SMART PARK JO

HASHEM & YAMAN

Development Environment & Methodology

Development Methodology :

The project followed the Agile development methodology, which focuses on building the system in small parts and improving it continuously. An Iterative approach was used, meaning the application was developed in multiple versions. After each version, testing and improvements were made before moving to the next stage.

Testing:

The application was tested using manual testing during development. Each feature was tested after implementation to ensure it worked correctly. Bugs and performance issues were fixed after every iteration to improve stability and user experience.

UI/UX Design :

The application design focuses on a simple, clean, and user-friendly interface. Consistent colors, organized layouts, and clear navigation were used to make the app easy to understand and comfortable for users.

Project Structure :

The code was organized into clear sections such as screens, widgets, services, and models. This structure improves code readability, maintainability, and makes future updates easier.

Security :

Security was handled using Firebase Authentication to ensure only authorized users can access their data. Firestore security rules were also used to protect the database and prevent

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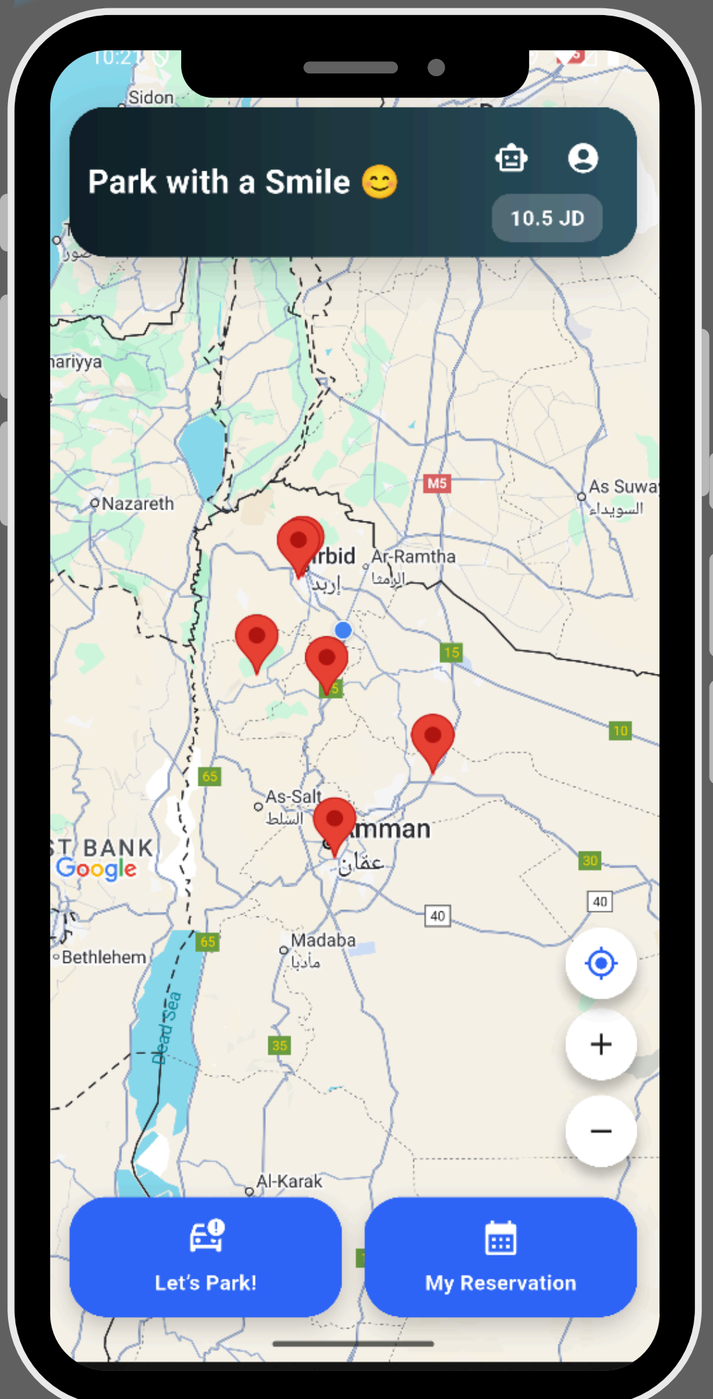
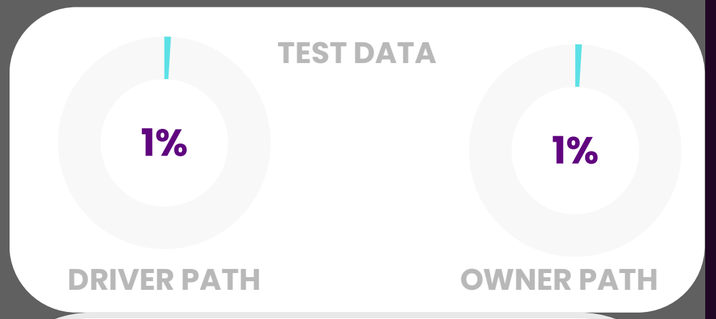
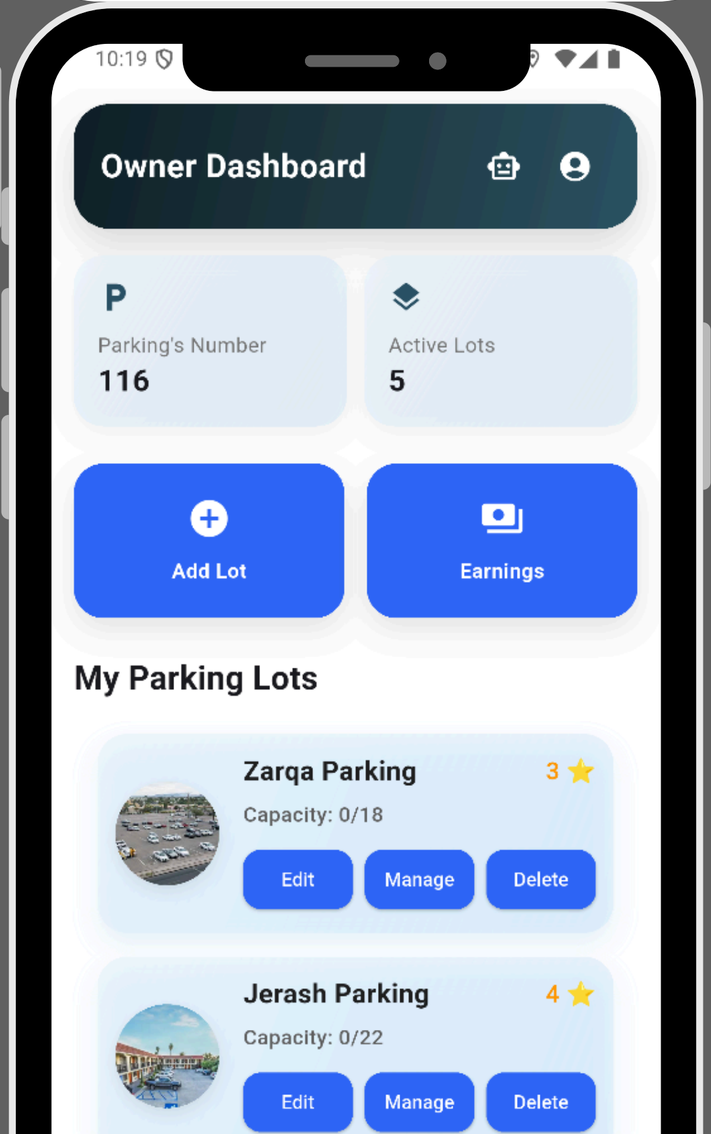






