**📄 Internship Task 1: Library Database – Schema Design**

### 1. **Title**

**Library Database: Schema Design and ER Diagram**

### 2. **Objective**

To design a well-structured relational database schema for a library management system using SQL. This includes creating appropriate tables, defining relationships, and ensuring data integrity through the use of primary and foreign keys.

### 3. **Tools Used**

* MySQL Workbench (or pgAdmin / SQLiteStudio)
* dbdiagram.io (for ER diagram)
* GitHub (for task submission)

### 4. **ER Diagram**

(Inserted ER diagram screenshot here after generating it from [*https://dbdiagram.io*](https://dbdiagram.io))

### 5. **SQL Schema Code**

Table books {

book\_id int [pk, increment]

title varchar(200)

genre varchar(100)

author varchar(100)

shelf\_number varchar(20)

is\_available boolean

}

Table members {

member\_id int [pk, increment]

name varchar(100)

email varchar(100)

phone varchar(15)

}

Table loans {

loan\_id int [pk, increment]

member\_id int [ref: > members.member\_id]

book\_id int [ref: > books.book\_id]

issue\_date date

due\_date date

}

### 6. **Learning Outcome**

Understood how to analyze a domain (library) and identify key entities  
 Learned to define relationships using primary and foreign keys  
 Practiced schema design with real-world logic  
Gained confidence in using tools like MySQL and dbdiagram.io  
 Improved documentation and debugging skills