PARKMATE

PHASE 2 DOCUMENTATION

1) UI SCREEN DESIGN

Login or Sign Up

Parking Made Easy,
Wherever You Go
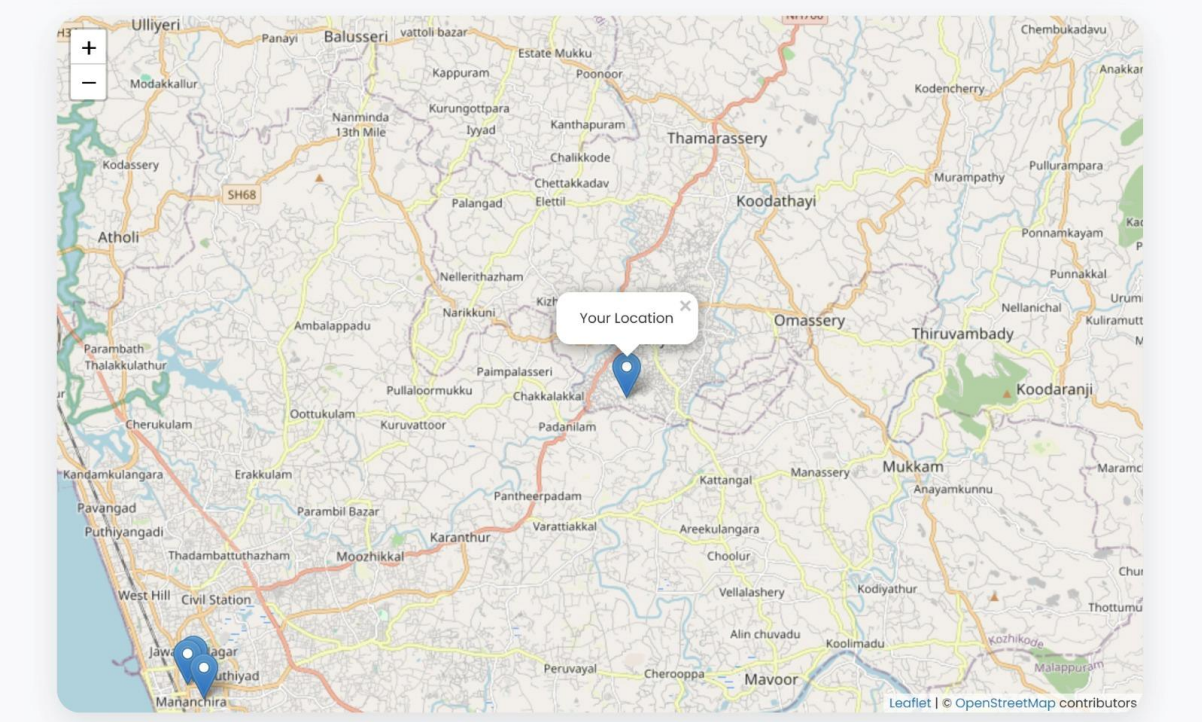
Hourly/Daily Parking   ⌄

Enter your destination

Select date and time

Find Parking Spots

Admin Dashboard

Logout

Overview

Total Customers	Total Operators	Bookings Today	Revenue Today
560	**351**	**257**	**₹9500**
View/Edit	View/Edit		

Settings

Parking Rates (per hour)

50

Save Settings

Parking Operator

Overview
Bookings
Payments
Slot Management
Analytics

Overview

Logout   Refresh Data

Total Slots	Available Slots	Bookings Today	Revenue Today
50	**35**	**15**	**₹450**

Operator Login

Email

Enter your email

Password

Enter your password

Login

Don't have an account? Sign Up

Operator Sign Up

Full Name

Enter your full name

Email

Enter your email

Password

Enter your password

Sign Up

Already have an account? Login

Parking Operator

- Overview
- Bookings
- Payments
- Slot Management
- Analytics

Bookings

Refresh Data

Booking ID	Customer Name	Slot Number	Date	Time Range	Payment Status	Booking Status	Actions
1	John Doe	A1	2025-02-16	10:00 AM - 12:00 PM	Paid	Approved	Approved
2	Jane Smith	B2	2025-02-16	2:00 PM - 4:00 PM	Pending	Pending	Approve Reject
3	Alice Johnson	C3	2025-02-16	6:00 PM - 8:00 PM	Paid	Approved	Approved

Payments

Refresh Data

Payment ID	Customer Name	Amount	Status	Date

Parking Operator

- Overview
- Bookings
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Slot Management

