Project Design Phase – II
Technology Stack (Architecture & Stack)

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

Technical Architecture

The CRM Application for Jewel Management is designed to track customer interactions, manage product inventory, generate personalized offers, and maintain sales records. It integrates customer service and sales data into a single system for effective jewelry business management.

Table 1: Components & Technologies

S.No	Component	Description	Technology
1	User Interface	Customer interacts via Web/Mobile dashboard	ReactJS / Flutter / HTML / CSS
2	Application Logic-1	Manages customer profiles and purchase history	Node.js / Java / Python
3	Application Logic-2	Tracks jewelry stock levels and updates	Server Scripts & Inventory APIs
4	Application Logic-3	Generates personalized offers and loyalty points	Custom Recommendation Logic
5	Local Database	Stores customer and sales-related data	MySQL / PostgreSQL
6	Cloud Database	Backup and analytics data storage	AWS RDS / Google Cloud SQL

7	File Storage	Stores invoices, certificates, product images	AWS S3 / Google Cloud Storage
8	External API-1	Handles secure payment transactions	Razorpay / PayPal API
9	External API-2	Customer communication alerts (WhatsApp/SMS)	Twilio / Gupshup API
10	Machine Learning Model (Optional)	Predicts customer jewelry preferences	Python ML Model
11	Infrastructure	Cloud-hosted secure deployment	AWS / Azure Cloud

Table 2: Application Characteristics

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	UI and backend developed using open-source frameworks	React, Node.js, Python
2	Security Implementations	Secure authentication, encrypted data handling	SSL, JWT Auth, RBAC
3	Scalable Architecture	Supports multi-branch jewelry stores	Cloud Auto Scaling
4	Availability	High uptime with cloud-based hosting	Load Balancer + Cloud Hosting
5	Performance	Optimized APIs and indexed database	Caching, Optimized Queries