Welcome To Our Application

Our app is a smart parking management and reservation system designed for both parking owners and drivers. Parking owners can add, edit, and manage their parking spaces, control prices and availability, track earnings, manage their profile, and communicate through a help center connected directly with the admin.

Drivers can search and reserve parking spaces sorted from nearest to farthest, view reservation history, manage their profile, and get instant support through the help center connected directly with the admin also.

The app uses an advanced QR code system to automate parking reservations and payments. After reserving a parking space, the driver receives a QR code that is scanned by a camera at the parking entrance to start time and cost calculation. When the driver exits, the QR code is scanned again to stop the reservation, generate a bill, and automatically deduct the amount from the driver's wallet. Drivers must add money to their wallet before reserving, ensuring a fast, secure, and cash-free parking experience.

Application Advantages

01
Smart Parking Management
Automates parking reservations, timing, and payments using QR code technology.

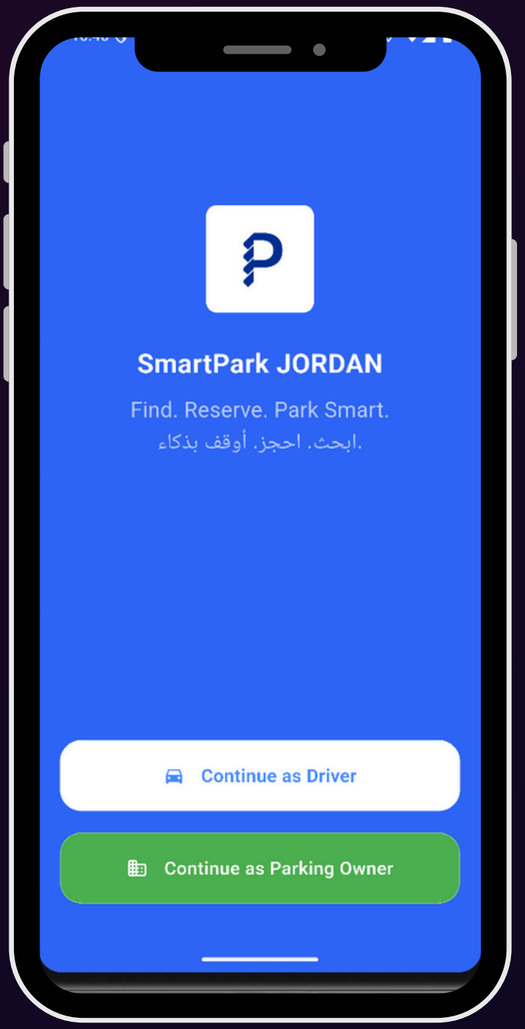
02
Time-Saving Experience
Reduces time spent searching for parking for drivers and managing operations for owners.

