Case Study 5: Library Management System

Database Schema:

- 1. Books table:
 - book_id (Primary Key)
 - title
 - author
 - genre
 - publication year
 - available copies
- 2. Members table:
 - member id (Primary Key)
 - first name
 - last name
 - email
 - phone
- 3. Loans table:
 - loan id (Primary Key)
 - member id (Foreign Key referencing Members.member_id)
 - book id (Foreign Key referencing Books.book_id)
 - loan date
 - due date
 - returned (Boolean indicating if the book has been returned)
- 1. Retrieve all books in the "Mystery" genre.
- 2. List all members who have borrowed books currently overdue.
- 3. Calculate the total number of books borrowed by each member.
- 4. Update the loan status for a specific book when it is returned.
- 5. Identify books with low availability (less than 5 copies left).
- 6. Retrieve the names of members who have borrowed books authored by a specific author.
- 7. List the most borrowed books along with the number of times they have been borrowed.
- 8. Find the member who has the highest number of overdue books.
- 9. Retrieve the total number of active loans (books not yet returned).
- 10. Calculate the average loan duration (in days) for all returned books.