Urban Property Management System - Software Requirements Specification (SRS)

1. Introduction

The Urban Property Management System is a web application designed to streamline property management processes for administrators, owners, and users. This system facilitates property listing, booking, rent payments, and utility management. It provides authentication, authorization, and profile management functionalities for users, owners, and administrators.

2. System Overview

The system consists of the following modules:

- Authentication and Authorization
- Profile Management
- Property Listing and Booking
- Rent Utility Management

3. Functional Requirements

3.1 Authentication and Authorization

1. Users (including admins, owners, and regular users) must be able to log in using their email address and password.
2. JSON Web Token (JWT) authentication must be implemented for secure access to the system.
3. New users can sign up with roles specified as either user or owner.

3.2 Profile Management

1. All users, including admins, owners, and regular users, should be able to update their profiles.
2. Profile updates may include personal information such as name, contact details, and profile picture.

3.3 Property Listing and Booking

1. Owners should be able to add flats to the system with details and images.

2. Users can browse through the list of available flats and book them.
3. Once booked, the flat should be marked as unavailable for further bookings.
4. Users who have rented a flat can initiate rent payments and manage utility payments.

3.4 Rent Utility Management

1. The system should maintain a rent utility table containing data such as rent amount, electric bill, water bill, etc.
2. Users should be able to view and pay their rent and utility bills through the system.

4. Non-Functional Requirements

4.1 Performance

1. The system should respond to user interactions within 2 seconds under normal load conditions.
2. Property listing and booking operations should be scalable to handle a large number of users concurrently.

4.2 Security

1. User authentication must be secure, preventing unauthorized access to sensitive data.
2. Personal information and payment details must be encrypted to ensure data privacy.

4.3 Usability

1. The user interface should be intuitive and easy to navigate for users of all technical backgrounds.
2. Error messages should be informative and guide users to resolve issues effectively.

5. Database Design

The system will utilize the following tables:

1. **Users Table**: Stores information about users including their roles (admin, owner, user).
2. **Rent Utility Table**: Contains data related to rent and utility payments.
3. **Image Table**: Stores images associated with property listings.
4. **Flat Table**: Stores details of available flats including owner information.

6. Glossary

- **Admin**: A user with administrative privileges.
- **Owner**: A user who owns one or more properties listed in the system.
- **User**: A regular user who can browse, book, and manage rented properties.

7. Assumptions and Constraints

- The system will be developed using modern web technologies such as HTML5, CSS3, JavaScript, and a backend framework like Node.js or Django.
- The database management system (DBMS) will support SQL queries for efficient data retrieval and manipulation.
- The system will be hosted on a reliable web hosting service with sufficient bandwidth and storage capacity.

8. Revision History

Version	Date	Description
1.0	2024-02-20	Initial draft of the document

This Software Requirements Specification (SRS) document outlines the functional and non-functional requirements for the Urban Property Management System. It serves as a guideline for the development team to implement the desired features and ensure the system meets the expectations of its stakeholders.