



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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