

Software Design Requirements (SDR)

Project: Digital Real Estate Rental Platform

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1. Introduction

This document defines the software design requirements for a digital rental platform that connects landlords and tenants. The system enables landlords to list properties (monthly and yearly rentals), while tenants can browse, book, pay, and manage contracts electronically. All long-term rental contracts will be integrated with Saudi Arabia's Ejar platform for official documentation.

2. Objectives

- Provide a secure, user-friendly web platform for real estate rentals.
- Enable landlords to easily manage their properties, contracts, and occupancy.
- Enable tenants to search, book, and manage their rental units online.
- Support Arabic (RTL) and English (LTR).
- Lay the foundation for future expansion into mobile applications.

3. Scope (MVP)

- Web-based application (desktop + mobile responsive).
- Two main user roles: Landlord and Tenant.
- Integration with payment gateways (HyperPay, PayTabs, Apple Pay, STC Pay).
- Contract documentation with Ejar (planned in Phase 2).

4. Core Features

Tenant Features

1. Registration/Login (Email or Mobile).
2. Property search with filters (city, price, monthly/yearly).
3. Property details (photos, description, location, amenities).
4. Booking flow (plan selection, start date, cost summary).
5. Online payment and confirmation.
6. Tenant Dashboard:
 - Active contracts.
 - Payment history.
 - Notifications (renewals, due dates).

Landlord Features

1. Registration/Login.
2. Landlord Dashboard:
 - Properties overview.
 - Occupancy status (vacant/occupied).
 - Contract notifications (new, expiring, renewal).
 - Revenue summary (monthly/annual).
 - Easy access to rentals, invoices, and financial reports.
3. Add/Edit Property:
 - Address, details, price (monthly/yearly).
 - Image upload.
4. Contract management:
 - View, renew, terminate.
 - Download PDF contracts.

5. System Requirements

Functional

- User authentication with role-based access.
- Database for users, properties, bookings, contracts.
- Payment integration with VAT support.
- Bilingual UI/UX (Arabic + English).

Non-Functional

- Responsive design (desktop + mobile).
- Secure data handling (SSL encryption, data privacy).
- Scalable architecture for future mobile app integration.
- Availability: 99.5% uptime.

6. Deliverables

- Wireframes: ~10 core screens (Login, Tenant Home, Property Details, Booking Flow ×2, Tenant Dashboard, Landlord Dashboard, Add Property, Contracts, Settings).
- High-fidelity UI/UX design with Arabic & English support.
- Prototype (Figma) with interactive flows.
- Design System: typography, color palette, components.

7. Business Model (Summary)

- **Revenue Streams:**
 - Transaction commission.
 - Subscription fees for landlords (premium listings).
- **Target Customers:**
 - Landlords/property owners.
 - Tenants seeking monthly/yearly rentals.

8. Future Expansion

- Daily rentals.
- Native mobile apps (iOS & Android).
- Advanced landlord analytics.
- Third-party integrations (maintenance, insurance).