03
Cashless & Secure Payments
Integrated wallet system ensures fast, safe, and transparent transactions.

02
Real-Time Tracking & Billing
Accurate time and cost calculation with instant bill generation.

04
User-Friendly for All Roles
Designed with separate paths for drivers and parking owners, each with tailored features.

06
Scalable & Admin-Controlled System
Includes admin support, help center, and monitoring, making it suitable for cities and large parking networks.



Application Features For Parking Owners

01

- Add, edit, and delete parking
- Control pricing, availability, and capacity
- Real-time earnings and reservation tracking

02

- Profile management
- Help center connected directly with admin
- Parking Rate

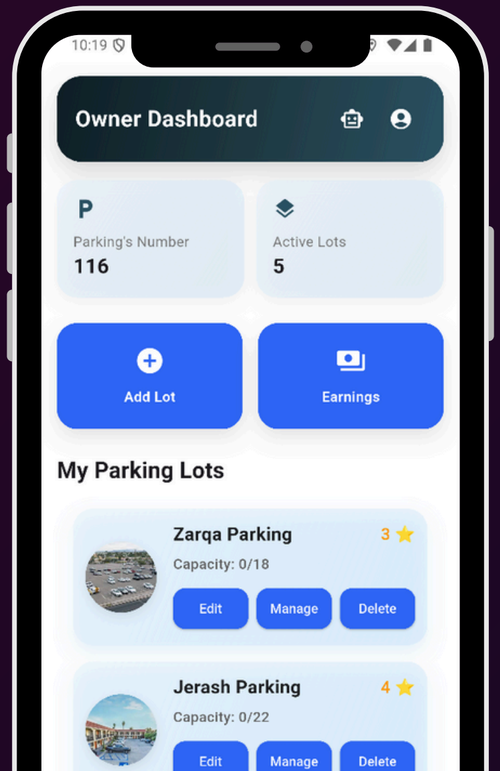
Application Features For Driveres

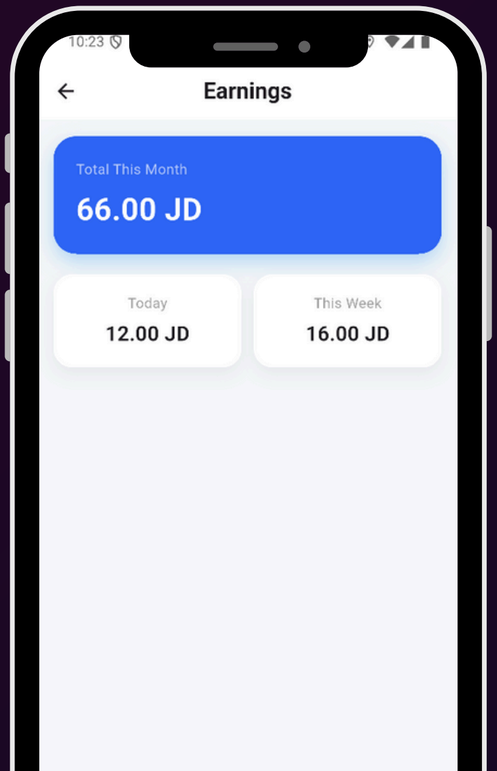
01

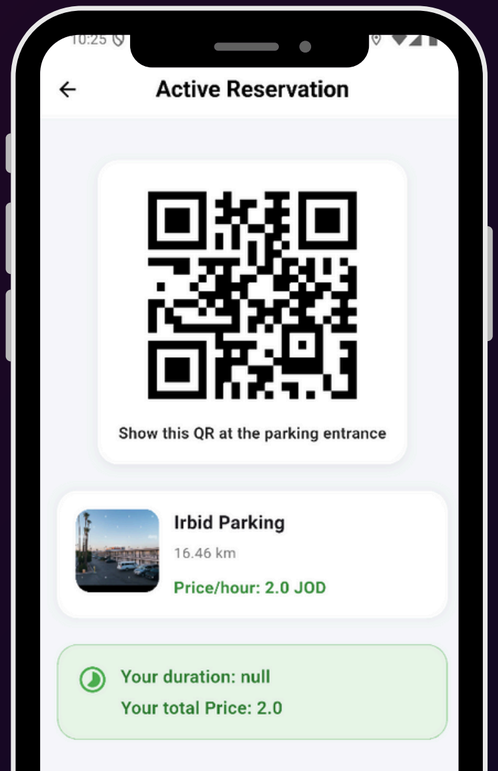
- Search and reserve parking spaces
- Parkings sorted from nearest to farthest
- QR code–based entry and exit system
- Automatic time and cost calculation

