

Project Design Phase
Solution Architecture

Date	20-06-2025
Team ID	LTVIP2025TMID5041
Project Name	ShopEZ : One-Stop Shop For Online Purchases
Maximum Marks	4 Marks

Solution Architecture:

ShopEZ's architecture uses the **MERN stack**:

- **MongoDB** – NoSQL database to store users, products, orders, etc. •
- **Express.js & Node.js** – Backend RESTful API handling business logic, authentication, and admin tools.
- **React.js** – Frontend application providing dynamic, responsive user interfaces for customers, sellers, and admins.

Key Features

- JWT-based secure login
- Role-based access: Customer, Seller, Admin
- Real-time product inventory management
- Responsive UI using React & Tailwind/Bootstrap
- Modular backend API
- Admin dashboard for monitoring users, orders, and product analytics

Development Phases

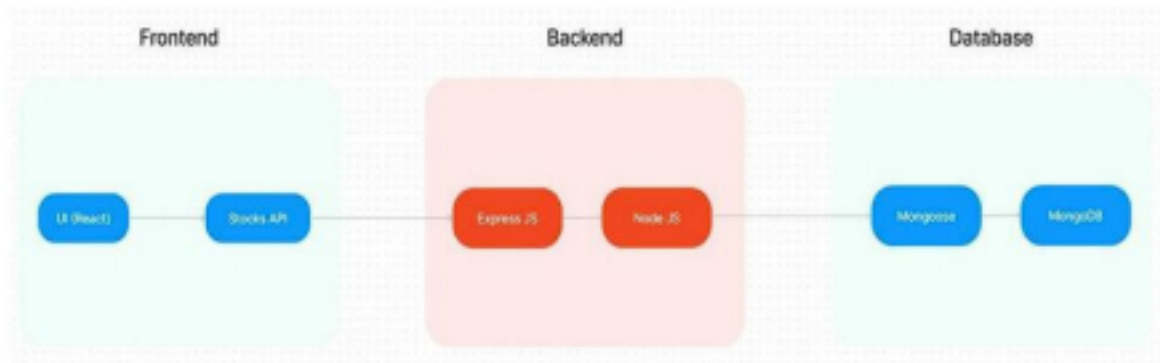
1. **Phase 1** – User authentication and role-based routing
2. **Phase 2** – Customer UI: product browsing, cart, checkout 3.

Phase 3 – Seller dashboard: add/update products, view orders 4.

Phase 4 – Admin dashboard: view users, manage platform 5.

Phase 5 – Payment gateway integration (future scope)

Architecture Diagram



Roles:

- **Customer** → Browse → Cart → Checkout
- **Seller** → Dashboard → Manage Products → View Orders •
- Admin** → Monitor users, sellers, products, and system logs