Project Design Phase-II

Technology Stack (Architecture & Stack)

Project Name: ShopEase – E-Commerce Web Application

Maximum Marks: 4 Marks

Technical Architecture

The ShopEase platform follows a scalable 3-tier MERN architecture.

Presentation Layer (Frontend)

- React.js

- Bootstrap

- Axios

- Product listing UI

- Filters & search bar

- Admin dashboard UI

Application Layer (Backend)

- Node.js

- Express.js

- JWT authentication

- Multer uploads

- REST APIs

Data Layer (Database)

- Users

- Products

- Categories

- Cart

- Orders

Components & Technologies

Component	Technology
Frontend	React.js, Bootstrap
Backend	Node.js, Express.js
Database	MongoDB
Authentication	JWT
Storage	Cloudinary / Local uploads
API style	REST APIs

Application Characteristics

- High performance

- Modular architecture

- Secure API communication

- Scalable product catalogue

- Admin-friendly dashboard

- Fully responsive for mobile