ParkOp

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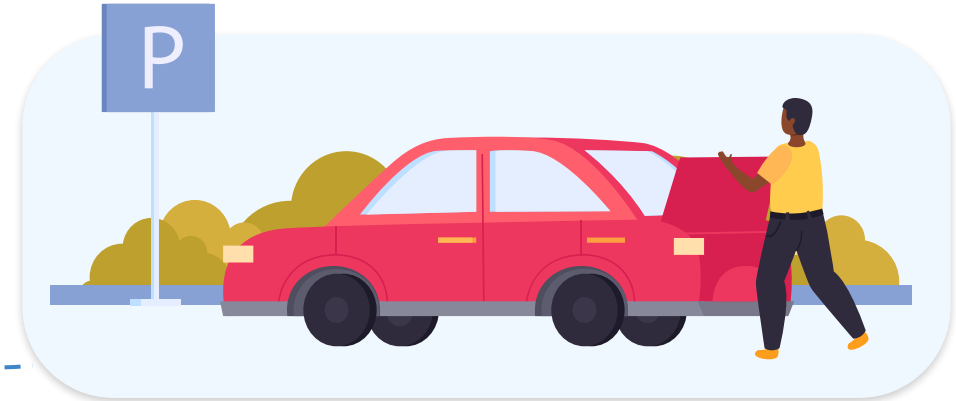
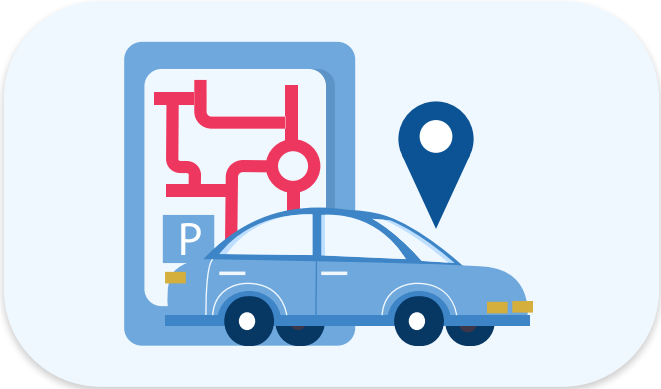
Manal Haid
Youssef Chaqqour



The urban parking problem in Morocco is closely linked to the rapid process of urbanization, exacerbates hinders mobility and congestion, and incurs economic and environmental costs.
The problem of urban parking in Morocco matters because it affects residents, commuters, employees, and tourists by causing congestion, wasted time, increased air pollution, and economic costs. Addressing this issue is essential for improving mobility, reducing congestion, and enhancing convenience in Moroccan cities.



Anas, a young professional living in Rabat, Morocco, faces the daily challenges of the urban parking problem

- He struggles to find a parking space near his office, leading to time-consuming searches.
- Anas often has to park far away, resulting in a long walk to his workplace.
- This affects his punctuality, productivity, and professional growth.
- The constant stress and frustration impact his well-being. Additionally, the financial burden of paid parking lots limits his resources.
- The urban parking problem hinders Anas's mobility wastes his time, and increases his stress levels.
- Addressing this issue is crucial for improving his daily routine and enhancing his quality of life.

