

## Property Rental Management System – Backend Flow & REST API

### 1. System Flow Overview

1. User browses properties.
2. Tenant creates a booking request.
3. Property manager approves or rejects the booking.
4. If approved, a rental (active lease or stay) is created.
5. Payments are made against the rental over time.
6. Rental eventually completes or is terminated.

Core relationship: PROPERTY → BOOKING → RENTAL → PAYMENTS

### 2. Role-Based Access Summary

- Admin (admin)
  - Manage all users
  - Approve property manager applications
  - Manage categories
  - View all bookings, rentals, and payments
  - Delete any property
- Property Manager (manager)
  - Manage only their properties
  - Upload images
  - Approve/reject bookings for their properties
  - View rentals and payments for their properties
- User (user)
  - Register and login
  - Browse properties
  - Create bookings
  - Make payments
  - View their own rentals and payments

### 3. Booking → Rental → Payment Explanation

Booking: A reservation request for a date range. No money is finalized yet.

Rental: Created only after booking approval. Represents real occupancy or lease.

Payments: Each record is a financial transaction tied to a rental. Supports monthly payments, partial payments, deposits, and full payments.

## 4. Full REST API Endpoints

### AUTH

Method	Endpoint
POST	/auth/register
POST	/auth/login
POST	/auth/refresh

### ADMIN

Method	Endpoint
GET	/admin/users
PATCH	/admin/:id/terminate
POST	/admin/categories
PATCH	/admin/categories/:id
DELETE	/admin/categories/:id
GET	/admin/manager-applications
GET	/admin/manager-applications/:id
PATCH	/admin/manager-applications/:id/approve
PATCH	/admin/manager-applications/:id/reject
PATCH	/admin/property/:id/approve
PATCH	/admin/property/:id/reject
PATCH	/admin/property/:id/suspend
GET	/admin/payments
GET	/admin/payments/summary

### PROPERTY MANAGER

Method	Endpoint
POST	/properties
PATCH	/properties/:id

DELETE	/properties/:id
GET	/properties/mine
POST	/properties/:id/images
PATCH	/bookings/:id/approve
PATCH	/bookings/:id/reject
GET	/rentals/property/:propertyId
GET	/payments/property/:propertyId
GET	/payments/summary/mine

## USER

Method	Endpoint
GET	/properties
GET	/properties/:id
POST	/bookings
GET	/bookings/me
POST	/rentals/:id/payments
GET	/payments/me
POST	/manager-applications
GET	/manager-applications/me
GET	/payments/:id
PATCH	/bookings/:id/cancel