

# Full Stack Development with MERN Project

## 1. Introduction

- **Project Title:** BookNest – MERN Stack Online BookStore
- **Team Members:** LTVIP2026TMIDS91739
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  - 2. Matta Praneeth
  - 3. Divya Guduru
  - 4. Merugu Sudharani

## 2. Project Overview

- **Purpose:**

BookNest is a full-fledged MERN Stack web application designed for an online book marketplace. It allows users to browse, buy books, manage orders, and provides separate dashboards for sellers and admins.

- **Features:**

- Book browsing by users.
- Cart management and order placement.
- Sellers can add/edit/delete their books.
- Admin can manage users, books, and orders.
- JWT-based authentication for role-based access.
- Dashboards with charts and metrics.

## 3. Architecture

- **Frontend:**

Built using **React.js** and **Vite**. Components are modularized. Routes managed using `react-router-dom`. State handled locally and with context where necessary.

- **Backend:**

Developed with **Node.js** + **Express.js**, structured with separate route, controller, and middleware files.

- **Database:**

MongoDB with **Mongoose** ODM. Collections:

- `users`: stores user, seller, admin credentials.
- `books`: stores book details with seller reference.
- `orders`: stores placed order data including books and users.

## 4. Setup Instructions

- **Prerequisites:**
  - Node.js
  - Express.js
  - MongoDB
  - React js

### Quick Start

- npm create vite@latest
- cd my-app
- npm install
- npm run dev

### Installation:

```
git clone https://github.com/your-username/booknest.git
```

- cd BookNest

```
# Setup backend
• cd Backend
• npm install
• npm install dotenv
```

```
# Add MONGO_URI and PORT in .env
• npm start
```

```
# Setup frontend
• cd frontend
• npm install
• npm run dev
```

## 5. Folder Structure

- **Client:**

### Frontend (frontend/):

- src/public/
- components/ # Navbar, Layout
- pages/ # Login, Register, Admin Dashboard, Seller Dashboard, AddBook, Books, Cart, EditBook, Landing, MyOrders, MyProducts.
- styles/ # Custom CSS
- services/ # Axios instance

- **Server:**

### Backend/

- routes/ # userRoutes, bookRoutes, orderRoutes
- controllers/ # bookcontroller, ordercontroller, usercontroller

- models/ # Mongoose schemas
- middleware/ # Auth middleware

## 6. Running the Application

- Provide commands to start the frontend and backend servers locally.
  - **Frontend:** `cd frontend, npm run dev`
  - **Backend:** `cd backend, npm start`

## 7. API Documentation

### Users

- POST /api/users/register – Register user
- POST /api/users/login – User login, returns JWT
- GET /api/users – (Admin) Get all users
- DELETE /api/users/:id – (Admin) Delete a user

### Books

- POST /api/books – (Seller) Add book
- GET /api/books – Get all books
- GET /api/books/seller/:sellerId – Seller's books
- DELETE /api/books/:id – Delete book

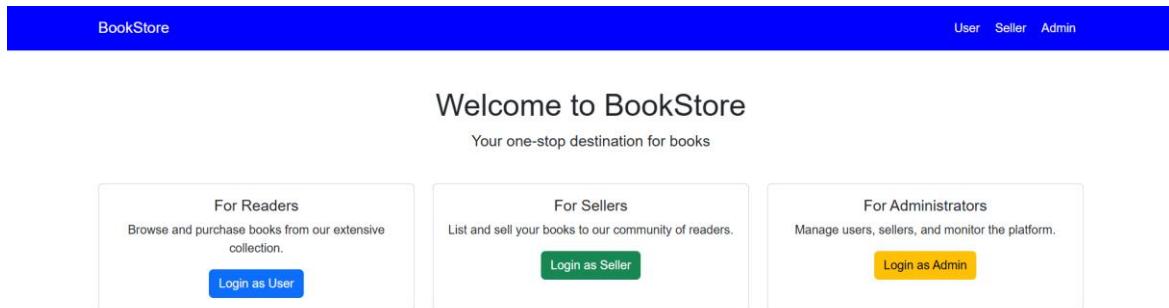
### Orders

- POST /api/orders – Place order
- GET /api/orders/my-orders/:userId – Get user's orders
- GET /api/orders/all – (Admin) All orders
- PUT /api/orders/:id/status – Update order status

## 8. Authentication

- Implemented using **JWT tokens**.
- On login/register, token is stored in localStorage.
- `verifyToken` middleware ensures protected routes.
- Admin/Seller roles determined from token payload.