Add New Slot

Slot ID	Slot Number	Status	Booking Duration	Actions	
1	A1	Available	No bookings	Edit	Delete
2	A2	Occupied	10:00 AM – 12:00 PM 2:00 PM – 4:00 PM	Edit	Delete
3	B1	Under Maintenance	No bookings	Edit	Delete
4	c2	Available	No bookings	Edit	Delete

Parking Operator

- Overview
- Bookings
- Payments
- Slot Management
- Analytics

Analytics

Today's Revenue	This Week's Revenue	This Month's Revenue
₹450	₹2,100	₹8,500

Analytics

Monthly Revenue Trends
Monthly Revenue
Revenue (₹)
5,000
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Month

2) INTERACTION/STATE DIAGRAM OF THE SYSTEM
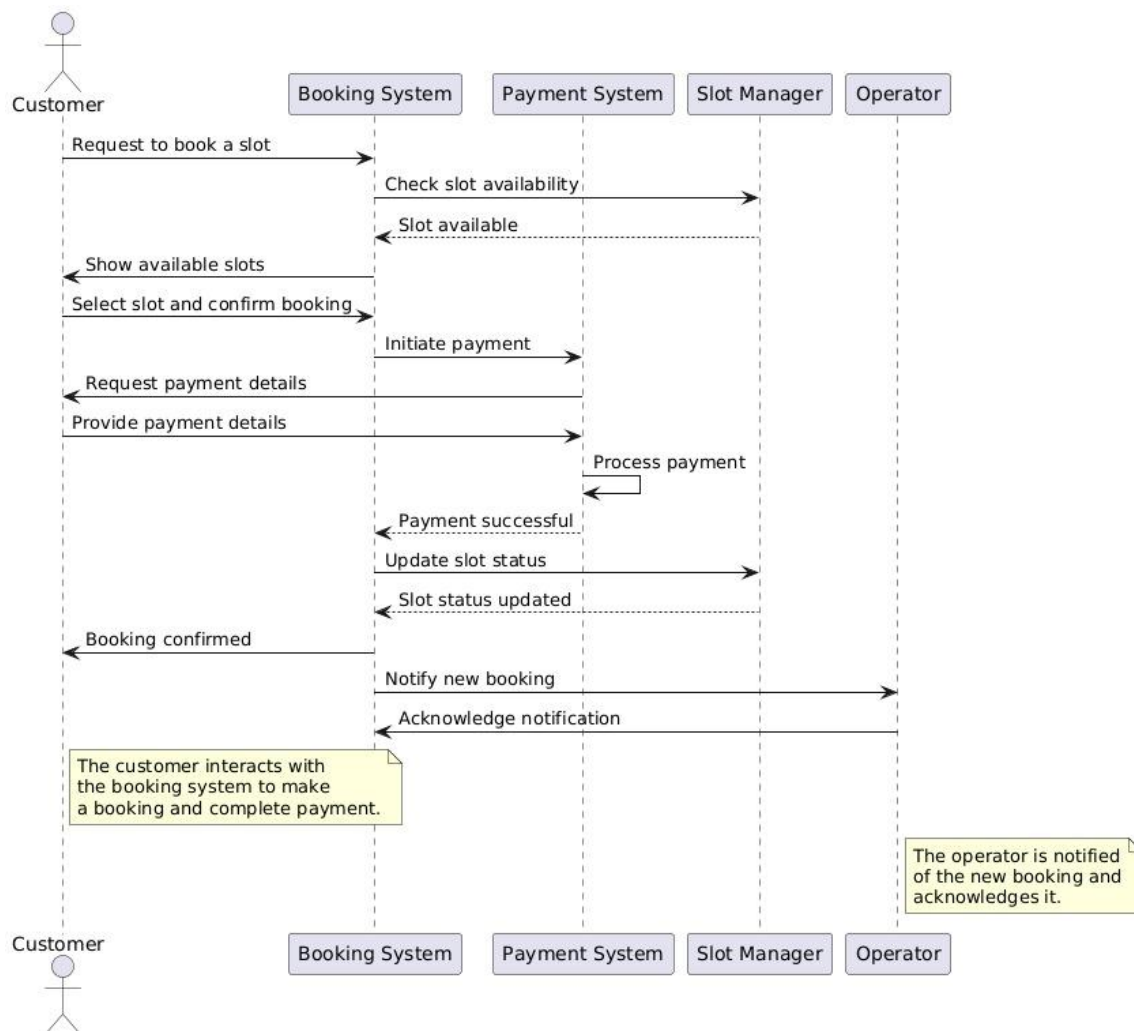
Explanation of the Sequence Diagram

Participants

Customer:

Initiates the booking process and provides payment details.

Booking System:

Handles the booking process, interacts with the Slot Manager and Payment System.

Payment System:

Processes the payment and confirms the transaction.

