

Consider a hypothetical database for a library management system. Design and implement the following database schema:

**Tables:**

**1. Books:**

- book\_id (Primary Key)
- title
- author
- publication\_year
- genre
- available\_copies

**2. Members:**

- member\_id (Primary Key)
- name
- address
- phone\_number
- membership\_start\_date
- membership\_end\_date

**3. Borrowed\_Books:**

- borrow\_id (Primary Key)
- book\_id (Foreign Key to Books.book\_id)
- member\_id (Foreign Key to Members.member\_id)
- borrow\_date
- due\_date
- return\_date

**Tasks:**

**1. DDL Operations:**

- Create the above tables with appropriate data types and constraints (primary keys, foreign keys, not null, etc.).
- Alter the Books table to add a new column publisher.
- Drop the Borrowed\_Books table.

## 2. DML Operations:

- Insert 5 records into the Books table.
- Insert 3 records into the Members table.
- Insert 4 records into the Borrowed\_Books table.
- Update the publication\_year of a specific book.
- Delete a member from the Members table.

## 3. Cascading Constraints:

- Implement a cascading delete constraint on the Borrowed\_Books table so that when a book is deleted, all related borrow records are also deleted automatically.
- Demonstrate the effect of this constraint by deleting a book.

### Submission:

Submit a **.sql** file containing the SQL statements for the above tasks. Also, include a brief explanation of each step and the output of each query On **WhatsApp group** also mention your name.