**MySQL Bookstore Project**

**Problem Statement**

The provided database schema for a books table is a foundational component of a retail bookstore's backend system. The challenge is to **leverage this schema to build a robust and functional MySQL project that provides valuable insights into the bookstore's inventory and sales data**. The primary problems to solve are data retrieval, analysis, and reporting to support business operations and decision-making.

The current schema, while useful for storing book details, lacks the functionality for deeper analysis. The raw data needs to be processed to answer key business questions, such as:

* Which books are bestsellers? 💰
* How does pricing affect sales and availability?
* Are certain categories more popular than others? 📊
* How do customer reviews correlate with a book's price and availability?

The project needs to address these questions by **designing and executing a series of MySQL queries** that transform the raw data into actionable intelligence. The project will also need to handle data integrity and consistency, ensuring the data is accurate for all reporting purposes.

**Expected Tasks**

The following tasks are designed to be a comprehensive MySQL project, building on the provided books table schema:

**1. Data Retrieval and Filtering**

* **Task:** Write queries to retrieve specific sets of data based on business requirements.
* **Deliverables:**
  + A query to find all books with a price\_incl\_tax greater than a certain value (e.g., $50).
  + A query to list all books in a specific category, sorted by their price\_excl\_tax in descending order.
  + A query to find books with 4 or more stars and an availability of 10 or less.

**2. Data Aggregation and Analysis**

* **Task:** Use aggregation functions (COUNT, SUM, AVG, MAX, MIN) and GROUP BY to analyze the dataset.
* **Deliverables:**
  + A query to find the total number of books and the average price for each category.
  + A query to identify the top 5 most-reviewed books.
  + A query to calculate the average stars rating for books in each category.

**3. Complex Queries and Reporting**

* **Task:** Create more complex queries using subqueries and CASE statements to generate business reports.
* **Deliverables:**
  + A query to create a report showing book titles, price\_incl\_tax, and a calculated column named price\_level with values like 'Expensive' (if price > 40), 'Moderate' (if price between 20 and 40), and 'Affordable' (if price < 20).
  + A query to find the book with the highest price within each category.
  + A query to calculate the percentage of books in each category out of the total number of books.

**4. Data Maintenance and Updates**

* **Task:** Demonstrate an understanding of data modification.
* **Deliverables:**
  + An UPDATE statement to change the tax and price\_incl\_tax for a specific book.
  + A DELETE statement to remove a book that is no longer in stock (availability = 0).

**5. Database Design and Schema Improvements**

* **Task:** Propose and justify at least two improvements to the current schema for better functionality or normalization.
* **Deliverable:** A brief explanation of the proposed changes (e.g., adding a publisher table and a foreign key) and a CREATE TABLE statement for the new schema.