

# SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

**Project Name:** Smart Property Portal

**Version:** 1.1

**Prepared For:** Real Estate Listing Platform

**Prepared By:** Digithoughts Solutions

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## 1. INTRODUCTION

### 1.1 Purpose

This document defines the functional and non-functional requirements for developing a full-scale **Property Listing Portal** that enables property buyers, sellers, brokers, builders, and advertisers to list, search, promote, and monetize real estate inventory through listings and digital advertisements.

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### 1.2 Scope

The system will function as a comprehensive real estate marketplace with built-in **Advertising Solutions** including banner ads, sponsored listings, promoted projects, and geo-targeted campaigns for developers, agents, and third-party advertisers.

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## 2. SYSTEM OVERVIEW

The Property Portal shall:

- Enable real estate listings and discovery
- Support verified agents and builders
- Offer lead management and CRM features

- Provide premium placements and subscriptions
  - Deliver a self-serve digital advertising platform
  - Monetize traffic through banner ads and sponsored content
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## 3. USER ROLES

### 1. Visitor (Guest)

- Browse listings
- View advertisements
- Click ads and sponsored content

### 2. Registered User (Buyer/Tenant)

- Save favorites
- Contact agents
- Submit inquiries
- View personalized ads

### 3. Agent/Broker

- Create listings
- Promote properties via ads
- Track leads and ad performance

### 4. Builder/Developer

- Post projects
- Launch ad campaigns

- Promote inventory

#### **5. Advertiser (Third-party)**

- Create banner or native ad campaigns
- Upload creatives
- Set targeting and budget

#### **6. Admin**

- Approve listings and ads
- Manage campaigns
- Track revenue and performance

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## **4. FUNCTIONAL REQUIREMENTS**

### **4.1 Authentication & User Management**

(Same as earlier)

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### **4.2 Property Listing Module**

(Same as earlier)

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### **4.3 Search & Filter Module**

(Same as earlier)

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### **4.4 Property Detail Page**

(Same as earlier)

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## **4.5 Lead Management**

(Same as earlier)

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## **4.6 Premium Listings & Subscriptions**

(Same as earlier)

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## **4.7 ADVERTISING SOLUTION MODULE**

### **4.7.1 Ad Inventory Types**

The system shall support the following ad formats:

- Homepage banners (top, middle, footer)
  - Listing page banners
  - Search result sponsored cards
  - Property detail page featured slots
  - Native in-feed ads
  - City/locality takeover ads
  - Push notification ads (optional)
  - Email newsletter ads (optional)
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### **4.7.2 Advertiser Dashboard**

Advertisers, agents, and builders shall be able to:

- Create ad campaigns
- Upload ad creatives (image/video/HTML5)
- Define ad copy and CTA
- Set campaign duration
- Set daily/monthly budget
- Choose pricing model:
  - CPM (Cost per 1,000 impressions)
  - CPC (Cost per click)
  - CPL (Cost per lead)
- Select targeting options:
  - City / Locality
  - Property type
  - User interest
  - Device type
  - Time of day
- Monitor performance metrics:
  - Impressions
  - Clicks
  - Leads
  - CTR
  - Spend
  - ROI

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### **4.7.3 Sponsored Listings**

- Promote selected properties
- Appear at top of search results
- Highlight badge: “Sponsored”
- City-based priority slots
- Daily bidding or fixed pricing

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### **4.7.4 Campaign Approval Workflow**

- Advertiser submits campaign
- Admin reviews creatives
- Compliance check (RERA, misleading content)
- Approve / Reject / Request changes

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### **4.7.5 Billing & Payments**

- Wallet-based ad spend
  - Online payment integration
  - Auto-debit
  - Invoice generation
  - Refund management
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### **4.7.6 Ad Serving Engine**

- Real-time ad delivery
  - Frequency capping
  - Geo-fencing
  - A/B creative rotation
  - Fraud detection
  - Impression and click tracking
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### **4.7.7 Reporting & Analytics**

- Campaign-level reports
  - City-wise performance
  - Conversion tracking
  - Revenue attribution
  - Downloadable CSV reports
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## **4.8 Admin Panel (Extended)**

Admin shall be able to:

- Manage ad inventory
- Define ad pricing
- Approve/reject campaigns
- Pause or terminate ads

- Track ad revenue
  - View advertiser performance
  - Manage featured slots
  - Blacklist misleading advertisers
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## **5. NON-FUNCTIONAL REQUIREMENTS**

(Existing sections apply)

Additional for Advertising:

- Real-time impression tracking
  - Click latency < 100 ms
  - Fraud detection engine
  - High-availability ad delivery
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## **6. SYSTEM ARCHITECTURE**

(Extended)

- Ad Server Microservice
  - Campaign Engine
  - Analytics Service
  - Billing Service
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## **7. WORKFLOWS**

### **7.3 Ad Campaign Flow**

1. Advertiser logs in
  2. Creates campaign
  3. Uploads creatives
  4. Selects targeting & budget
  5. Submits for approval
  6. Admin approves
  7. Campaign goes live
  8. Ad served to users
  9. Metrics tracked
  10. Invoice generated
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## **8. FUTURE ENHANCEMENTS**

- Programmatic ad bidding
  - AI ad optimization
  - Retargeting campaigns
  - Lookalike audiences
  - Real estate lead scoring
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## **9. REPORTING MODULE (Extended)**

- Ad revenue by city
  - Campaign ROI
  - Top advertisers
  - Sponsored listing revenue
  - Impressions vs conversions
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## **10. COMPLIANCE**

- RERA ad guidelines
  - Consumer Protection Act
  - Google Ads–style disclosure
  - GDPR
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## **11. ASSUMPTIONS & CONSTRAINTS**

- Ads subject to admin approval
  - Budget exhaustion pauses campaigns
  - Third-party ad integration optional
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## **12. ACCEPTANCE CRITERIA**

- Ad module fully operational
- Accurate impression/click tracking

- Payment reconciliation working
  - Reporting verified
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## **OPTIONAL ADD-ONS**

- Push ads
  - WhatsApp ad notifications
  - Video ad hosting
  - Third-party ad network integration
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