**Project Design Phase**

**Solution Architecture**

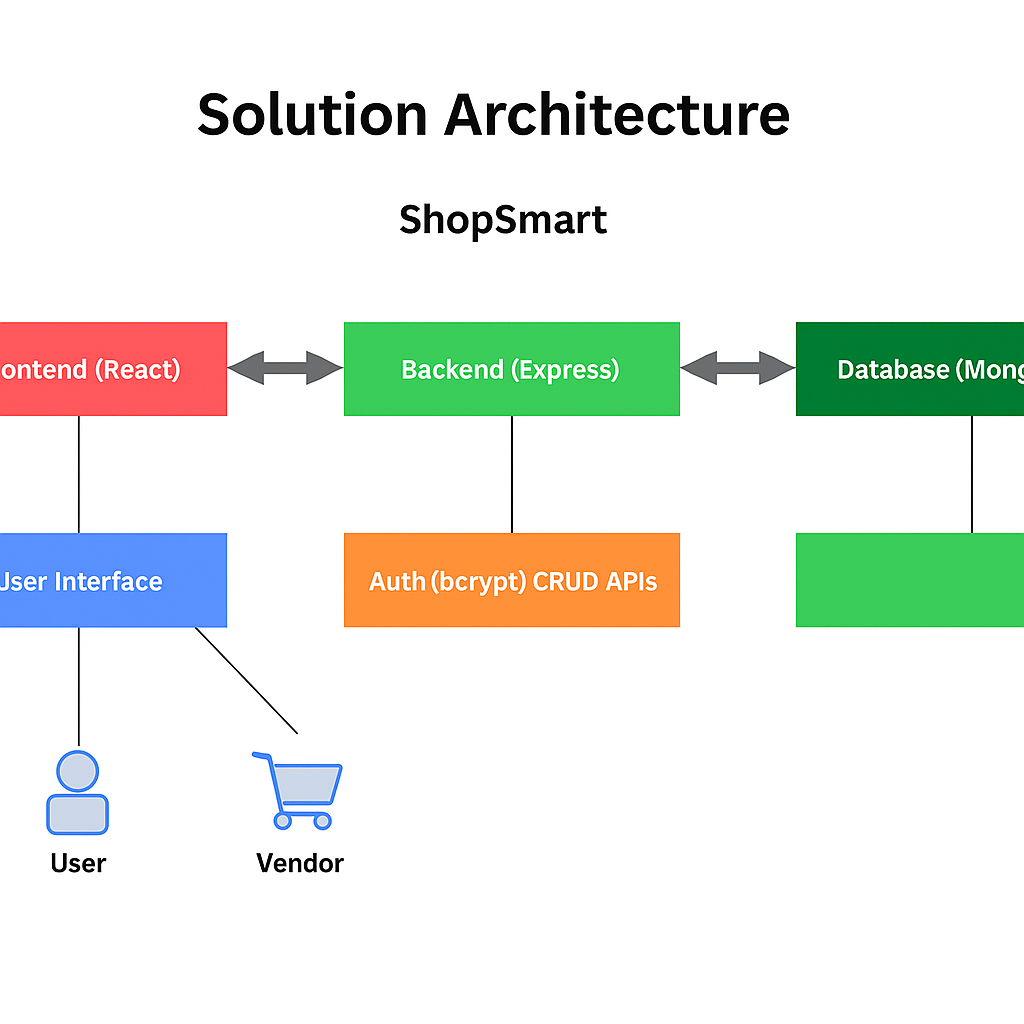
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| --- | --- |
| Date | 26 -05-2025 |
| Team ID | LTVIP2025TMID21098 |
| Project Name | *Shopsmart: Your Digital Grocery* |
| Maximum Marks | 4 Marks |

**Solution Architecture:**

The solution architecture for **ShopSmart** ensures a **scalable, secure, and user-friendly platform** that connects customers with **local grocery stores**. The system is built using the **MERN stack** (MongoDB, Express.js, React.js, Node.js) and includes **separate modules** for **user, vendor (store), and admin** roles.

**The architecture emphasizes:**  
• Seamless grocery shopping and store discovery  
• Real-time cart, inventory, and order management  
• Secure login for users, vendors, and admins with role-based routing  
• Scalable and modular backend APIs built using RESTful principles  
• Structured data flow between the React frontend, Node backend, and MongoDB  
• Conditional rendering and access control based on user roles (user/vendor/admin)  
• Admin tools for promoting stores, managing users, and maintaining platform quality

**Example - Solution Architecture Diagram:**

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