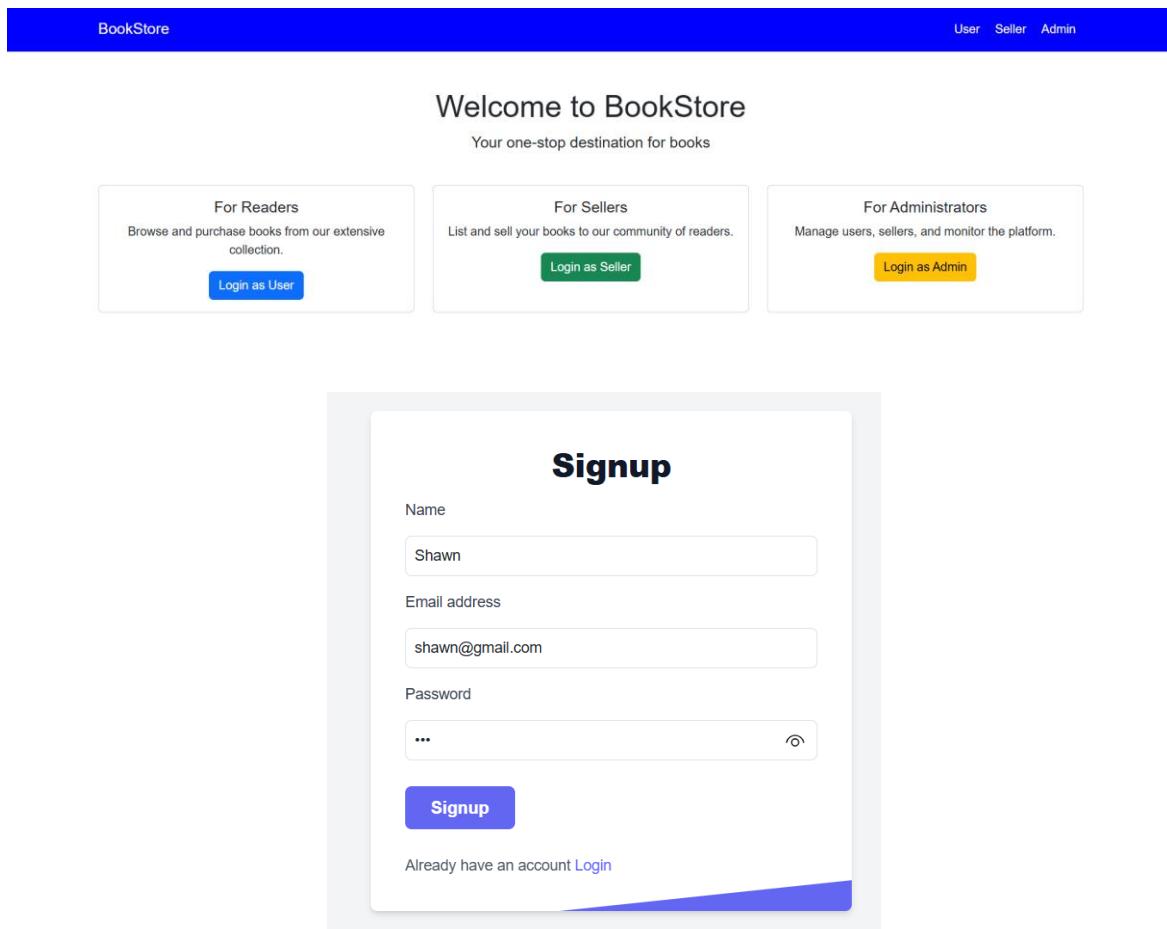
## 9. User Interface



## 10. Testing

- Manual testing with real-time data.
- Thunder Client used to test backend APIs.
- MongoDB Compass used to inspect database state.

## 11. Screenshots or Demo



## Login to user account

Email address

Password

[Log in](#)

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

BookStore

Home Books Wishlist My orders Logout(Shinichi )

### Best Seller

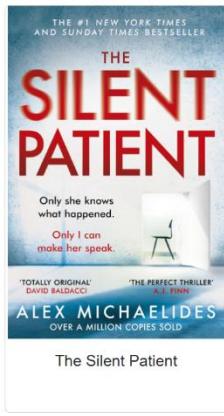
Fourth Wing

The Thursday Murder Club

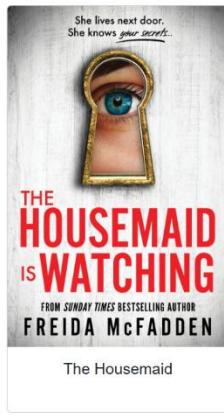
Klara and the Sun

Killing the Witches

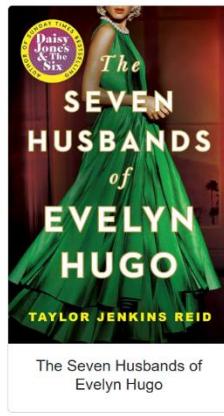
## Top Recommendation



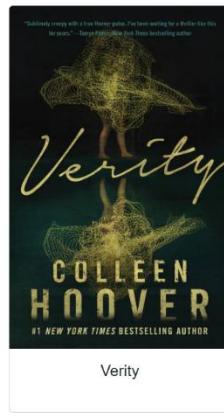
The Silent Patient



The Housemaid



The Seven Husbands of Evelyn Hugo



Verity



BookStore

[Home](#) [Books](#) [Wishlist](#) [My orders](#) [Logout\(Shinichi \)](#)

