

Full Stack Development (MERN) - Book Store Application Documentation

1. Introduction

Project Title: Book Store Application (MERN Stack)

Team Members: Suganth K (Developer)

2. Project Overview

Purpose

The purpose of this Book Store application is to provide a complete online platform for users, sellers, and administrators to manage books, orders, accounts, and listings.

Features

- User registration, login, and authentication
 - Users can browse products, place orders, view wishlist, and manage their profiles
 - Sellers can add books, manage products, track orders
 - Admin can manage users, sellers, and books
 - Image upload for books
 - Secure API with JWT authentication
-

3. Architecture

Frontend (React + Vite)

- Built with React (component-based architecture)
- Organized into separate modules for Admin, Seller, and User
- Uses Axios for API calls
- Routing handled by React Router

Backend (Node.js + Express.js)

- REST API architecture
- Separated into Controllers, Routes, Middleware, and Models
- Handles authentication, book operations, user/seller/admin actions

Database (MongoDB + Mongoose)

- Collections:

- Admin
 - Seller
 - Users
 - Books
 - Orders
 - Wishlist
- Mongoose schemas for validation and structure
-

4. Setup Instructions

Prerequisites

- Node.js
- MongoDB (local or cloud)
- VS Code

Installation

Backend

```
cd Backend  
npm install
```

Set environment variables in .env:

```
MONGO_URL=your_mongo_url  
JWT_SECRET=your_secret
```

Frontend

```
cd Frontend  
npm install
```

5. Folder Structure

Backend Folder Structure

```
Backend/  
  └── config/  
      └── connect.js  
  └── controllers/  
      ├── AdminControllers.js  
      ├── SellerControllers.js  
      └── UsersController.js  
  └── middlewares/  
      ├── authMiddleware.js  
      └── upload.js  
  └── models/
```

```
|- Admin/
  |- AdminSchema.js
|- Seller/
  |- BookSchema.js
  |- SellerSchema.js
|- Users/
  |- MyOrders.js
  |- UserSchema.js
  |- Wishlist.js
routes/
  |- adminRoutes.js
  |- sellerRoutes.js
  |- userRoutes.js
uploads/
node_modules/
```

Frontend Folder Structure

```
Frontend/
  src/
    Admin/
      Ahome.jsx
      Alogin.jsx
      Anavbar.jsx
      Asignup.jsx
      items.jsx
      Seller.jsx
      Users.jsx
    Seller/
      Addbook.jsx
      Book.jsx
      List.css
      MyProducts.jsx
      Orders.jsx
      Shome.jsx
      Slogin.jsx
      Snavbar.jsx
      Ssignup.jsx
    User/
      Login.jsx
      MyOrders.jsx
      OrderItem.jsx
      Products.jsx
      Signup.jsx
      Wishlist.jsx
      Uhome.jsx
      Uitem.jsx
      Unavbar.jsx
    Components/
      Footer.jsx
```

```
|- assets/
|- App.jsx
|- App.css
|- index.css
|- main.jsx
|-- public/
|-- package.json
|-- vite.config.js
|-- node_modules/
```

6. Running the Application

Backend

```
cd Backend
npm start
```

Frontend

```
cd Frontend
npm run dev
```

7. API Documentation

(Examples — actual details can be added later) **### User Routes** - POST /user/signup
- POST /user/login - GET /user/products - POST /user/order

Seller Routes

- POST /seller/addbook
- GET /seller/products
- GET /seller/orders

Admin Routes

- GET /admin/users
 - GET /admin/sellers
 - DELETE /admin/delete-user/:id
-

8. Authentication

- JWT-based authentication
 - Middleware authMiddleware.js protects private routes
 - Separate login for Admin, Seller, and User
-

9. User Interface

- React components for Admin, Seller, and User
 - Clean navigation using Navbars
 - Book listing pages, product details, cart, wishlist, etc.
-

10. Testing

- Manual testing using Postman for APIs
 - Browser testing for frontend flows
-

11. Screenshots or Demo

The screenshot displays two pages of the BookVerse platform. The top portion shows the homepage with a navigation bar featuring 'User', 'Seller', and 'Admin' buttons. The main heading 'Your Gateway to Infinite Stories' is prominently displayed, followed by a subtitle encouraging users to discover books and connect with sellers. A 'Start Exploring' button is visible. Below this, a section titled 'Explore by Category' offers links to 'Fiction', 'Science', 'Biographies', and 'Children's Books'. A 'Contact Us' button is located at the bottom of this section. The bottom portion of the screenshot shows a modal window titled 'Admin Registration' with fields for Name, Email address, and Password, along with a 'Signup' button and a link to 'Login'.

BookVerse

User Seller Admin

Your Gateway to Infinite Stories

Discover captivating books, connect with passionate sellers, and fuel your love for reading — only at BookVerse.