Slot Manager:

Manages slot availability and updates slot status after a booking.

Operator:

Receives notifications about new bookings and acknowledges them.

Sequence of Interactions

- The Customer requests to book a slot.

- The Booking System checks slot availability with the Slot Manager.

- The Slot Manager confirms that the slot is available.

- The Booking System shows available slots to the Customer.

- The Customer selects a slot and confirms the booking.

- The Booking System initiates payment with the Payment System.

- The Payment System requests payment details from the Customer.

- The Customer provides payment details.

- The Payment System processes the payment.

- The Payment System confirms the payment to the Booking System.

- The Booking System updates the slot status with the Slot Manager.

- The Slot Manager confirms the slot status update.

- The Booking System confirms the booking to the Customer.

- The Booking System notifies the Operator about the new booking.

- The Operator acknowledges the notification.

3)   CLASS DIAGRAM
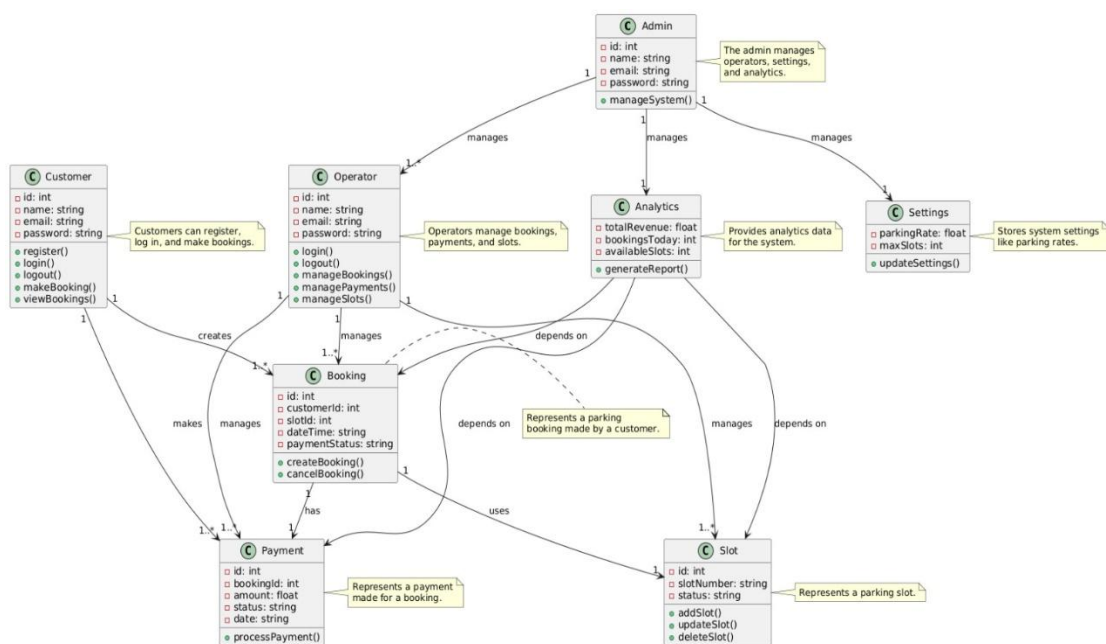
Explanation of the Full Class Diagram

Roles

Admin:

- Manages Operators, Settings, and Analytics.

- Attributes: id, name, email, password.

- Methods: manageSystem().

Customer:

- Can register, log in, and make bookings.

- Attributes: id, name, email, password.

- Methods: register(), login(), logout(), makeBooking(), viewBookings().

Operator:

- Manages Bookings, Payments, and Slots.

- Attributes: id, name, email, password.

- Methods: login(), logout(), manageBookings(), managePayments(), manageSlots().

Entities

Booking:

- Represents a parking booking made by a customer.

- Attributes: id, customerId, slotId, dateTime, paymentStatus.

- Methods: createBooking(), cancelBooking().

Payment:

- Represents a payment made for a booking.

- Attributes: id, bookingId, amount, status, date.

- Methods: processPayment().

Slot:

- Represents a parking slot.

- Attributes: id, slotNumber, status.

- Methods: addSlot(), updateSlot(), deleteSlot().

Analytics:

- Provides analytics data for the system.

- Attributes: totalRevenue, bookingsToday, availableSlots.

- Methods: generateReport().

Settings:

- Stores system settings like parking rates and maximum slots.

- Attributes: parkingRate, maxSlots.

- Methods: updateSettings().

Relationships

- Admin manages Operators, Settings, and Analytics.

- Operator manages Bookings, Payments, and Slots.

- Customer creates Bookings and makes Payments.

- Booking is associated with Payment and Slot.

- Analytics depends on Booking, Payment, and Slot.