### Available Books



**Trapped**

Author: Haemuri  
Genre: Thriller  
Seller: Leo

\$500.00 Free Shipping

[View Details](#)

[Buy Now](#)

[Add to Wishlist](#)



**The Thursday Murder Club**

Author: Richard Osman  
Genre: Crime Fiction  
Seller: Leo

\$450.00 Free Shipping

[View Details](#)

[Buy Now](#)

[Add to Wishlist](#)



**Klara and the Sun**

Author: Kazuo Ishiguro  
Genre: Science Fiction  
Seller: Leo

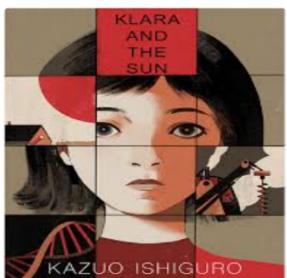
\$700.00 Free Shipping

[View Details](#)

[Buy Now](#)

[Remove from Wishlist](#)

## Wishlist



Klara and the Sun

Author:

Genre:

Price: \$

[Remove from Wishlist](#)[View](#)

-877b

### Description

From her place in the store, Klara, an Artificial Friend with outstanding observational qualities, watches carefully the behavior of those who come in to browse, and of those who pass on the street outside. She remains hopeful that a customer will soon choose her, but when the possibility emerges that her circumstances may change forever, Klara is warned not to invest too much in the promises of humans. In *Klara and the Sun*, Kazuo Ishiguro looks at our rapidly changing modern world through the eyes of an unforgettable narrator to explore a fundamental question: what does it mean to love?

[Buy Now](#)

### Info

Title: Klara and the Sun

Author: Kazuo Ishiguro

Genre: Science Fiction

Price: 700

Seller: Leo

**Book Details**



**Klara and the Sun**  
Author: Kazuo Ishiguro  
Genre: Science Fiction  
Price: \$700  
Seller: Leo

**Description:** From her place in the store, Klara, an Artificial Friend with outstanding observational qualities, watches carefully the behavior of those who come in to browse, and of those who pass on the street outside. She remains hopeful that a customer will soon choose her, but when the possibility emerges that her circumstances may change forever, Klara is warned not to invest too much in the

**Shipping Information**

Flat/House Number \*

City *	Pincode *
Tokyo	545645

State \*  
Kanto

Phone Number \*  
8743888392

Order Summary	
Book Price:	\$700
Shipping:	Free
<b>Total Amount:</b>	<b>\$700</b>

**Place Order**

## My Orders

	ProductName:	OrderId:	Address:	Seller	BookingDate	Delivery By	Price	Status
	-878e	699878e55e	8, Tokyo,(545645), Kanto.	Leo	2026-02-20T15:08:21.329Z	Pending	\$450	delivered
	-8860	699886005e	8, Tokyo,(545645), Kanto.	Leo	2026-02-20T16:04:16.779Z	Pending	\$700	delivered

## Seller Registration

Name

Email address

Password

**Signup**Already have an account [Login](#)

# Login to Seller account

Email address

Password

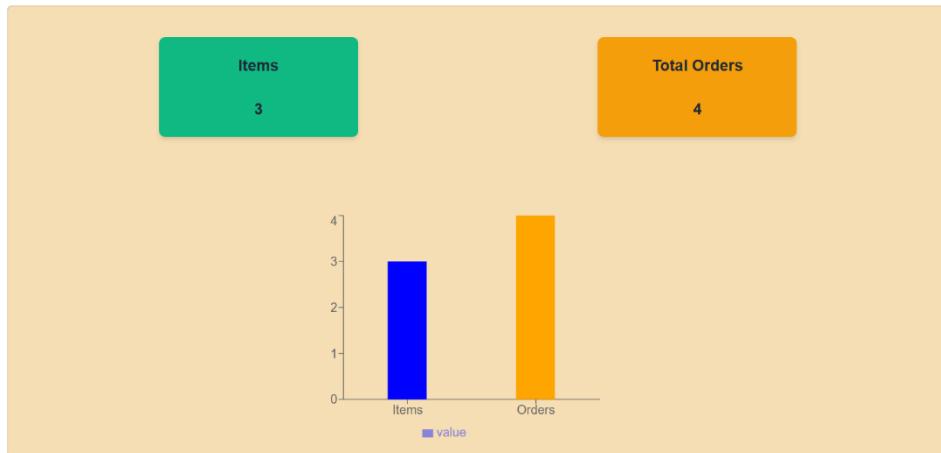
(

[Log in](#)

