

## **PROJECT PART-1: LIBRARY MANAGEMENT SYSTEM**

**Books:** This entity represents the collection of books available in the library. It includes essential details such as the International Standard Book Number (ISBN) to uniquely identify each book, the book title, the author(s) who wrote the book, the genre or category of the book, and the publication date.

**Authors:** This entity stores information about the authors who have written the books in the library. It includes attributes such as author id, the author's full name, nationality, and a brief biography to provide insights into the author's background and writing style.

**Publishers:** This entity represents the publishing houses or companies responsible for releasing the books. It includes attributes like publisher id, the publisher's name, location, and contact information to establish communication and collaboration.

**Members:** This entity represents individuals who are registered members of the library and have borrowing privileges. It includes details such as a unique identifier for each member, the member's full name, contact information, and membership status (e.g., active, suspended, expired).

**Librarians:** This entity stores information about the librarians or staff members working in the library. It includes attributes like a unique identifier for each librarian, the librarian's full name, contact information, and their job role within the library.

**Book Copies:** This entity tracks individual physical copies of books available in the library. It includes attributes like a unique identifier for each book copy, and its current availability status (e.g., available, on loan, reserved).

**Categories:** This entity represents the different categories or genres in which books are classified. It includes attributes such as the category id, category name and a brief description of the category's content.

**Language:** This entity stores information about the languages in which books are available in the library. It includes attributes like the language name and any relevant notes or details about the language.

**Borrowed\_Books\_Fines:** This entity tracks the fines incurred by members for overdue books. It includes attributes such as the fine amount, payment status. The fine is identified by the unique identifier of the borrowed book copy.

**Book\_Reviews:** This entity stores reviews and ratings given by members for books they have read. It includes attributes like the review text, rating. Each review is identified by the unique identifier of the book.

**Library\_Branches:** This entity represents different branches or locations of the library. It includes attributes like the branch-id, branch name, address, contact information, and any other relevant details about each branch.

**Library\_Events:** This entity stores information about events and activities organized by the library. It includes attributes like the event id, event name, description, date, location, and any other relevant details.

**Attendees:** This entity keeps the records of attendees of events as attendee id, fees paid, NID number, qualification etc.

**Library\_Subscriptions:** This entity stores information about any subscription services offered by the library, such as e-books, digital resources, or magazines. It includes attributes like the subscription name, type, and availability. Each subscription is identified by the member id.

**Library\_Hours:** This entity tracks the operating hours of the library for different days of the week. It includes attributes like the date, day, opening time, and closing time for each day of the year.

**Library\_Holidays:** This entity stores information about holidays when the library remains closed. It includes attributes like the holiday date and any relevant notes or details about the holiday.

**Thesis:** This entity stores information about thesis of students. It has a thesis id, title and date of completions

**Supervisor:** This entity stores information about supervisors of the thesis. A supervisor is a teacher. Information about supervisor is id, name, department name and designation.

**eResources:** There are many e-resources at the library e.g., PC, Laptop, CD etc. those are used inside the library. Each e-resources has an id, name, type, location.

**Proceedings:** There are many proceedings in the library for different conferences. Each proceeding has an id, name, conference, venue.

**Book Issuer-receiver:** Book Issuer-receiver are employees of library responsible for issue and receive of books. They have id, name, designation and qualification.

**Journal:** A journal has an id, title, volume number, year.

**Shelves:** Each shelf has an id, location and type.

**Seminar:** Seminars have title, date, start time, end time etc.

**Speakers:** name, speech title, summary, qualification, specialization etc.

