Project Design Phase

Solution Architecture

Date	24 June 2025
Team ID	LTVIP2025TMID53966
Project Name	BookNest: Where Stories Nestle
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Maximum Marks	4 Marks

Solution Architecture

The **solution architecture for BookNest** bridges the gap between bibliophile needs (a seamless, interactive, and personalized online book browsing and purchasing experience) and modern technology solutions powered by the **MERN stack** (MongoDB, Express.js, React.js, Node.js). It ensures BookNest is scalable, responsive, and rich in user experience.

Find the best tech solution to solve existing business problems:

1. Solve Real User Challenges

BookNest is designed to address the needs of readers like Sarah, who wish to browse, explore, and buy books without the limitations of traditional bookstores. The MERN stack provides the perfect foundation for delivering a responsive, interactive, and efficient book store platform.

2. Describe System Structure for Stakeholders

The architecture clearly outlines how the frontend, backend, database, and key services (authentication, inventory, orders) communicate with each other. This ensures that all team members and stakeholders understand data flow and component interactions.

3. Define Features and Development Phases

· User registration & login

· Book browsing and filtering

· Cart management and checkout

· Order tracking

· Admin book/inventory control

*4. **Provide Specifications for Delivery and Scalability***

The architecture includes:

· RESTful API specifications for secure, modular development

· Database schema to manage books, users, orders, reviews

· Deployment plan supporting scalability and high availability

· Frontend structure using React components and responsive design

Example - Solution Architecture Diagram: