



Practice Assignment -MySQL Constraints

MySQL Practice Assignment: Constraints

Objective: Create a database for a small library management system and apply MySQL constraints to enforce data integrity.

Instructions:

- Create a MySQL database named `library_db`.
 - Design tables with appropriate constraints (`PRIMARY KEY`, `NOT NULL`, `DEFAULT`, `UNIQUE`, `CHECK`).
 - Insert sample data to test the constraints.
 - Write queries to demonstrate how constraints enforce data integrity.
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Assignment Tasks

Task 1: Create the Database and Tables

Create a database named `library_db` and design the following tables with the specified constraints:

Table: members

- `member_id`: Integer, primary key, auto-incremented.
- `first_name`: VARCHAR(50), cannot be null.
- `email`: VARCHAR(100), must be unique and cannot be null.
- `age`: Integer, must be between 12 and 100 (use CHECK).
- `membership_date`: DATE, defaults to the current date.

Table: books

- book_id: Integer, primary key, auto-incremented.
- title: VARCHAR(200), cannot be null.
- isbn: VARCHAR(13), must be unique and cannot be null.
- publication_year: Integer, must be between 1800 and 2025 (use CHECK).
- available_copies: Integer, defaults to 1, cannot be null.

Table: borrow_records

- borrow_id: Integer, primary key, auto-incremented.
- member_id: Integer, foreign key referencing members(member_id), cannot be null.
- book_id: Integer, foreign key referencing books(book_id), cannot be null.
- borrow_date: DATE, defaults to the current date, cannot be null.
- return_date: DATE, nullable (as books may not yet be returned).

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