FINAL PROJECT

Server Side Internet Programming

Topic:

Final Project Laravel - Bookshop Web Application

LECTURER:

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1. INTRODUCTION

Bookshop is a web-based bookstore management system developed using the Laravel framework. This application allows users to add, manage, and purchase books. It was created as a final project for the Server Side Internet Programming course.

2. OBJECTIVES

- Apply CRUD concepts (Create, Read, Update, Delete)
- Utilize the Laravel framework for PHP web application development
- Manage data related to books, authors, categories, and purchases
- Implement additional features such as image upload and book stock management

3. MAIN FEATURES

- **Book Management**: Add, edit, delete, and view books.
- **Author Management**: CRUD operations for book authors.
- **Category Management**: CRUD operations for book categories.
- **Image Upload**: Upload book covers and display them in the book list.
- **Book Stock (Quantity)**: Add stock when inputting/editing books, and automatically reduce it upon purchase.
- **Purchase Transaction**: Book purchase feature with buyer name, email, and quantity input.

4. DATABASE STRUCTURE

- **authors**: id, name, bio
- **categories**: id, name, description
- **books**: id, title, description, price, quantity, published_at, image, author_id (FK), category_id (FK)
- **orders**: id, book_id (FK), buyer_name, buyer_email, quantity, total_price

5. TECHNOLOGIES USED

- **Framework**: Laravel 10
- **Programming Language**: PHP 8
- **Database**: MySQL
- **Frontend**: Blade + Bootstrap 5

6. CRUD IMPLEMENTATION

- All entities (books, authors, categories, orders) are managed through Laravel controllers and resource routes.
- Form validation is handled using `Request::validate()`.
- Methods `store()`, `update()`, and `destroy()` are used for data manipulation.
- Tables are rendered using Blade and styled with Bootstrap.

7. ADDITIONAL FEATURES

- Upload book images to `storage/app/public` and display via `public/storage`.
- Stock is checked during purchase; if insufficient, an error message is shown.
- The "Buy" button is only shown if the book is in stock.

8. APPLICATION UI

The application uses a responsive layout styled with Bootstrap. The navigation includes pages for Books, Authors, and Categories.

9. CONCLUSION

This application meets all the criteria for the final project, including CRUD implementation, foreign key relationships, image upload, stock validation, and use of the Laravel framework. With the addition of purchase functionality, this system can serve as a foundational online bookstore management application.

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