**Project Design Phase**

**Solution Architecture**

|  |  |
| --- | --- |
| **Date** | **24 June 2025** |
| **Team ID** | **LTVIP2025TMID24654** |
| **Project Name** | **Shopez : one-stop shop for online purchases** |
| **Mentor Name** | **Dr Shaik Salma Begam** |
| **Maximum Marks** | **4 Marks** |

**Solution Architecture**

Solution architecture for Shopez bridges the gap between business needs (a seamless, secure, and scalable e-commerce experience) and technology solutions (MERN stack, REST APIs, cloud storage, etc.). The goals of Shopez’s solution architecture are to:

* **Find the best tech solution to solve existing business problems:**

Shopez leverages the MERN stack (MongoDB, Express.js, React, Node.js) to deliver a robust, scalable, and maintainable e-commerce platform.

* **Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders:**

The architecture clearly defines how the frontend, backend, database, and supporting services interact, ensuring all stakeholders understand the system’s flow and responsibilities.

* **Define features, development phases, and solution requirements:**

Features such as user authentication, product management, order processing, and admin dashboards are mapped to specific components and services, with clear development phases for incremental delivery.

* **Provide specifications according to which the solution is defined, managed, and delivered:**

The architecture includes API specifications, data flow diagrams, and deployment strategies to ensure the solution is delivered as intended and can be efficiently managed and scaled.

**Example - Solution Architecture Diagram:**

