

# Application Demo

## BIBLIOSHELF

A library management app to elevate your library experience with seamless organization and effortless book discovery.

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# Things I will be talking about

- Problem Statement
- Implemented Solution
- Data model
- Quick demo
- My Takeaways

# Problem Statement

- The current library system faces challenges with manual processes, resulting in errors, delays, and difficulties in tracking book availability. There is a need for improved fine calculation, real-time book updates, and member account management for borrowing.
  
- This application:
  - ❑ Streamlines Issuing/Returning of Books
  - ❑ Automates issuing of books. Books can also be issued manually by staff.
    - Automates Book Availability
  - ❑ Member Account Management
    - Enhances Fine Calculations
    - Notifications

# User Personas

There are 2 types of Users:

## ➤ Staff

- Manages the book inventory, adding new books and updating existing entries.
- Approves/Rejects Book Borrowing requests.
- Issues books to members and receives returns.
- Manages the status of ebooks and ensures their availability.
- Sends notifications to members for overdue fines.

## ➤ Member

- Explores books and ebooks and checks their availability.
- Requests for books and ebooks and returns them.
- Receives notifications for overdue fines and pays them.

# ACL

Made use of ACLs to make sure:

➤ Member

- Has access only to Books and Ebooks tables.
- Able to request for books and ebooks.

➤ Staff

- Has access to all the tables but Staff Table which is managed by the Admin.
- Manages library workflow and book availability.

➤ Admin has all the Staff rights and additional rights, mainly deletion of records for Books and Library Members.

# Components Used

- Extended the already existing User Table:
  - To create Member and Staff table
- Client Scripts:
  - To Auto-populate field values in Books, Ebooks and Issued Item Table from Items table (which contains basic info like Title, Author, etc).
  - Auto-updating the necessary fields like No. of Copies Available and No. of Books Allowed as soon as a book is issued.
  - Setting field values and making fields read only: Set Item type to 'Book' or 'Ebook' accordingly.
- Script Includes:
  - Fine Calculation logic
  - Utility function for field validations (for reusability)
  - Helper functions for client scripts and business rules
- UI Policies:
  - Managing the visibility of fields: Hide Return Date when Item type is 'Ebook'.



➤ UI Actions:

- Form banner Button to request for a Book/Ebook.
- This button triggers the flow for book borrowing request.

➤ Business Rules:

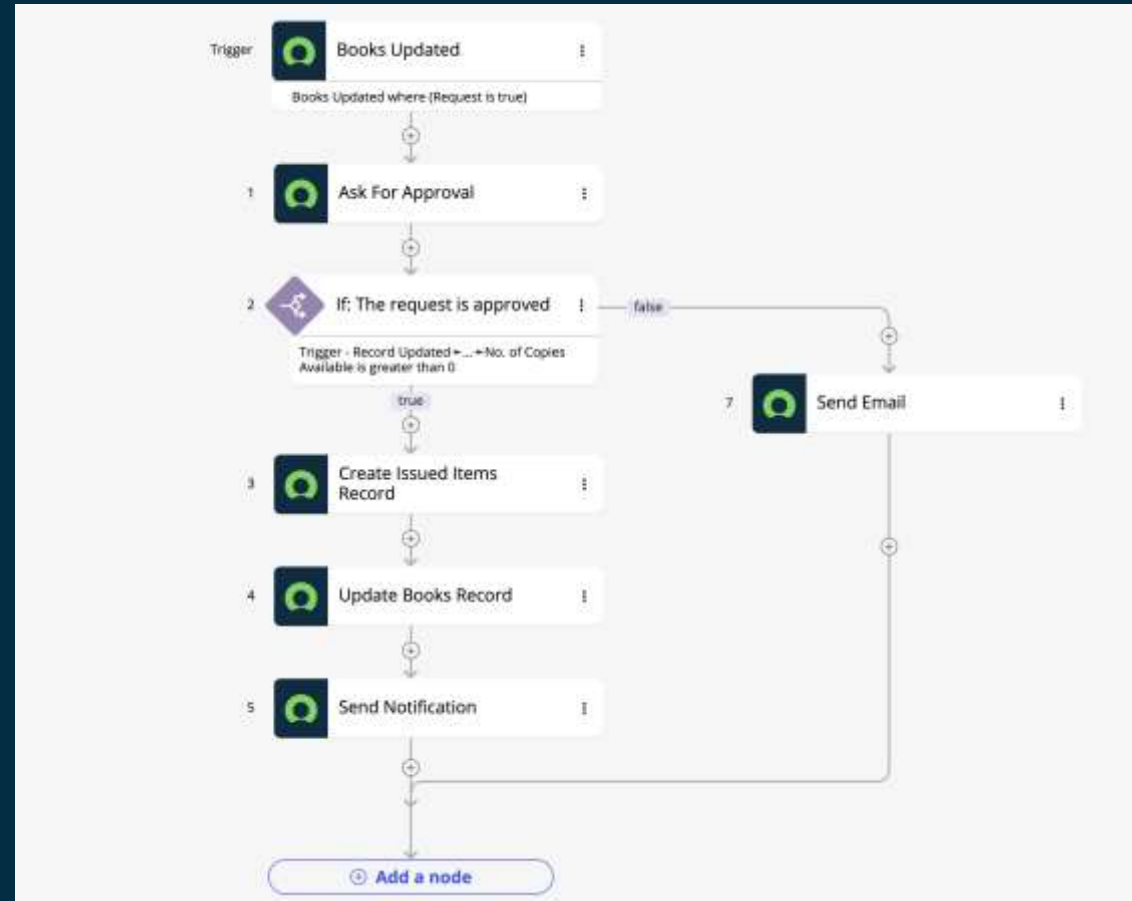
- Fine calculator for an Issued Item till it is returned.
- Fine calculator for a particular member based on the books issued.
- Field validations based on the fields present.

