Full-Stack Project Proposal

Project Title: BookBazaar – Online Bookstore Web Application

Problem Statement:

In today's digital era, book lovers still struggle to find a unified platform where they can browse, search, and buy books conveniently while allowing sellers or admins to easily manage inventory. Traditional bookstores lack accessibility, and many existing websites fail to offer seamless filtering, sorting, and management features.

Objective:

To develop a full-stack web application that enables users to browse and purchase books online while allowing admins to manage inventory efficiently. The system will include user authentication, advanced search, filtering, and pagination for an optimized user experience.

Key Features:

Backend (Node.js + Express.js):

• Authentication & Authorization: User registration, login, JWT-based authentication, and admin authorization.
• CRUD Operations: Admin can Create, Read, Update, and Delete book listings.
• Filtering, Searching, Sorting & Pagination: Implemented for browsing books by genre, author, price, or rating.
• Hosting: Backend hosted on Render or Vercel Serverless Functions.

Database:

• Database Type: MongoDB (Non-relational)
• Features: Stores user profiles, book data, and order details.
• Hosting: MongoDB Atlas (Cloud-hosted database).

Frontend (React.js + Tailwind CSS):

• Routing: Multiple pages (Home, Books, Book Details, Cart, Admin Dashboard).
• Dynamic Data Fetching: Real-time book listings, search results, and user interactions via API calls.
• Responsive UI: Clean, modern interface optimized for desktop and mobile.
• Hosting: Frontend deployed on Vercel or Netlify.

Layer	Technology
Frontend	React.js, Tailwind CSS, Axios, React Router
Backend	Node.js, Express.js
Database	MongoDB (Mongoose ORM)
Authentication	JWT, bcrypt.js
Hosting	Frontend – Vercel/Netlify, Backend – Render/Vercel, Database – MongoDB Atlas
Version Control	GitHub

Expected Outcome:

A fully functional and hosted full-stack web application that allows users to browse, search, and purchase books while enabling admins to manage the bookstore through a secure and user-friendly interface.