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



## DashBoard



### Add Book

Trapped

Haemuri

Thriller

500

Chae-a Han and Yunsu Park may be perfect angels

Item Image

yjy2hb4zk7jd1.jpeg

[Submit](#)

## Books List

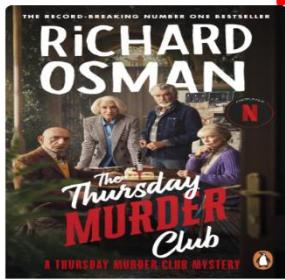
**Trapped**

Author: Haemuri

Genre: Thriller

Price: \$500

Description:Chae-a Han and Yunsu Park may be perfect angels at church, but Chae-a is really a

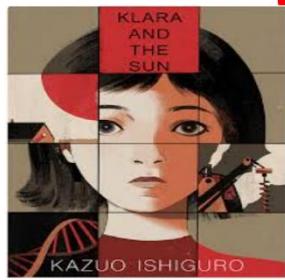
**The Thursday Murder Club**

Author: Richard Osman

Genre: Crime Fiction

Price: \$450

Description:in a peaceful retirement village, four unlikely friends meet up once a week to investigate

**Klara and the Sun**

Author: Kazuo Ishiguro

Genre: Science Fiction

Price: \$700

Description:From her place in the store, Klara, an Artificial Friend with outstanding observational

## Orders

ProductName:	Orderid:	Customer Name	Address:	BookingDate	Delivery By	Warranty	Price	Status
	699878ad5e	Ran	7, Tokyo,(545645), Kanto.	2026-02-20T15:07:25.313Z	Pending	1 year	700	delivered
	699878e55e	Shinichi	8, Tokyo,(545645), Kanto.	2026-02-20T15:08:21.329Z	Pending	1 year	450	delivered
	69987d4e5e	shawn	8, Tokyo,(545645), Kanto.	2026-02-20T15:27:10.642Z	Pending	1 year	450	delivered

## Loginto Admin account

Email address

admin@gmail.com

Password

.....



Log in

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

## DashBoard

USERS

4

Vendors

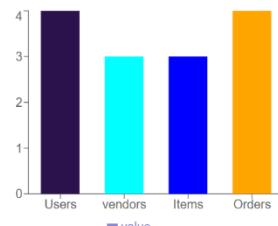
3

Items

3

Total Orders

4



## Users

sl/no	UserId	User name	Email	Operation
1	6997303b9eb7c72a2e7c91ab	Shinichi	shinichi@gmail.com	view
2	699878415eec3016b4da8098	Ran	ran@gmail.com	view
3	69987c8c5eec3016b4da80b9	Gojo	gojo@gmail.com	view
4	69987d1d5eec3016b4da80d5	shawn	shawn@gmail.com	view

## User Orders



Product Name:	Orderid:	Address:	Buyer	Seller	BookingDate	Delivery By	Warranty	Price	Status
-878e	699878e55e	8, Tokyo,(545645), Kanto.	Shinichi	Leo	2026-02-20T15:08:21.329Z	Pending	1 year	450	delivered



Product Name:	Orderid:	Address:	Buyer	Seller	BookingDate	Delivery By	Warranty	Price	Status
-8860	699886005e	8, Tokyo,(545645), Kanto.	Shinichi	Leo	2026-02-20T16:04:16.779Z	Pending	1 year	700	delivered

Close

## Vendors

sl/no	UserId	User name	Email	Operation
1	699730ae9eb7c72a2e7c91b7	Leo	leo@gmail.com	view
2	699878285eec3016b4da8095	Rose	rose@gmail.com	view
3	69987d725eec3016b4da80f1	gus	gus@gmail.com	view

Vendor Products

	Product Name: -80d6 OrderId: 69980d6a6d Warranty: 1 year Price: 500	
	Product Name: -876e OrderId: 699876e05e Warranty: 1 year Price: 450	
	Product Name: -877b OrderId: 699877b45e Warranty: 1 year Price: 700	

[Close](#)

## 12. Known Issues

- Order status logic may need further scalability.
- Image upload currently works via URL only.

## 13. Future Enhancements

- Pagination and search for books.
- Role management UI.
- Email notifications on order placement.