SRS DOCUMENT

DOAP – (Digital Outdoor Advertising Platform)

1.INTRODUCTION

1.1Problem Statement

Outdoor digital advertising lacks a centralized platform that enables advertisers to easily discover screens, book slots, manage campaigns, and ensure content compliance, while also allowing screen owners to manage their assets efficiently.

2. OVERALL DESCRIPTION

2.1 Product Perspective

DOAP is a **standalone web application** developed using a **client–server architecture**.It follows a modular and role-based design, ensuring separation of responsibilities and scalability.

2.2 Product Functions

The system provides the following major functions:
- User authentication and role management
- Screen registration and discovery
- Booking and scheduling
- Advertisement submission
- Content validation and approval
- Payment processing
- Notifications and confirmations
- Administrative monitoring

2.3 User Classes and Characteristics

2.3.1 Advertiser
- Discovers and books advertising screens
- Submits advertisement creatives
- Makes payments

2.3.2 Screen Owner
- Registers and manages screens
- Defines pricing and availability
- Approves or rejects bookings

2.3.3 Advertisement Designer (Independent)
- Designs or edits advertisement creatives **outside DOAP**
- Uploads finalized creatives for validation

- Responds to rejection feedback

2.3.4 Admin
- Manages users and roles
- Approves screens and advertisements
- Monitors system activity

2. FUNCTIONAL REQUIREMENTS

FR-1 User Authentication

Actors: All users

Description: The system shall allow secure user registration and login using role-based access.

Output: Access to role-specific dashboard

FR-2 Screen Discovery

Actors: Advertiser

Description: Advertisers shall discover screens using list and map views.

FR-3 Screen Detail View

Actors: Advertiser

Description: Advertisers shall view complete screen details including location, pricing, and availability.

FR-4 Screen Registration & Management

Actors: Screen Owner

Description: Screen owners shall register, update, and manage their screens.

FR-5 Booking Approval

Actors: Screen Owner

Description: Screen owners shall approve or reject booking requests.

FR-6 Advertisement Submission

Actors: Advertiser, Advertisement Designer

Description: Finalized advertisement creatives shall be uploaded for review.

FR-7 Content Validation (Content Check)

Actors: Admin

Description: The system shall validate advertisement creatives against content policies.

Validation includes:

Prohibited keywords

Offensive content

Format and resolution checks

FR-8 Booking & Scheduling

Actors: Advertiser, Screen Owner

Description: Advertisers shall book screens for selected time slots.

FR-9 Payment Processing

Actors: Advertiser

Description: Payments shall be securely processed for confirmed bookings.

FR-10 Screen Categorization

Actors: Screen Owner, Admin

Description: Screens shall be categorized based on type and location.

FR-11 Booking Confirmation Notification

Actors: System
Description: The system shall send booking confirmation notifications.

FR-12 AI Screen Recommendation (Basic)

Actors: Advertiser
Description: The system shall recommend screens based on campaign data.

FR-13 Multi-Screen Campaign Booking

Actors: Advertiser
Description: Advertisers shall book multiple screens under a single campaign.

4. NON-FUNCTIONAL REQUIREMENTS

4.1 Security

- JWT-based authentication
- Role-based authorization
- Encrypted credentials

4.2 Performance

- Response time under 2 seconds
- Concurrent user support

4.3 Scalability

- Modular architecture
- Horizontal scalability

4.4 Reliability & Availability

- 99% uptime
- Graceful error handling

4.5 Maintainability

- Layered architecture
- Loose coupling

Conclusion:

DOAP (Digital Outdoor Advertising Platform) is a centralized and role-based system designed to simplify and manage digital outdoor advertising workflows by connecting advertisers, screen owners, independent advertisement designers, and administrators on a single platform. The system focuses on screen discovery, booking, scheduling, payment handling, content validation, and administrative monitoring, while explicitly excluding advertisement creation or editing, which is performed independently outside the platform. With clear scope definition, modular architecture, and well-defined responsibilities, DOAP provides a scalable and transparent solution suitable for both academic evaluation and real-world deployment.