

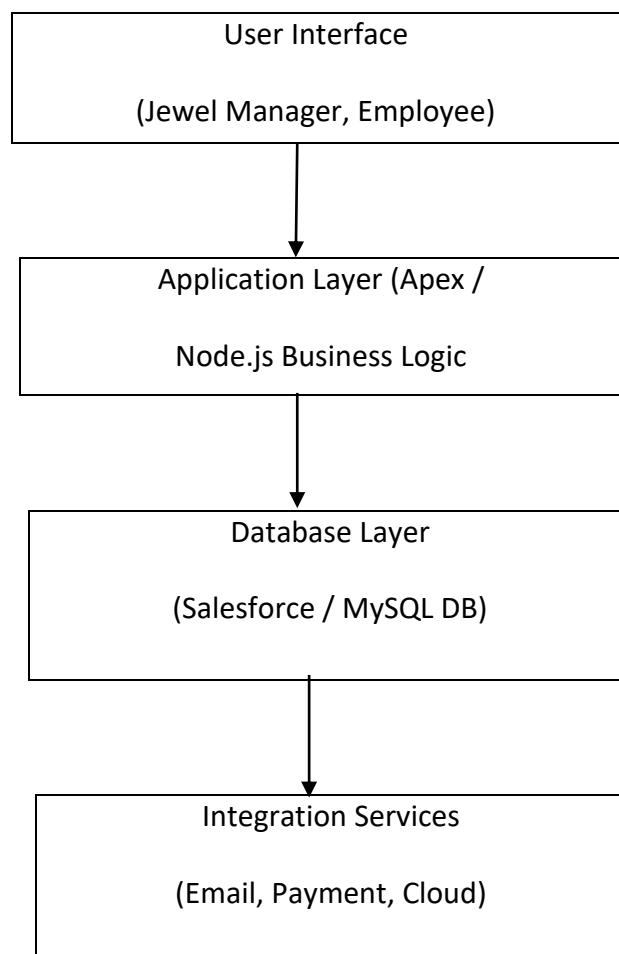
Technology Stack Template (Architecture & Stack)

Date	06 Nov 2025
Team ID	25E251B56BC5016B4484596B39025A8F
Project Name	CRM Application for Jewel Management - (Developer)
Maximum Marks	2 Marks

1. System Architecture Overview

Layer	Description	Technologies / Tools
Presentation Layer (Front-End)	The user interface that allows jewel managers, sales reps, and customers to interact with the CRM system. It includes dashboards, sales tracking screens, and inventory views.	Lightning Web Components (Salesforce) / React.js, HTML5, CSS3, JavaScript, Bootstrap / Tailwind CSS
Application Layer (Business Logic)	Handles core business processes such as customer management, order tracking, billing, and loyalty programs.	Salesforce Apex / Node.js / Express.js
Database Layer (Data Storage)	Stores customer, product, sales, and billing information securely.	Salesforce Object Database / MySQL / PostgreSQL
Integration Layer (API Services)	Connects the CRM with external systems like email, payment gateways, or inventory apps.	RESTful APIs / Salesforce API / GraphQL
Security Layer	Protects sensitive jewelry and customer data through encryption, authentication, and authorization.	OAuth 2.0 / JWT / HTTPS / Salesforce Shield
Infrastructure Layer (Hosting & Deployment)	Supports deployment, scalability, and continuous operation of the CRM system.	Salesforce Cloud / AWS / Heroku
Testing Layer	Ensures application functionality and reliability through automated and manual testing.	Salesforce Test Classes / Jest / Selenium / Postman

2. CRM System Architecture (Conceptual View)



3. Detailed Technology Stack

Category	Technology / Tool	Purpose / Description
Frontend	Lightning Web Components / React.js	Build interactive CRM dashboards and customer views

Backend	Salesforce Apex / Node.js	Handle business logic, workflows, and data processing
Database	Salesforce Objects / MySQL	Store customer, order, and product data
Cloud Platform	Salesforce Cloud / AWS	Host the CRM application and enable scalability
API Integration	RESTful API / GraphQL / Salesforce API	Connect with billing, email, or analytics services
Authentication	OAuth 2.0 / JWT	Secure user login and data access
Testing Tools	Apex Test Classes / Postman / Selenium	Validate functionality and performance
Version Control	Git / GitHub	Manage code versions and team collaboration
CI/CD Tools	Jenkins / GitHub Actions	Automate build, test, and deployment cycles
Analytics & Reporting	Salesforce Reports / Power BI / Tableau	Generate insights into sales and customer behavior
Notifications	SendGrid / Twilio / Firebase	Send SMS or email alerts to customers
Monitoring & Logging	Salesforce Setup Audit Trail / CloudWatch	Track performance and system health

4. Optional Technology Extensions

Feature	Recommended Tools / Services	Purpose
Payment Gateway	Razorpay / Stripe	Online billing and payment collection
Customer Engagement	Salesforce Marketing Cloud / Mailchimp	Automated campaigns, offers, and loyalty programs
Inventory Management Integration	ERP API / Odoo Connector	Real-time stock and product tracking
AI Recommendations	Salesforce Einstein / TensorFlow	Personalized jewelry recommendations
Data Backup	AWS S3 / Google Cloud Storage	Secure data storage and recovery

5. Example Technology Flow

**Customer → CRM Web App → Backend (Apex / Node.js) → Salesforce DB → API Integration
→ Reports & Insights**

This architecture ensures:

- Centralized data management for jewelry sales and inventory
- Seamless automation of customer and billing processes
- High-level security and scalability
- Real-time analytics and reporting