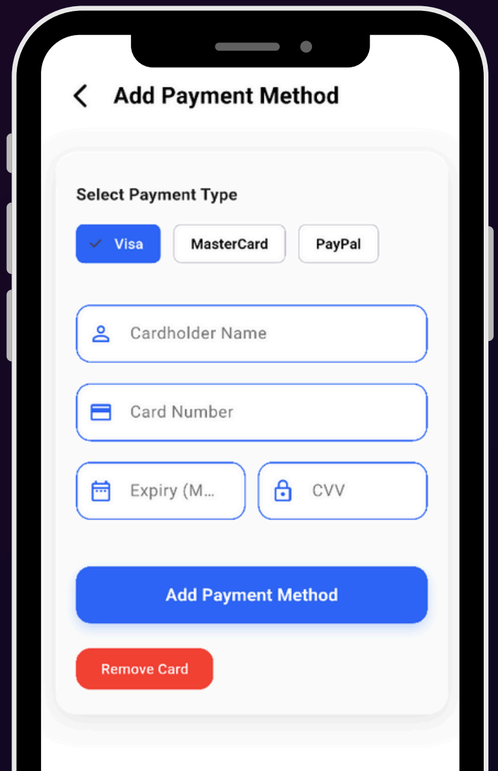
02

- Wallet system for cashless payment
- Reservation history and bill preview
- Profile management and chatbot support









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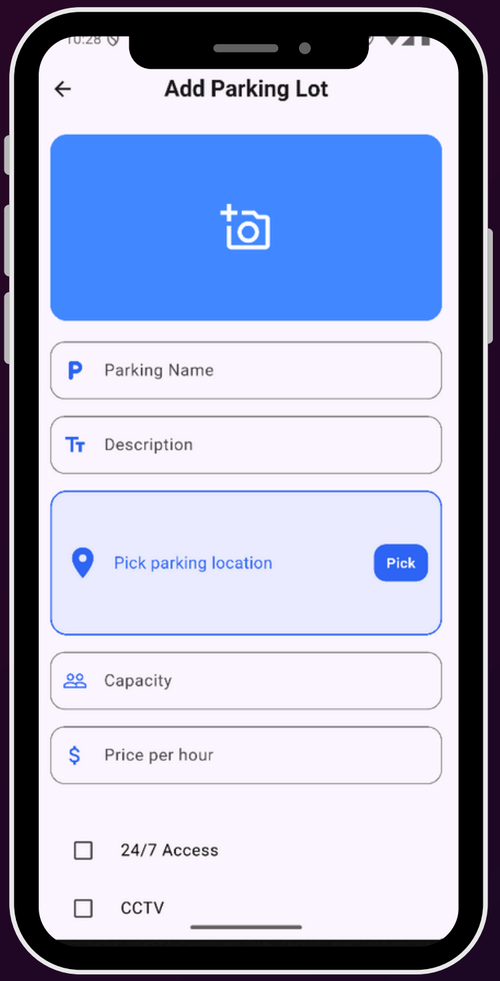
Owners path Features

