Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	31 January 2025
Team ID	LTVIP2026TMIDS24270
Project Name	ShopEZ: One-Stop Shop for Online Purchases
Maximum Marks	4 Marks

Technical Architecture:

The **ShopEZ: One-Stop Shop for Online Purchases** platform is built using the **MERN stack** and follows a structured **3-tier architecture**:

- **Presentation Layer**: Developed with React.js to support dynamic rendering, routing, and role-based dashboards (User, Restaurant, Admin).

- **Business Logic Layer**: Uses Node.js with Express.js to handle API requests, authentication, cart management, and order processing.

- **Data Layer**: MongoDB stores all data related to users, products, restaurants, orders, and admin functions.

Table-1 : Components & Technologies:

S. No.	Component	Description	Technology Used
1	**User Interface**	React-based web UI for customers, sellers, and admins	React.js, JavaScript, CSS, HTML
2	**Application Logic - 1**	Handles cart functionality, product search, checkout process, and user login	Node.js, Express.js
3	**Application Logic - 2**	Admin panel for product and seller management, seller dashboard	React.js (components), Node.js (backend)
4	**Database**	Stores users, sellers, orders, products, cart data, and admin controls	MongoDB

Table-2: Application Characteristics:

S. No.	Characteristics	Description	Technology
1	Open-Source Frameworks	Frontend and backend technologies	React.js, Node.js, Express.js
2	Scalable Architecture	Modular 3-tier design with token-based access control	RESTful APIs, JWT, MongoDB

References:

[React.js Documentation](#)

[Node js Best Practice](#)

[JSON Web Server Reference](#)

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d

[MongoDB docs](#)