

BookNest – Where Stories Nestle

1. Introduction

Project Title : BookNest – Where Stories Nestle

Team Members:

SNO	Team Members	Role
1	Jnana Chandrika Adapa	Full Stack Developer & Project Lead – Developed frontend using React.js, implemented backend APIs using Node.js & Express.js, designed MongoDB database schema, handled JWT authentication, integrated frontend and backend modules, and managed overall system architecture.
2	Jogendra Prasad Middhe	Frontend Developer (UI/UX) – Designed user interface layouts, implemented React components, improved responsiveness, handled routing, and ensured smooth navigation and user-friendly experience.
3	Nandini Veera Naga Lakshmi Nilla	Database Support – Assisted in MongoDB database setup, managed data modeling support, handled environment configuration, supported deployment setup, and helped in resolving integration issues.
4	Mounica Sai Venkata Srilakshmi Barla	Testing – Conducted functional testing, prepared test cases, executed UAT testing, identified defects, and supported project documentation preparation.

2. Project Overview

Purpose

BookNest is a MERN stack-based online bookstore platform designed to provide users with a seamless book purchasing experience. The project aims to:

- Provide digital access to books
- Enable sellers to manage inventory
- Ensure secure transactions
- Deliver a scalable and user-friendly system

Features

Customer

- Register / Login

- Browse books
- Search & Filter books
- Add to Cart
- View Order History

Seller

- Add / Update / Delete Books
- Manage Inventory
- View Orders

Admin

- Manage Users
- Manage Sellers
- Monitor Books

3. Architecture

Frontend (React.js)

- Built using React.js
- Component-based architecture
- React Router for navigation
- Axios for API communication
- Bootstrap for UI styling

Backend (Node.js + Express.js)

- RESTful API structure
- Express.js routing
- Middleware for authentication
- Role-based access control
- Error handling middleware

Database (MongoDB)

MongoDB is used as NoSQL database.

Collections:

- Users
- Books
- Orders
- Sellers
- Reviews

4. Setup Instructions

Prerequisites:

- Node.js (v16+)
- MongoDB (Local or MongoDB Atlas)
- Git
- Npm

Installation Steps

Step 1 : Install Backend Dependencies

```
cd server
```

```
npm install
```

Step 2 : Install Frontend Dependencies

```
cd client
```

```
npm install
```

Step 3 : Setup Environment Variables (.env)

```
PORT=5000
```

```
MONGO_URI=your_mongodb_connection_string
```

```
JWT_SECRET=your_secret_key
```

5. Folder Structure

Client (Frontend)

```
client/
```

```
| — src/  
|   | — User/  
|   | — Seller/  
|   | — Admin/  
|   | — Components/  
|   | — App.jsx  
|   | — main.jsx
```

Server (Backend)

```
server/
|—— models/
|—— routes/
|—— controllers/
|—— middleware/
|—— config/
|—— index.js
```

6. Running the Application

Backend:

```
cd server
```

```
npm start
```

Frontend:

```
cd client
```

```
npm run dev
```

Application runs at:

- Frontend: <http://localhost:5173>
- Backend: <http://localhost:5000>

7. API Documentation

Authentication

Method	Endpoint	Description
POST	/api/auth/register	Register new user
POST	/api/auth/login	Login user

Books

Method	Endpoint	Description
GET	/api/books	Get all books
GET	/api/books/:id	Get single book
POST	/api/books	Add new book (Seller)
PUT	/api/books/:id	Update book
DELETE	/api/books/:id	Delete book

Orders

Method	Endpoint	Description
POST	/api/orders	Create order
GET	/api/orders	Get user orders

8. Authentication

Authentication is handled using:

- JWT (JSON Web Token)
- bcrypt for password hashing
- Role-based authorization (User, Seller, Admin)

Flow:

1. User logs in
2. JWT token generated

3. Token stored in local storage
4. Protected routes verify token

9. User Interface

Home Page

Welcome to BookNest

Discover your next favorite book.

Search books, authors, genres...

The Silent Patient
Alex Michaelides
Psychological Thriller, Mystery, Crime
A gripping psychological thriller about a woman who shoots her husband and then never speaks another...

Atomic Habits
James Clear
Self-Help, Productivity, Personal Development
An insightful guide to building good habits and breaking bad ones using small, consistent improvement...

The Alchemist
Paulo Coelho
Fiction, Adventure, Philosophy
A philosophical story about a young shepherd named Santiago who travels in search of treasure and di...