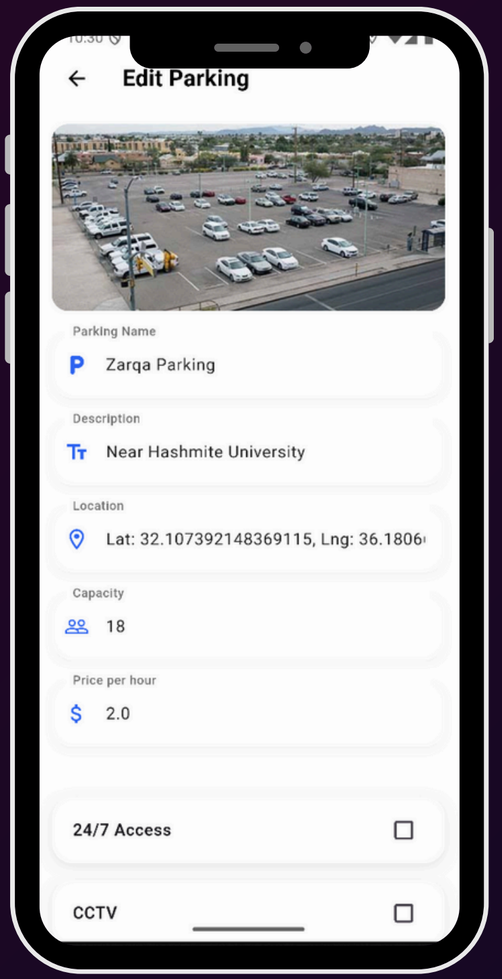
01

Add Parking lot



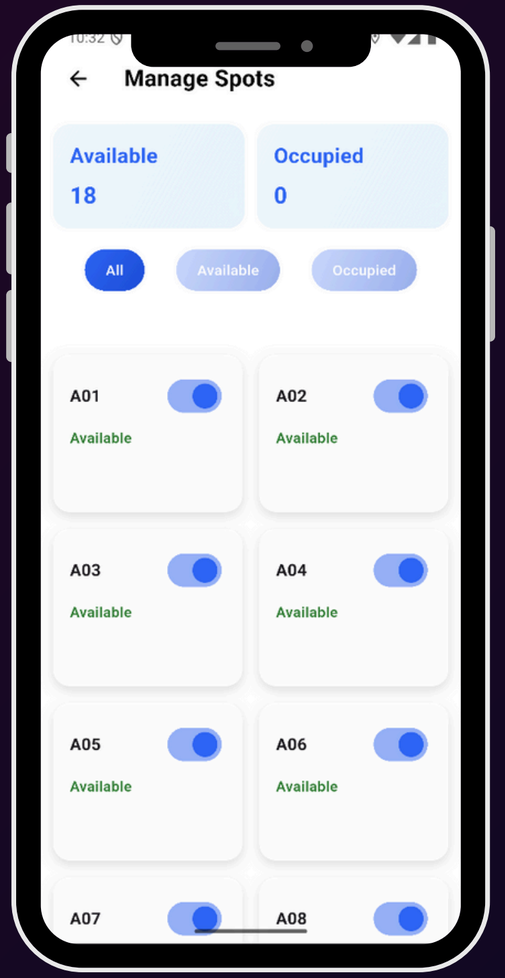
02

edit Parking lot



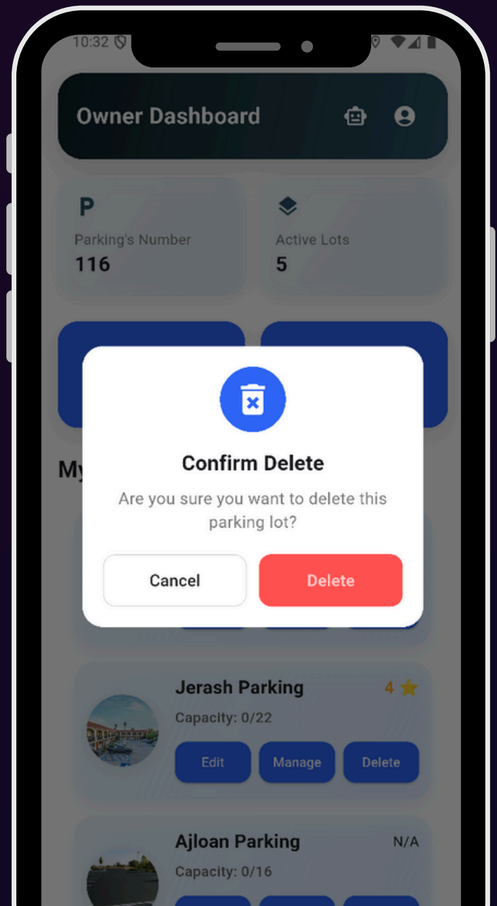
03

manage Parking lot



04

delete Parking lot



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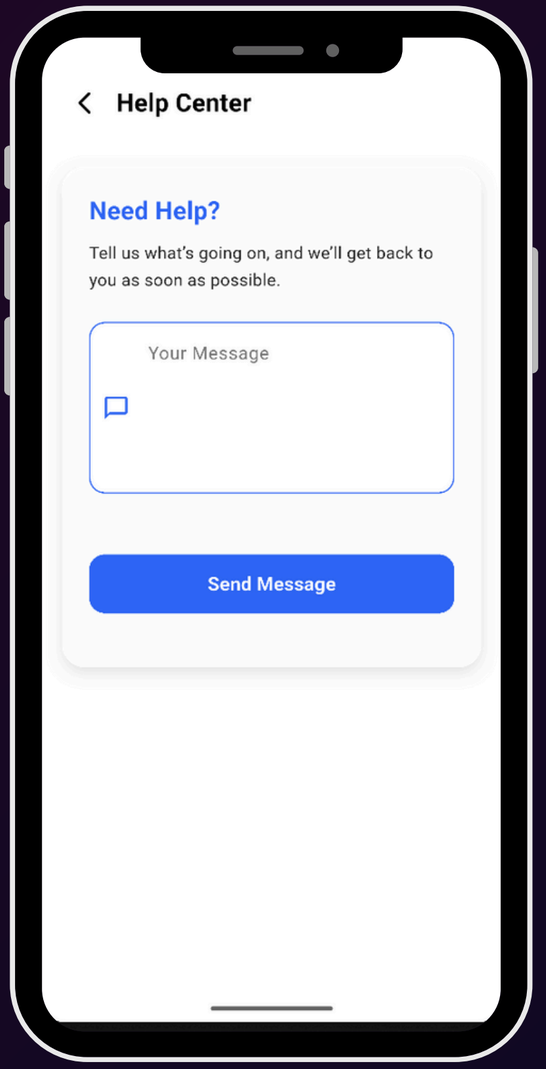
