Solution Requirements

Date	06 Nov 2025
Team ID	FE7F7B420961141A91F48E734450581D
Project Name	CRM Application for Jewel Management - (Developer)
Maximum Marks	2 Marks

1. Introduction

This section outlines the **functional** and **non-functional requirements** of the proposed **CRM Application for Jewel Management**. The system aims to streamline jewelry business operations by managing customer relationships, sales, inventory, billing, and marketing activities under a unified platform.

2. System Overview

The **CRM for Jewel Management** will provide a centralized platform that:

- Manages customer data, preferences, and purchase history.
- Tracks jewelry inventory and stock levels.
- Handles sales quotations, billing, and payments.
- Supports marketing automation and customer engagement.
- Generates analytical reports and dashboards for management decisions.

3. Functional Requirements

3.1. Customer Management

- The system shall allow adding, updating, and deleting customer records.
- The system shall store customer contact details, purchase history, and preferences.
- The system shall allow categorization of customers (e.g., regular, VIP).
- The system shall support loyalty programs and reward tracking.
- The system shall enable communication via email/SMS for offers or follow-ups.

3.2. Inventory Management

- The system shall maintain records of all jewelry items (type, design, material, weight, price).
- The system shall allow adding new products and updating stock quantities.
- The system shall automatically update stock levels after each sale.
- The system shall generate alerts for low-stock or high-demand items.
- The system shall maintain supplier details and purchase records.

3.3. Sales and Billing

- The system shall enable quotation generation and conversion to invoices.
- The system shall record customer purchases and update inventory accordingly.
- The system shall support multiple payment methods (cash, card, online).
- The system shall automatically calculate taxes, discounts, and final totals.
- The system shall generate and print/download invoices.

3.4. User Management

- The system shall provide different access levels (Admin, Sales Executive, Accountant).
- The system shall manage user authentication and authorization securely.
- The system shall log all user activities for audit purposes.

3.5. Marketing & Communication

- The system shall allow scheduling promotional campaigns (email/SMS).
- The system shall segment customers based on purchase behavior.
- The system shall maintain campaign reports and response tracking.
- The system shall enable sending birthday or anniversary wishes automatically.

3.6. Reports and Analytics

- The system shall generate reports on sales, customers, and inventory trends.
- The system shall provide dashboards for management insights.

- The system shall allow data export in Excel/PDF formats.
- The system shall provide visual analytics using charts and graphs.

3.7. Repair and Service Management (Optional)

- The system shall manage jewelry repair or customization requests.
- The system shall track service status and notify customers upon completion.

4. Non-Functional Requirements

Category	Requirement Description
Performance	The system must support 500+ concurrent users without performance degradation.
Scalability	The application should be cloud-ready to support additional modules in future.
Security	Data encryption, secure authentication (JWT/OAuth), and SSL/TLS encryption required.
Reliability	System uptime should be at least 99.5%. Daily backups must be maintained.
Usability	Interface must be responsive, intuitive, and mobile-friendly.
Maintainability	Codebase should follow modular architecture with clear documentation.
Compatibility	The application should support major browsers (Chrome, Edge, Safari) and Android/iOS devices.
Localization	Multi-currency and multi-language support (optional).

5. Hardware and Software Requirements

Category	Specification
Server OS	Linux / Windows Server
Database Server	PostgreSQL / MySQL

Application Server	Node.js / Express.js
Client Environment	React.js or Angular
Cloud / Hosting	AWS / Azure / Google Cloud
Development Tools	VS Code, Postman, GitHub, Figma
Browser Support	Chrome, Firefox, Edge
Hardware	Minimum 8GB RAM, Quad-Core Processor (Development setup)

6. Constraints and Assumptions

- Users must have an internet connection to access the system.
- All jewelry images will be stored in secure cloud storage (AWS S3/Cloudinary).
- Sensitive data such as customer payment information will be encrypted.
- The CRM will follow data protection and privacy compliance (e.g., GDPR).

7. Success Metrics

- 30% reduction in manual sales and billing errors.
- 40% faster order processing time.
- Improved customer retention by 20% via targeted marketing.
- Enhanced visibility of inventory and sales through real-time analytics.