

# Assignment 1

## Functional Requirements

### Must Have (M)

#### FR-001: Property Listing Management

Allow users to create, read, update, and delete property listings.

Justification: Essential for managing the inventory of properties available for sale or rent.

#### FR-002: User Registration and Authentication

Enable users to register and log in to the system securely.

Justification: Necessary for user identity management and security.

#### FR-003: Search Functionality

Provide a search feature to filter properties by various criteria (e.g., location, price, type).

Justification: Critical for users to quickly find suitable properties.

#### FR-004: Client Management

Manage client profiles, including contact details and preferences.

Justification: Important for tracking interactions and personalizing services.

#### FR-005: Transaction History

Store and retrieve historical data on property transactions.

Justification: Essential for auditing, reporting, and client relationship management.

FR-006: Property Photos and Documents Upload

Allow users to upload images and documents related to properties.

Justification: Enhances listings and provides comprehensive information to potential buyers/renters.

FR-007: Appointment Scheduling

Enable clients to schedule viewings or meetings with agents.

Justification: Streamlines the process of organizing property viewings.

FR-008: Payment Processing

Facilitate secure online payment processing for transactions.

Justification: Essential for managing financial transactions securely and efficiently.

FR-009: Reporting and Analytics

Generate reports on sales, rentals, and market trends.

Justification: Important for business insights and strategic decision-making.

FR-010: Notifications and Alerts

Send notifications for important events (e.g., new listings, price changes).

Justification: Keeps users informed and engaged with the system.

## Should Have (S)

11. FR-011: Property Comparison Tool - Allow users to compare multiple properties side-by-side. - Justification: Aids users in making informed decisions.

### FR-012: Wishlist Functionality

Enable users to save favorite properties for future reference.

Justification: Enhances user experience and engagement.

### FR-013: Agent Profiles

Provide detailed profiles for agents, including reviews and ratings.

Justification: Builds trust and transparency between clients and agents.

### FR-014: Integration with External APIs

Allow integration with external services (e.g., maps, mortgage calculators).

Justification: Expands functionality and improves user experience.

## Could Have (C)

15. FR-015: Virtual Tours - Enable users to conduct virtual property tours. -

Justification: Enhances engagement and can facilitate remote viewing.

### FR-016: Mobile App Support

Provide a mobile-friendly version of the system or a dedicated app.

Justification: Increases accessibility and user convenience.

## FR-017: Multi-language Support

Offer the system in multiple languages.

Justification: Expands the user base and caters to diverse clients.

Won't Have (W)

18. FR-018: Auction Functionality - Include features for auctioning properties. - Justification: Not currently a priority for the business model.

## FR-019: Blockchain Integration

Utilize blockchain for transactions and property records.

Justification: Not required in the initial phase; can be explored later.

## FR-020: Augmented Reality Features

Implement AR for enhanced property viewing experiences.

Justification: While innovative, not critical for the current system needs.

## Non-Functional Requirements

### NFR-001: Performance

The system should support at least 500 concurrent users with a response time of under 2 seconds.

Justification: Essential for user satisfaction and system reliability during peak usage.

## NFR-002: Security

Implement strong encryption for sensitive data and secure user authentication methods.

Justification: Protects user data and maintains trust in the system.

## NFR-003: Scalability

The database should be able to scale up to accommodate growth in data and user numbers without significant performance degradation.

Justification: Ensures long-term viability as the business expands.

## NFR-004: Backup and Recovery

Establish regular backup procedures and disaster recovery plans.

Justification: Critical for data integrity and business continuity in case of data loss.

## NFR-005: Usability

The user interface should be intuitive and accessible to users with varying levels of technical expertise.

Justification: Enhances user experience and encourages engagement with the system.

This structured approach ensures that the Real Estate system's database meets both immediate functional needs and long-term operational goals.