SignUp Page

BookNest

Home Login Register

Register

Create a new account

Name

Your full name

Email

your@email.com

Password

At least 6 characters

Role

User - Browse & Buy Books

Browse through books and place orders. ⚠ Admin account already exists

Register

Already have an account? [Login here](#)

Login Page

BookNest

Home Login Register

Login

Email

Password

Login

User Wishlist Page

BookNest

Home Wishlist My Orders Sudeep Profile Logout

My Wishlist

The Silent Patient
Alex Michaelides
A gripping psychological thriller about a woman who shoots her husband and then never speaks another...

\$14.99 View Remove

User Orders Page

BookNest

Home Wishlist My Orders Sudeep Profile Logout

My Orders

Book	Seller	Quantity	Total Price	Booking Date	Delivery By	Status
The Silent Patient Alex Michaelides	Varma	2	\$29.98	18/2/2026	18/2/2026	delivered
Harry Potter and the Sorcerer's Stone J.K. Rowling	Hema	1	\$13.5	18/2/2026	TBD	shipped

Seller Dashboard Page

BookNest

Home Seller Dashboard Varma Profile Logout

Seller Dashboard

Total Items 5

Total Orders 2

Pending Orders 0

My Books Orders

+ Add New Book

Cover	Title	Authors	Price	Actions
	The Silent Patient	Alex Michaelides	\$14.99	View Edit Delete
	Atomic Habits	James Clear	\$18.5	View Edit Delete
	The Alchemist	Paulo Coelho	\$12.75	View Edit Delete
	Rich Dad Poor Dad	Robert T. Kiyosaki	\$16.2	View Edit Delete

Seller Orders Page

BookNest

Home Seller Dashboard Varma Profile Logout

Seller Dashboard

Total Items: 5 Total Orders: 2 Pending Orders: 0

My Books Orders

Recent Orders

Buyer	Book	Quantity	Price	Status	Actions
Sudeep	The Silent Patient	2	\$29.98	Delivered	<input type="button" value="View"/>
Chandrika	Atomic Habits	1	\$18.5	Delivered	<input type="button" value="View"/>

Admin Dashboard Pages

BookNest

Home Admin Booknest Profile Logout

Admin Dashboard

Overview Vendor Products Users Sellers

Users: 4 Sellers: 4 Items: 7 Total Orders: 4

BookNest

Home Admin Booknest Profile Logout

Admin Dashboard

Overview Vendor Products Users Sellers

Vendor Products

Product Name	OrderId	Warranty	Price	Actions
The Silent Patient	8470058a	1 year	\$14.99	<input type="button" value="Delete"/>
Atomic Habits	40873133	1 year	\$18.5	<input type="button" value="Delete"/>
The Alchemist	4087315d	1 year	\$12.75	<input type="button" value="Delete"/>
Rich Dad Poor Dad	40873165	1 year	\$16.2	<input type="button" value="Delete"/>
The Hobbit	4087316d	1 year	\$15	<input type="button" value="Delete"/>
Deep Work	408732dc	1 year	\$19.99	<input type="button" value="Delete"/>

Admin Dashboard

Overview Vendor Products Users Sellers

Users Management

Name	Email	Role	Actions
Yaggu	yaggu@gmail.com	user	Promote Delete
Chandrika	chandrikaadapa2005@gmail.com	user	Promote Delete
Varma	varma@gmail.com	seller	Promote Delete
Booknest	booknest123@gmail.com	admin	Promote Delete
Hema	hema@gmail.com	seller	Promote Delete
Rupa	rupa@gmail.com	user	Promote Delete
Sai	sai@gmail.com	seller	Promote Delete
Prasad	prasad@gmail.com	seller	Promote Delete

Admin Dashboard

Overview Vendor Products Users Sellers

Sellers Management

Name	Email	Actions
Varma	varma@gmail.com	Delete
Hema	hema@gmail.com	Delete
Sai	sai@gmail.com	Delete
Prasad	prasad@gmail.com	Delete

10. Testing

Testing Types:

- Functional Testing
- API Testing
- Authentication Testing
- Performance Testing (Response Time)

Tools Used:

- Manual Testing

11. Screenshots / Demo

Github repository Link: <https://github.com/JnanaChandrikaAdapa/Booknest-Where-Stories-Nestle>

Video Demo Link: https://drive.google.com/file/d/12-0vg9cbagX0NGq4a3JsL5l8ynBcnkGs/view?usp=drive_link

12. Known Issues

- Minor UI responsiveness issues
- Search optimization improvements needed

13. Future Enhancements

- AI-based Book Recommendation
- Mobile App Version
- Multi-language Support
- Real-time Chat Support
- Subscription Model
- Advanced Analytics Dashboard