Product Requirements Document: Property Management System

1. Product Overview

This is a property management platform connecting **owners, management companies, tenants, and service providers**. The platform provides **document management, AI-powered analytics, and service request handling**.

2. Product Objectives

Goals

- Digitize property documentation with OCR capabilities
- Provide AI insights on property finances and maintenance
- Streamline service request workflows

3. Entity Model & Relationships

Core Entities

User (Base Entity)

├── Owner

├── Property Manager (Admin/Staff)

├── Tenant

└── Service Provider Staff

Organization

├── Property Management Company

└── Service Provider Company

Property

├── House/Apartment Unit

├── Lease Agreement

└── Document Repository

Service Request

├── Ticket

└── Work Order

Key Relationships

- **Owner** → owns **Properties**
- **Owner** → authorizes **Property Management Org**
- **Property Management Org** → manages **Properties** from different owners
- **Property** → has one **Lease** → linked to **Tenants**
- **Service Request** → assigned to **Service Provider** → delegated to **Service Staff**
- **Documents** → tagged to **Property**

4. Core Features

Feature 1: Document Management System

4.1.1 Document Capture & Storage

- **Upload Methods**: Web file uploading, mobile photo
- **OCR Processing**:
  - Text extraction from photos/scans
  - Field detection (dates, amounts, vendor names)
  - Support for receipts, invoices, contracts, and inspection reports
- **Auto-categorization**:

- Financial (receipts, invoices, tax documents)
- Legal (leases, insurance, warranties)
- Maintenance (inspection reports, work orders)
- Compliance (permits, certificates)

4.1.2 Document Organization

- Folder structure: Property → Year → Category → Document
- Custom tagging
- Version control
- Expiration tracking with alerts

4.1.3 Search & Retrieval

- Full-text search
- Filters: property, date, category, vendor, amount
- Recent documents dashboard
- Bulk export

Feature 2: AI Property Analytics

4.2.1 Financial Analysis

- **Cash Flow**:
  - Monthly income vs. expenses
  - Year-over-year comparison
  - Seasonal patterns
- **Anomaly Detection**:
  - Flag unusual expenses (40% increase triggers alert)
  - Identify duplicate charges
  - Benchmark against local properties
- **ROI Metrics**:
  - Cap rate tracking
  - Net operating income trends
  - Maintenance cost per square foot

4.2.2 Predictive Maintenance

- Maintenance scheduling based on historical patterns
- Budget forecasting for major expenses
- Risk scoring by property

4.2.3 Market Intelligence

- Rent comparison with market rates
- Vacancy pattern analysis
- Monthly property value estimates

Feature 3: Service Request System

4.3.1 Request Submission

- **Request Form**:
  - Category: Plumbing, Electrical, HVAC, Appliance, Other
  - Urgency: Emergency, High, Normal, Low
  - Photo/video attachment
- Common issue templates
- Tenant availability scheduling

4.3.2 Request Routing

- **Routing Rules**:
  - Emergency requests trigger immediate notifications
  - Auto-assignment by issue type
  - Escalation based on SLA
- **Vendor Network**:
  - Pre-vetted providers by category
  - Performance metrics
  - Multi-vendor quote requests

4.3.3 Tracking

- Status updates: Submitted → Reviewed → Assigned → In Progress → Completed
- Three-way messaging (tenant, manager, provider)
- Request history log

5. User Workflows

Owner/Property Manager

1. **Property Onboarding**
   - Add property details
   - Upload documents
   - Configure notifications
2. **Monthly Review**
   - Review the AI report
   - Approve recommended actions
   - Categorize documents
3. **Service Requests**
   - Triage requests
   - Assign providers
   - Approve work orders

Tenant

1. **Service Request**
   - Submit the issue with photos
   - Track status
   - Provide feedback

Service Provider

1. **Work Orders**
   - Accept assignments
   - Update progress
   - Submit invoices