➤ Flow Designer:

- For sending Notification to the member whenever a book is issued.
- for Book Borrowing Request to Library.



# Workflow



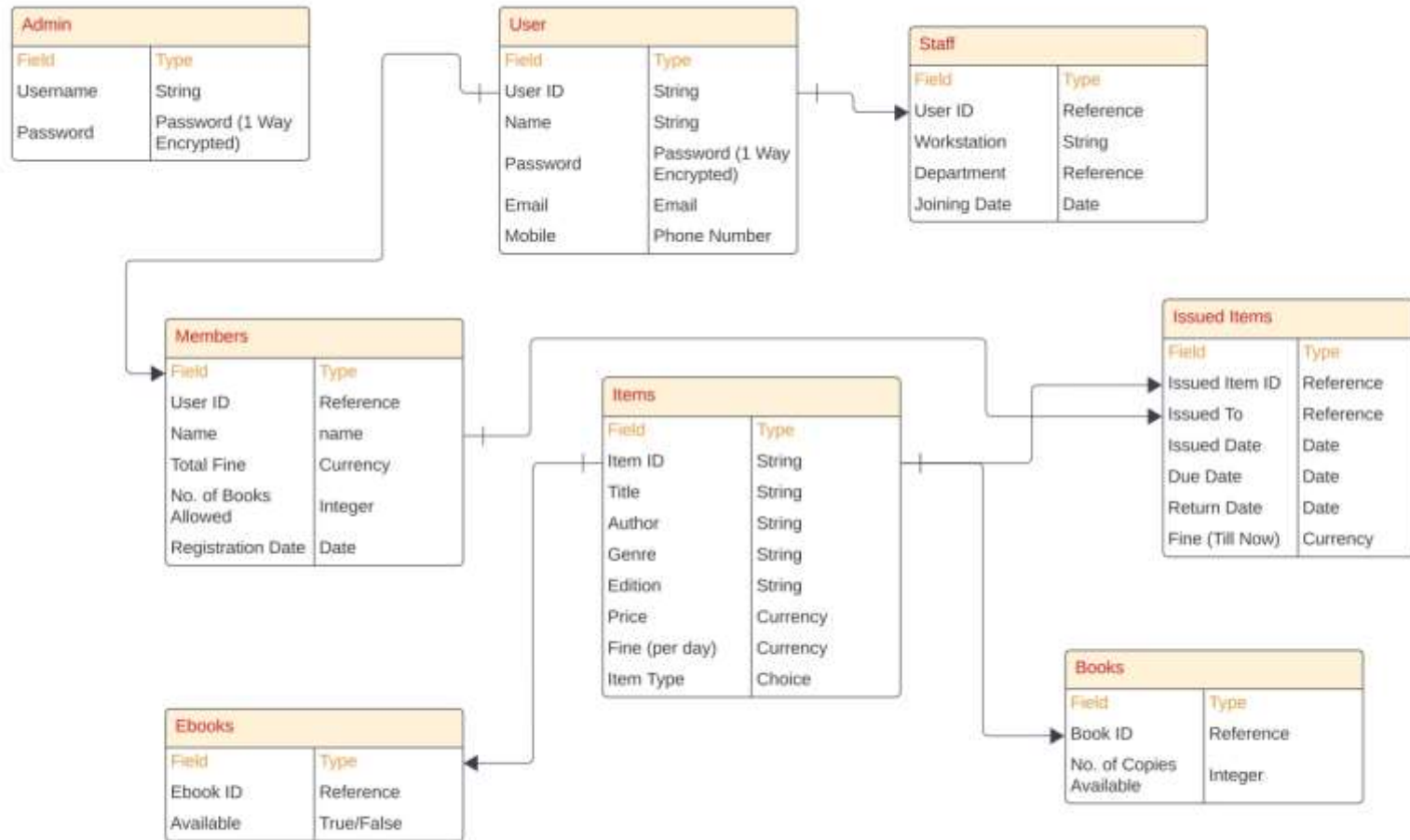
Book Borrowing Request  
Notification





# Data Model





# Demo

# Advanced Features

This library management app can be expanded with:

- **Search History:** Track and display books searched in the past 30 days.
- **Recommendation System:** Implement machine learning for personalized book recommendations.
- **Subscription Model:** Introduce a subscription-based service for premium features or enhanced access.
- **Scheduled Notifications:** Set up scheduled jobs for weekly notifications, keeping users engaged.
- **Library Stats:** Generate and present weekly, monthly, and yearly reports for insightful analytics.

# My Takeaways



# Thank you, Questions?