**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 29 June 2025 |
| Team ID | LTVIP2025TMID55008 |
| Project Name | Shop Smart: Your Digital Grocery Store Experience |
| Maximum Marks |  |

**Technical Architecture:**

The Resolve Now platform is designed with a scalable 3-tier architecture that includes the presentation layer (frontend), business logic (backend), and data storage layer. The solution ensures performance, security, and ease of integration with third-party APIs (e.g., Stripe for payments).

**Table-1 : Components & Technologies:**

| **S.No** | **Component** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | User Interface | Web-based interface for user and admin | HTML, CSS, JavaScript / React Js etc. |
|  | Application Logic-1 | Browsing products | Node.js, Express.js |
|  | Application Logic-2 | |  | | --- | | Admin panel | | React js, Node js |
|  | Database | Stores user data, products, orders | MongoDB |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | Frontend frameworks | React.js, Node.js, BootStrap, Tailwind CSS |
|  | Scalable Architecture | 3-tier architecture with RESTful APIs | Microservices |

**Advantages:**

* Personalized Recommendations – Suggests products based on user behaviour and preferences.
* Price Comparison – Helps users find the best deals across multiple stores.
* Smart Cart Management – Automatically applies discounts, coupons, or suggests budget-friendly alternatives.
* Inventory Updates – Real-time stock tracking to prevent out-of-stock purchases.
* User Reviews & Ratings – Provides genuine feedback for informed decisions.
* Seamless Checkout – Fast and secure payment integration.
* Location-Based Offers – Shows nearby deals using GPS data.
* Order Tracking – Tracks delivery status within the app.
* Loyalty Programs – Integrates rewards or cashback systems.
* Eco-Friendly Suggestions – Highlights sustainable or eco-conscious products.

**References:**

[**https://github.com/Helina-Thathapudi/Shopsmart**](https://github.com/Helina-Thathapudi/Shopsmart)