Start Exploring

Explore by Category

Fiction Science Biographies Children's Books

Contact Us

Admin Registration

Name

Email address

Password

Signup

Already have an account? [Login](#)

Login to Admin Account

Email address

Password

Log in

Don't have an account? [Signup](#)

BookStore (Admin)

Home Users Sellers Logout (Abhi)

Admin Dashboard

USERS

3

Vendors

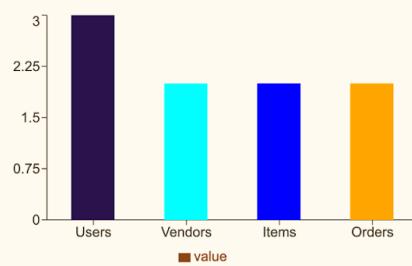
2

Items

2

Total Orders

2



Users

Sl/No	User ID	Name	Email	Operation
1	68959952d9691a6325af12a3	Ram	ram@gmail.com	View Orders
2	68959db78e1cfa3b586c7437	Akash	Akash@gmail.com	View Orders
3	6895c91aa3d7833b2a94a410	Siya	Siya@gmail.com	View Orders

User Orders



Product:
Order ID: 68959c59d9

Buyer: Ram
Seller:

Address:
173, Mayur Vihar Phase-1, Delhi (110091), Delhi

Price: \$549
Status: ontheway

[Close](#)

Seller Registration

Name

Email address

Password

Signup

Already have an account? [Login](#)

Login to Seller Account

Email address

Password

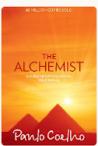
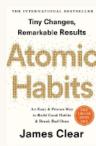
Log in

Don't have an account? [Signup](#)

Seller Dashboard

Items
2**Total Orders**
2

Books List

**The Alchemist****Author:** Paulo Coelho**Genre:** Fiction / Inspirational**Price:** Rs 399**Description:** A shepherd boy named Santiago embarks on a journey to discover his personal legend and fulfill his d...**Atomic Habits****Author:** James Clear**Genre:** Self-help / Psychology**Price:** Rs 450**Description:** A practical guide to building good habits and breaking bad ones, backed by scientific research....

Add Book

Title
Author
Genre
Price
Description

Item Image

Submit**Orders**

Product Name	Order ID	Customer Name	Address	Booking Date	Delivery By	Warranty	Price	Status
 Atomic Habits James Clear	68959e59d9	Ram	173, Mayur Vihar Phase-1, Delhi (110091), Delhi	2025-08-08	2025-08-13	1 year	₹549	onthe way

Product Name	Order ID	Customer Name	Address	Booking Date	Delivery By	Warranty	Price	Status
 The Alchemist Paulo Coelho	68959deb8e	Akash	Balaji Medical, Datia (475661), Madhya Pradesh	2025-08-08	2025-08-13	1 year	₹498	onthe way

User Registration

Name

Email address

Password

Signup

Already have an account? [Login](#)

Login to User Account

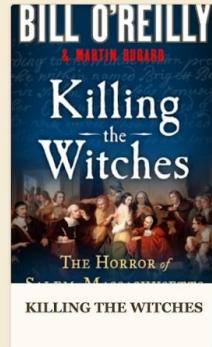
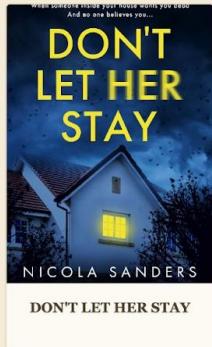
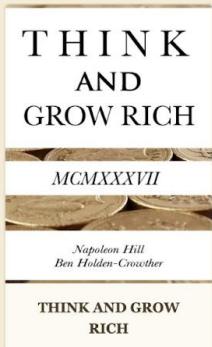
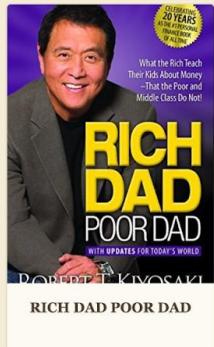
Email address

Password

Log in

Don't have an account? Create [Signup](#)

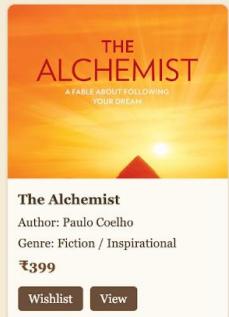
Best Seller



Top Recommendation

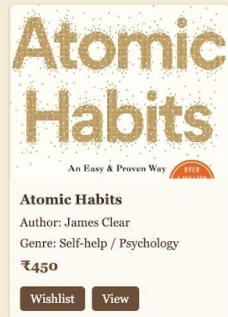


Books List



The Alchemist
Author: Paulo Coelho
Genre: Fiction / Inspirational
₹399

[Wishlist](#) [View](#)



Atomic Habits
Author: James Clear
Genre: Self-help / Psychology
₹450

[Wishlist](#) [View](#)

Description

A practical guide to building good habits and breaking bad ones, backed by scientific research.

Info

Title: Atomic Habits
Author: James Clear
Genre: Self-help / Psychology
Price: ₹450
Seller: Pravanshu

Buy Now

BookStore

Home Books Wishlist My Orders Logout (Ram)

My Orders

Product Name	Order ID	Address	Seller	Booking Date	Delivery By	Price	Status
Atomic Habits - 59c5	68959c59d9	173, Mayur Vihar Phase-1, Delhi (110091), Delhi		2025-08-08	2025-08-13	₹549	on the way

Contact Us

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12. Known Issues

- None documented yet

13. Future Enhancements

- Add payment gateway integration
- Improve UI/UX
- Add search and filter functionality
- Add analytics dashboards for admin