of Extending the System

- Challenges Encountered:
  - Ensuring seamless integration of social networking features with existing functionalities.
  - Addressing performance considerations, especially during concurrent user interactions.
  - Testing and debugging the extended system to ensure reliability and stability.

- Lessons Learned:
  - Importance of modular design and clear separation of concerns for extensibility.
  - Need for robust testing strategies to identify and address potential issues early in the development process.

What we learned?

- Our library management system uses an SQLite database to handle information about books and users. SQLite is very simple to handle, it’s a file-based database that doesn’t need a separate server, making it quick to set up.

- We created clear layouts (schemas) for books and users to make sure all relationships between different target are connect correctly, which helps us keep our data accurate and organized.

- We connected to the SQLite database using the SQLite JDBC driver. This involved adding the driver to our Java project and using the Connection object to interact with the database.

What we learned?

- During the design phase, our team learned the importance of a robust architectural plan. We focused on creating a scalable and maintainable system design, using UML diagrams to help us visualize relationships and functions, ensuring the coherence and functionality of the design.
- For project management, we first go through the tasks that we need to complete during the project and created an object oriented design, also create a clear guide on what function we need to complete. Then we assign task to each individual, and set up a github repository. while we are working on the project, we meet every weekend to keep on track of our timeline. Also keep ontrack what task are complete and what are missing. If someone run into a problem,then we group up and discuss how to solve it.

Demonstration

- Share screen