

Comprehensive CRM Design Proposal for Property Management Documentation

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This document serves as the final proposal for designing a dedicated Customer Relationship Management (CRM) system focused on documentation management for your property management website. The system is specifically tailored for the **Property Manager** as the primary user, emphasizing efficiency, security, and compliance in handling tenant and property-related documents.

The proposal is structured into three main components, each detailed in the attached documents:

1. Feature Set and Functional Specification (feature_specification.md)
2. High-Level System Architecture and Technology Stack (architecture_design.md)
3. Additional Considerations: Security, Compliance, and Scalability (additional_considerations.md)

1. Summary of Proposed Features

The core design principle is to move beyond simple file storage to a system that actively manages the document lifecycle.

Feature Category	Key Functionality	Property Manager Benefit
Data Organization	Hierarchical structure: Property -> Tenant -> Document.	Instant context and retrieval; documents are never lost in generic folders.
Advanced Search	Full-Text Search within documents; metadata filtering by Property, Tenant, Type, and Date.	Rapidly locate any document, even if the file name is forgotten.
Workflow Automation	Critical Date Tracking, Automated Alerts (e.g., 90/60/30 days before lease expiration).	Proactive management of deadlines, significantly reducing administrative oversight risk.
Compliance	Document Retention Policy tagging, Secure Archival, and Secure Deletion.	Ensures adherence to legal requirements for document retention and disposal.

Security	Document Versioning and comprehensive Audit Trail.	Maintains a complete history of all document changes and access for accountability.
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2. Proposed Technical Foundation

To support these features, a modern, scalable, and secure technical stack is recommended:

- **Architecture:** A robust **Three-Tier Architecture** (Presentation, Application, Data).
- **Technology Stack:**
 - **Frontend:** React or Vue.js (for a fast, modern user experience).
 - **Backend:** Python (FastAPI/Django) (for rapid development and powerful business logic).
 - **Database:** PostgreSQL (for transactional integrity and advanced querying).
 - **Document Storage:** AWS S3 (or equivalent cloud object storage) (for high durability and cost-effective storage of files).

This combination ensures high performance, security, and the ability to scale as your property portfolio grows.

3. Critical Non-Functional Requirements

The proposal places a strong emphasis on non-functional requirements to protect sensitive data:

- **Security:** Mandatory **Multi-Factor Authentication (MFA)**, **Encryption at Rest and in Transit (TLS/SSL)**, and secure file access via **Pre-Signed URLs**.
- **Compliance:** Implementation of a strict **Document Retention Policy** and features to support **Data Privacy** principles, including secure deletion of PII.
- **Scalability:** The use of cloud-native services and stateless application design ensures the system can handle a massive increase in document volume and user activity without performance degradation.

This comprehensive design provides a clear roadmap for developing a powerful and reliable documentation management CRM that will streamline your property management operations. Please review the attached detailed specifications.