AI CHAT BOT - HELP CENTER

owner - driver path

01

AI CHAT BOT



02

HELP CENTER

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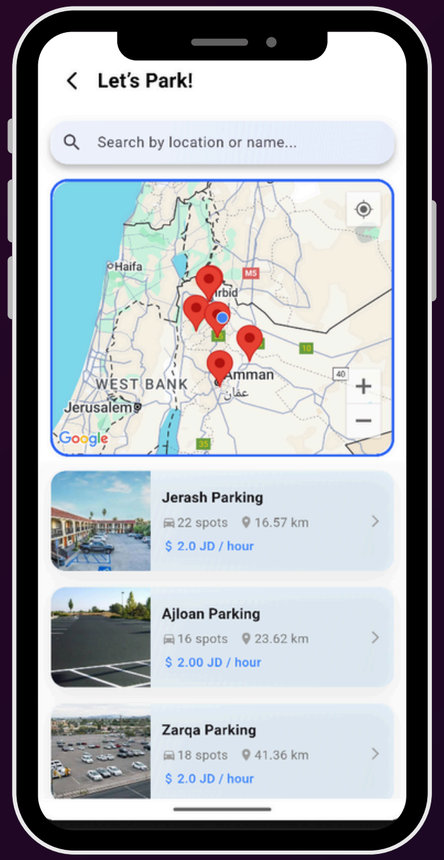
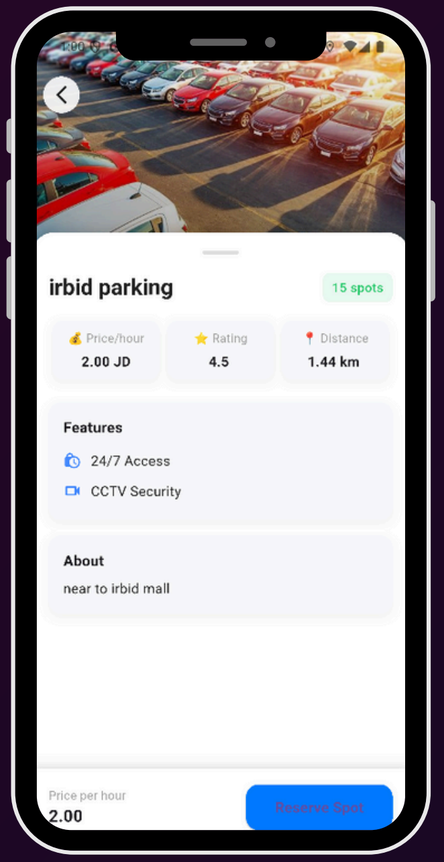
drivers path Features

