



## Project Design Phase

### Solution Architecture – ShopEZ

**Date :** 16 February 2026

**Team ID :** LTVIP2026TMIDS81707

**Project Name :** ShopEZ: One-Stop Shop for Online Purchases

**Maximum Marks:** 4 Marks

#### Solution Architecture Description

The **ShopEZ** solution architecture bridges the gap between the business challenges of fragmented online shopping and the technical implementation of a unified, scalable e-commerce platform.

It is designed using the **MERN stack** (MongoDB, Express.js, React.js, Node.js), ensuring a modern, full-stack JavaScript environment that supports rapid development and scalability.

#### Goals of the Solution Architecture

- **Identify the best tech stack** to solve the problem of disconnected buyer-seller experiences
- **Define the structure and behavior** of the ShopEZ platform, including frontend, backend, and database layers
- **Outline key features** such as personalized product feeds, seller dashboards, secure checkout, and multilingual support
- **Break down development phases** into modular sprints (e.g., user auth, product catalog, cart C checkout, analytics)
- **Provide clear specifications** for APIs, data models, and user flows to guide development and stakeholder alignment

### Solution Architecture:

Solution architecture is a complex process – with many sub-processes- that bridges the gap between business process and technology solutions: its goals are :

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

### Example – Solution Architecture Diagram:

