

## Project Design Phase

### Solution Architecture

Date	3 Nov 2025
Team ID	NM2025TMID03582
Project Name	CRM Application for Jewel Management
Maximum Marks	4 Marks

#### Solution Architecture:

The solution architecture for the CRM Application is designed to provide efficient management of jewelry sales, inventory, and customer data. The system uses a cloud-based architecture built with Node.js, React.js, and MongoDB. It integrates a secure API layer, authentication module, and scalable database design.

#### Goals of the Architecture:

- Enable real-time customer and order management
- Ensure secure and encrypted data handling
- Support scalability for multiple jewelry outlets
- Automate inventory updates and billing
- Provide analytics and reports for business insights

#### Key Components:

- Frontend: React.js Web Application
- Backend: Node.js with Express
- Database: MongoDB / MySQL Cloud
- Authentication: JWT / OAuth 2.0
- Hosting: AWS / Azure Cloud
- APIs: REST APIs for order, product, and analytics management

#### Development Phases:

1. Build UI and backend connection
2. Configure database schema and API routes
3. Implement authentication and payment gateway
4. Deploy on cloud and perform testing
5. Release production version with monitoring tools

### **Solution Architecture Description:**

This architecture ensures high availability and modular scalability. Each service is designed as an independent component, making maintenance easier and enabling integration with future systems such as AI-driven recommendation engines.

### **Example: Solution Architecture diagram**



