



TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
THAPATHALI CAMPUS

A Proposal
On
Library Management System

Submitted By:

Aashish Kusatha (THA078BCT002)
Ashish Parajuli (THA078BCT010)
Kamal Shrestha (THA078BCT018)

Submitted to:

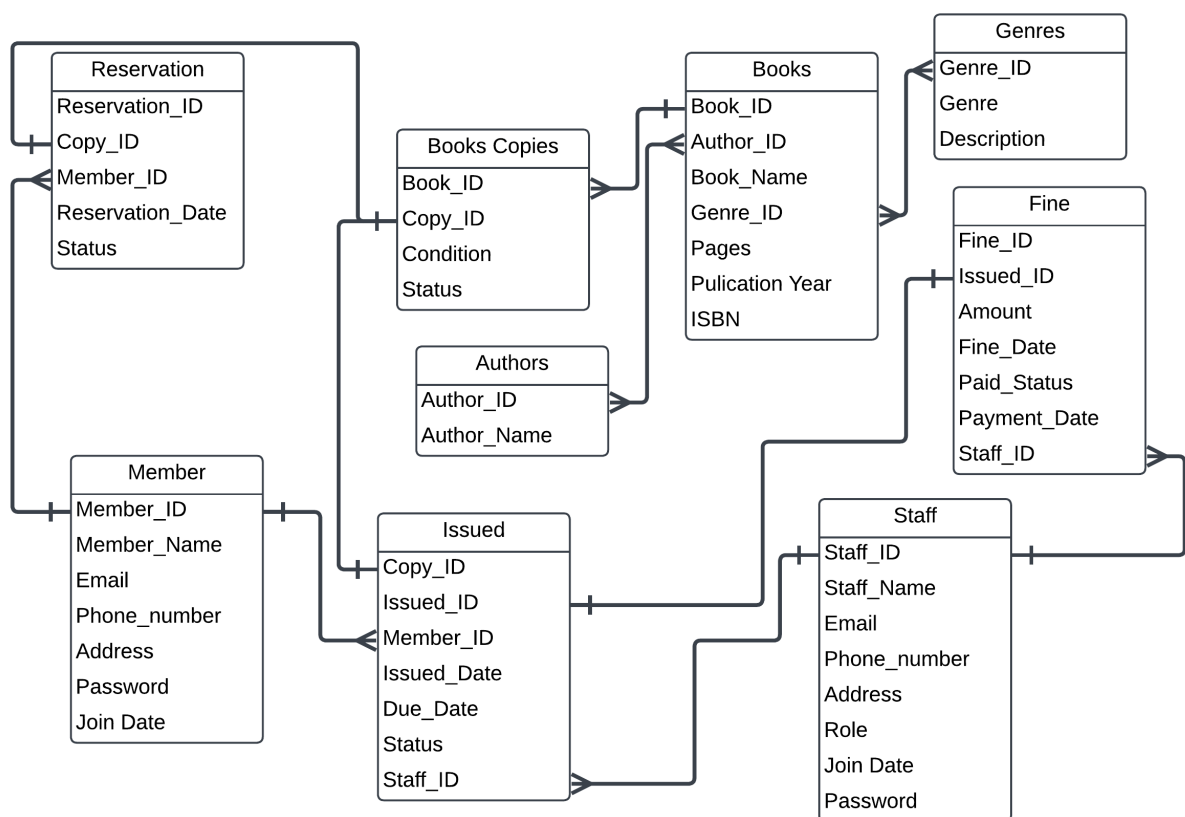
Rajad Shakya
Department of Electronics and Computer Engineering
Thapathali Campus
Kathmandu, Nepal

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1. Objective

- To design a well-structured database in PostgreSQL to efficiently store and manage information about books, users, transactions, and library operations.
- To ensure data integrity and implement relationships between tables to accurately track borrowing, returns, and user activity while minimizing redundancy.

2. ER Diagram



ER DIAGRAM OF LIBRARY MANAGEMENT SYSTEM

3. Tech Stack

- **Frontend:** HTML, CSS, JavaScript.
- **Backend:** Python with Flask.
- **Database:** PostgreSQL.

4. Features & Pages

1. Features:

- User authentication (login/logout).
- Search functionality for books.
- Book reservation and borrowing management.
- Role-based access control (User and Librarian).
- Report generation for overdue fines.

2. Pages:

- **Home Page:** Overview and navigation.
- **User Dashboard:** Displays user-specific information.
- **Admin Dashboard:** Allows librarians to manage the catalog and transactions.
- **Search Page:** Enables users to search for books using filters.
- **Book Details Page:** Provides detailed book information.

5. Expected Outcome

➤ **Efficient Library Management**

- Easy processes to manage books, members, reservations, and issued books.
- Removes manual errors in record-keeping and fine calculations.

➤ **User-Friendly System**

- Simple and easy-to-use screens for members and administrators.
- Quick access to book availability, member details, and issued book records.

➤ **Better Member Experience**

- Members can find books, reserve them, and check issued books online.
- Alerts for overdue books and fines make things clear and simple.

➤ **Improved Administrative Control**

- Easy tools to add or update books, manage members, and track issued books.
- Detailed reports for overdue books, fines, and book inventory.