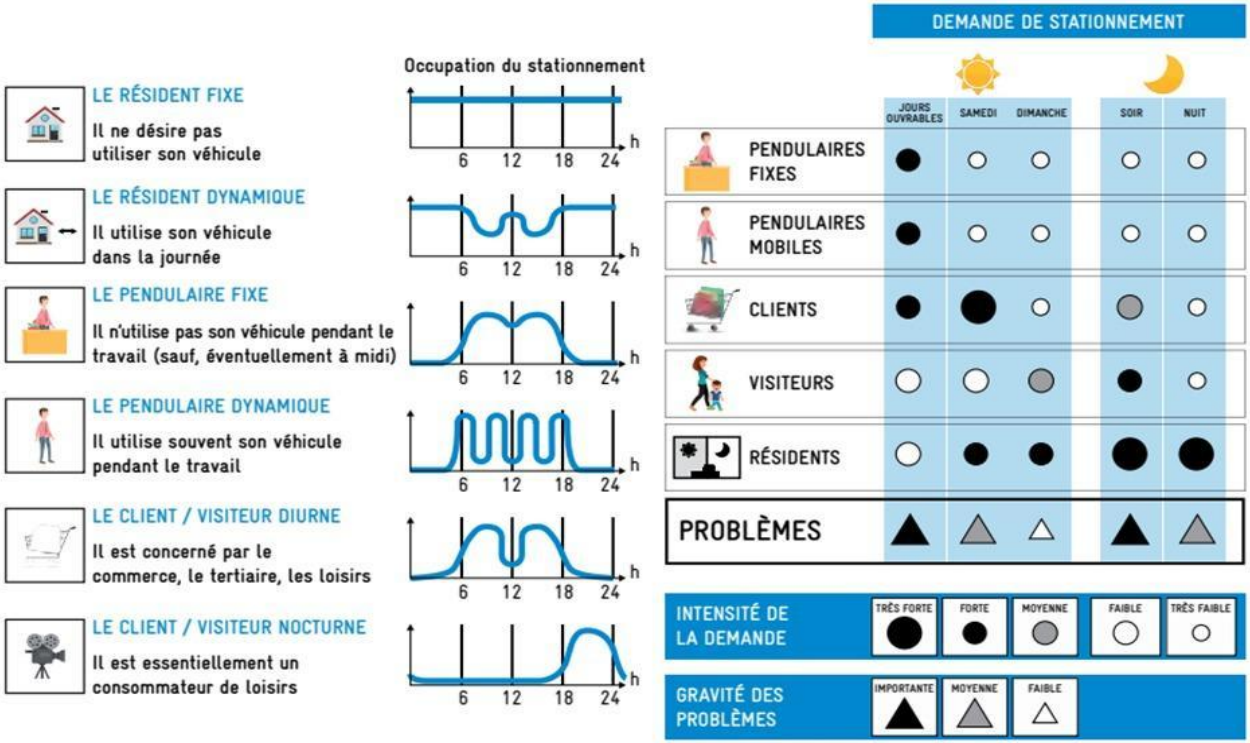
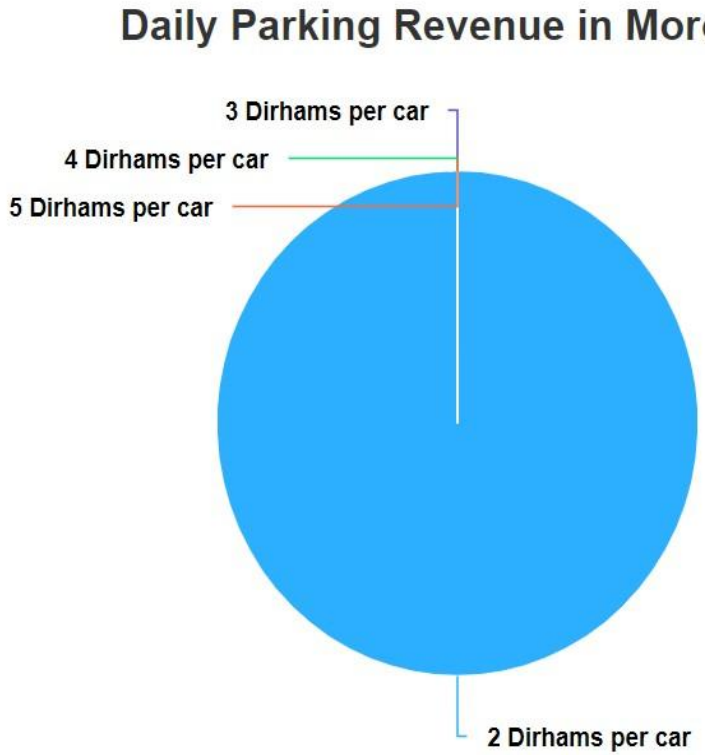


Figure 27 : Types d'usagers du stationnement

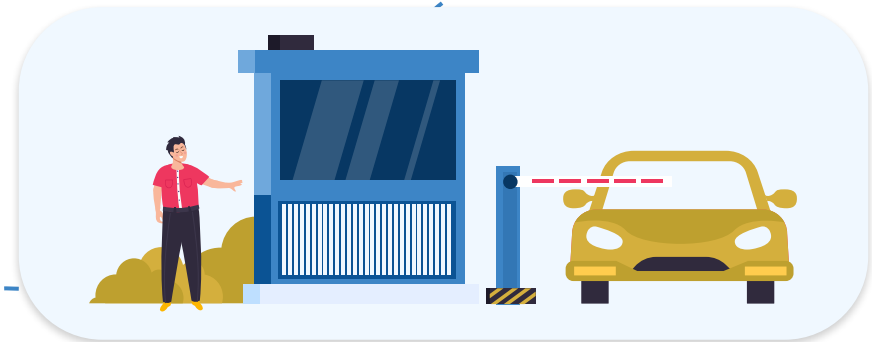
Visualization 01: Type of parking users in Morocco
Source: Guide Circulation web.pdf (mobiliseyourcity.net)

