

Hotel Management System Documentation

The Hotel Management System is designed to manage hotel operations, including booking rooms and managing user information. The project is divided into two services: the Booking Service and the User Service.

Booking Service

The Booking Service manages the process of booking rooms. This includes checking room availability, making reservations, and processing payments in the hotel system. It interacts with the database to store booking details and retrieve room availability and payment information.

API Endpoints

Room List

- **Description:** This endpoint lists available rooms, retrieves their details, and potentially adds new rooms via a POST request.
- **Error Handling:** If an error occurs, it means that the room number provided is already assigned to an existing room in the system.

Booking List

- **Description:** This endpoint provides a way to list all bookings in the hotel system, retrieve their details, and create new bookings.

Payment List

- **Description:** This endpoint manages hotel payments. It provides a way to list all payments in the hotel system, retrieve their details, and create new payments.

Booking Process

Room Booking

- Users can book a room by providing the required details.
- The Booking Service checks room availability and confirms the booking.
- Booking details are saved in the database.

User Service

The User Service manages user information and authentication. It handles user registration, profile management, and authentication tokens. This service provides endpoints for user registration, login, profile updates, and retrieving user information. It implements authentication mechanisms, likely using JWT (JSON Web Tokens) or sessions, and stores and retrieves user data, including personal information.

Key Components

- **users/models.py**
 - Defines the database models for user information.
- **users/serializers.py**
 - Handles serialization of user data.
- **users/views.py**
 - Contains the logic for handling API requests related to users.
- **users/urls.py**
 - Maps URLs to the corresponding views.
- **user_service/settings.py**
 - Configures settings for the user service, including authentication.
- **user_service/urls.py**
 - Maps the overall URL configuration.

User Operations

- **User Registration:** Users can register by providing their details.
- **User Authentication:** The service provides endpoints for login and authentication token management.
- **Profile Management:** Users can update their profile information.
- **Data Storage:** User data, including personal information, is stored and retrieved from the database.

How It Works

- **Booking Service**
 - **Room List:** Provides a list of available rooms and their details.
 - **Booking List:** Lists all bookings and allows new bookings to be created.
 - **Payment List:** Manages and lists all payments in the hotel system.
- **User Service**

- **Registration:** Users can register by providing their details.
- **Authentication:** Users can log in to access the system using authentication tokens.
- **Profile Management:** Users can update their profiles and retrieve their information.