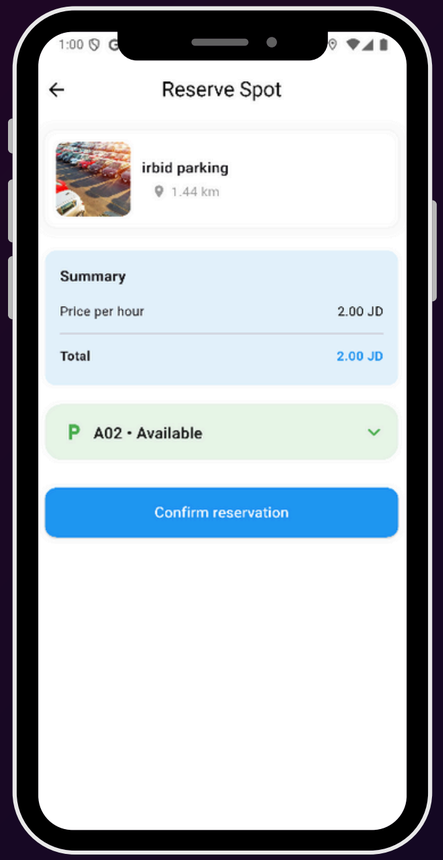
Lets Park

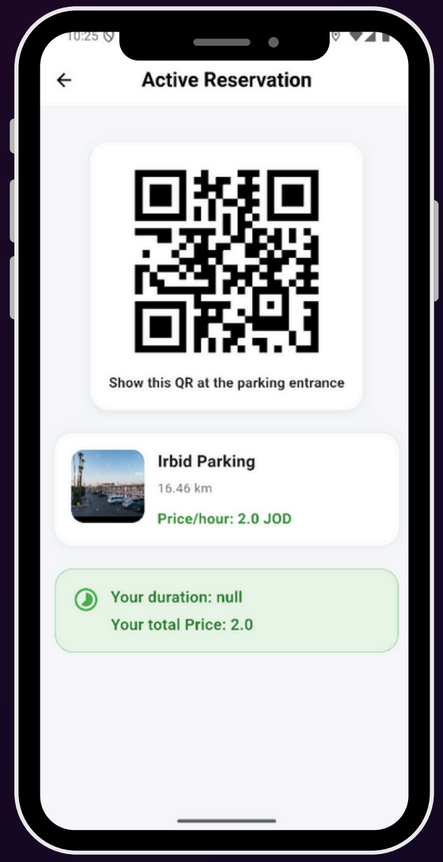




Parking details

Reserve Spot





Active Reservation

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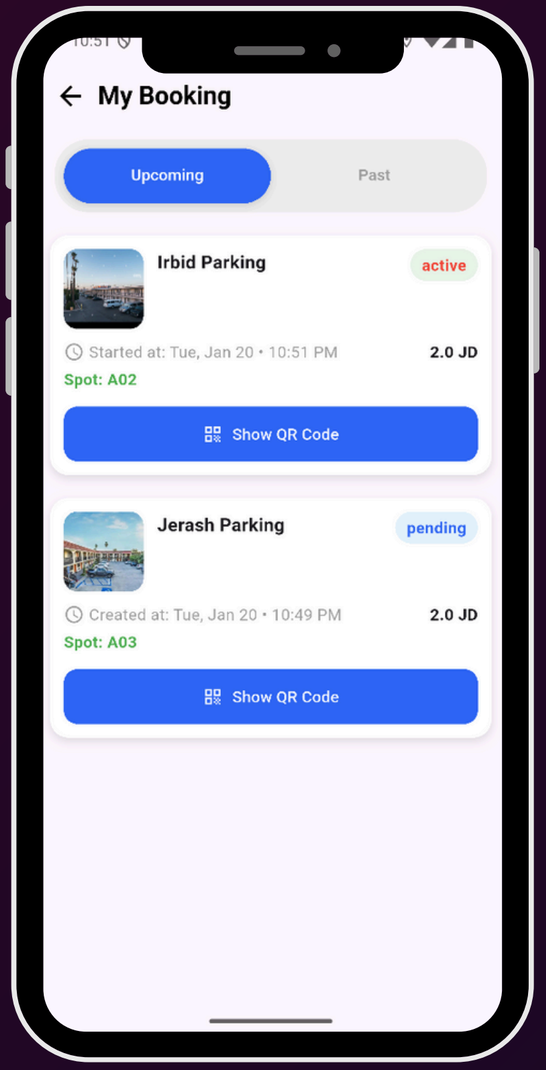
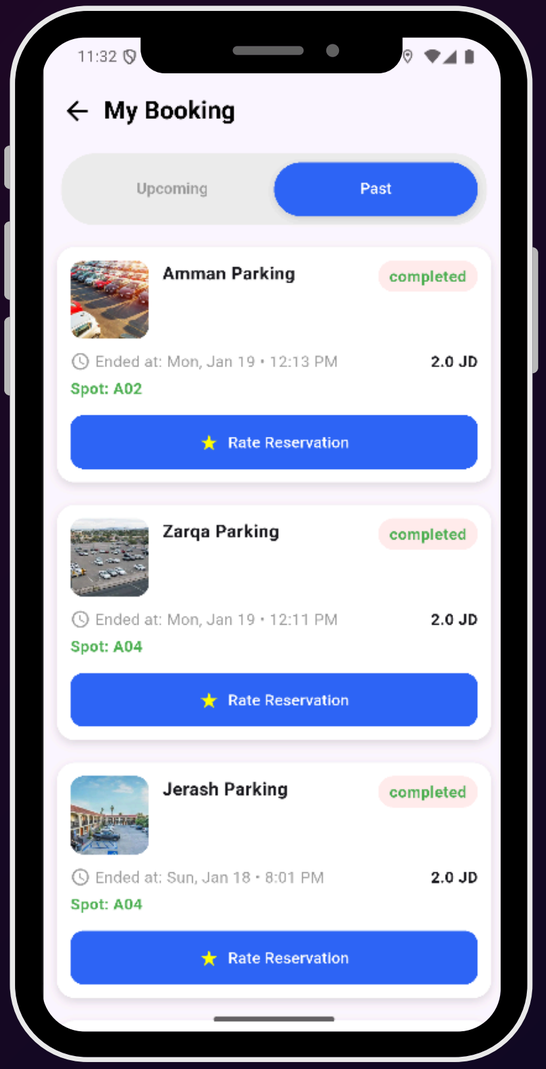
Drivers Path - My Bookings



