**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

| Date | 26-05-2025 |
| --- | --- |
| Team ID | LTVIP2025TMID55721 |
| Project Name | ShopEZ:ONE-STOP SHOP FOR ONLINE PURCHASES |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

The **ShopEZ** platform is designed with a scalable 3-tier architecture that includes the presentation layer (frontend), business logic layer (backend), and data storage layer. The solution ensures fast performance, secure transactions, and smooth integration with third-party services (e.g., Razorpay/Stripe for payments).

**Table-1: Components & Technologies**

| **S.No** | **Component** | **Description** | **Technology** |
| --- | --- | --- | --- |
| 1 | **User Interface** | Web-based interface for customers and sellers | HTML, CSS, JavaScript / React.js |
| 2 | **Application Logic-1** | Product browsing, search, cart, checkout | Node.js, Express.js |
| 3 | **Application Logic-2** | Admin dashboard for moderation and reports | React.js, Node.js |
| 4 | **Database** | Stores user data, products, orders, transactions | MongoDB / MySQL |

**Table-2: Application Characteristics**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
| **1** | **Open-Source Frameworks** | Frontend and backend frameworks | React.js, Node.js, Tailwind CSS |
| **2** | **Scalable Architecture** | RESTful APIs with modular/microservice capability | Microservices or MVC |

**References:**

* [React.js Documentation](https://reactjs.org)
* Node.js Best Practices
* JSON Web Token (JWT)
* [How to Draw Useful Architecture Diagrams](https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d)