01

Upcoming Bookings



02

Past Bookings - include rate parking

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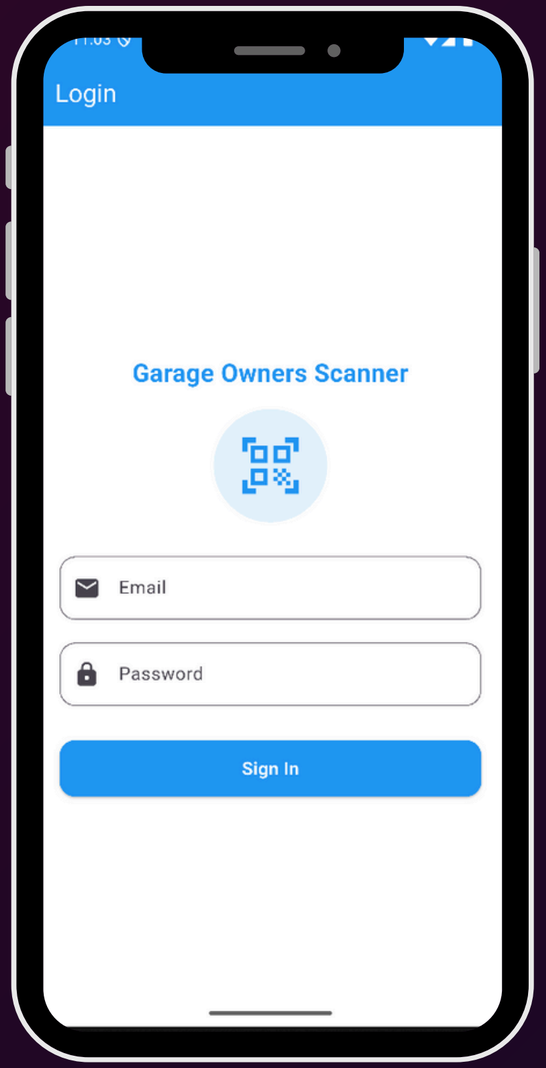
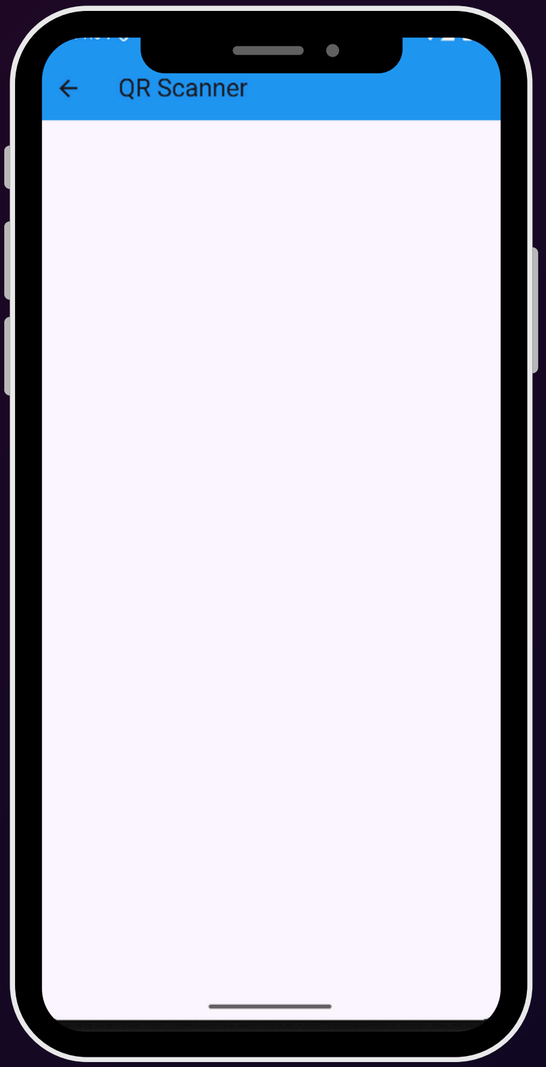
QR-Scanner App



01

LOG IN



02

QR - SCANNER

Thank You

We look forward to transforming parking into a faster, smarter, and more efficient experience.

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