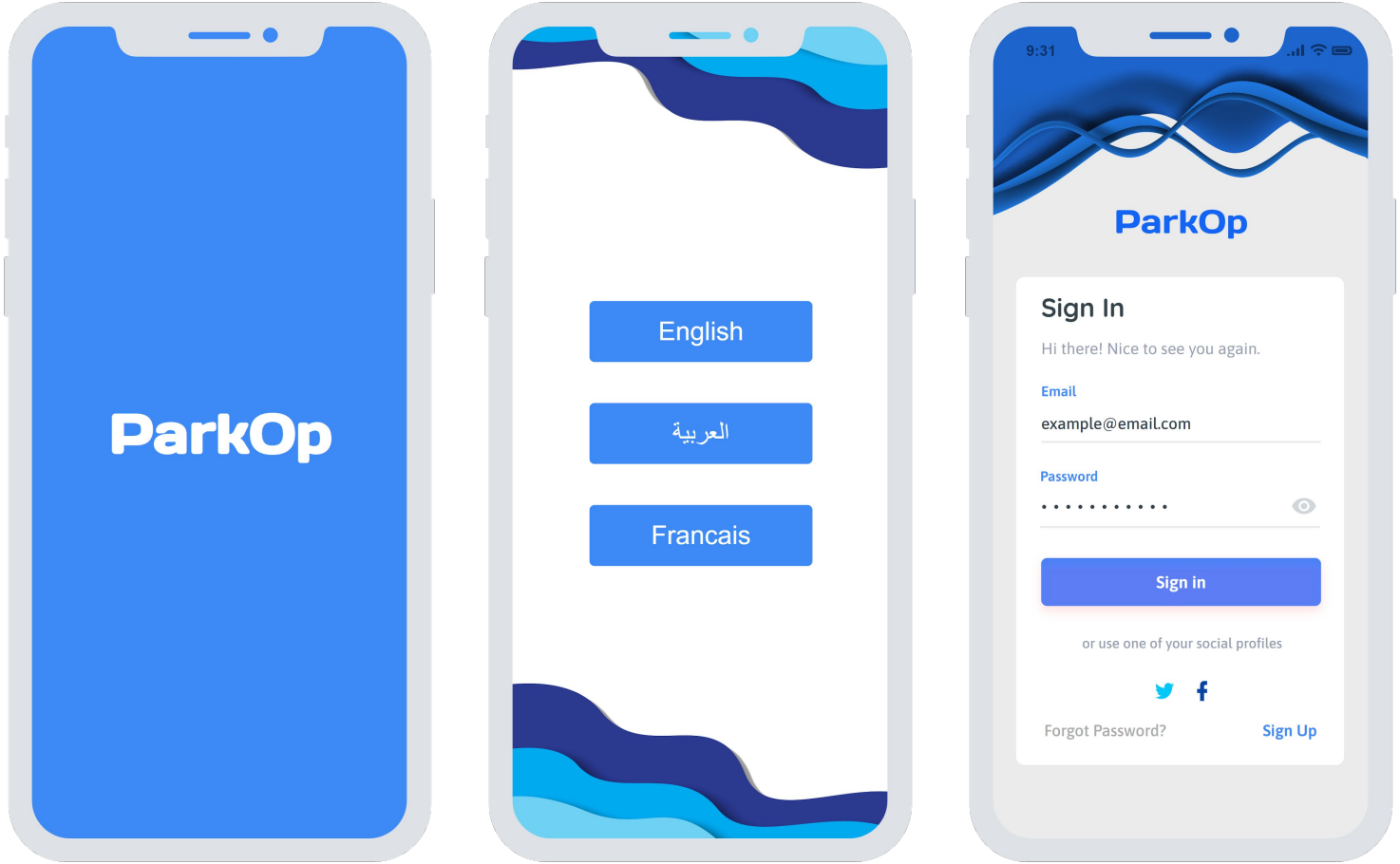


Visualization 02: Daily Parking Revenue in Morocco
Source: https://bayanealyaoume.press.ma/

ParkOp Smart Parking App

Develop a smartphone application that uses real-time data to provide users with information on available parking spaces, including their locations, capacity, and pricing. The app could also incorporate features such as reservation options, navigation to the nearest parking spots, and payment integration.




ParkOp
English
العربية
Francais
9:31
ParkOp
Sign In
Hi there! Nice to see you again.
Email
example@email.com
Password
Sign in
or use one of your social profiles
Forgot Password?
Sign Up

9:31

Verify Your Number

Please enter your Country &
your Phone Number

Phone Number

Send

9:31

Verification Code

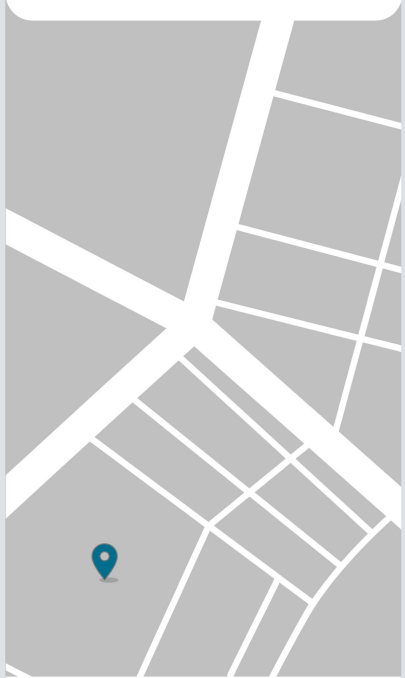
Please enter the code sent
to **06 XX XX XX XX**

Verify

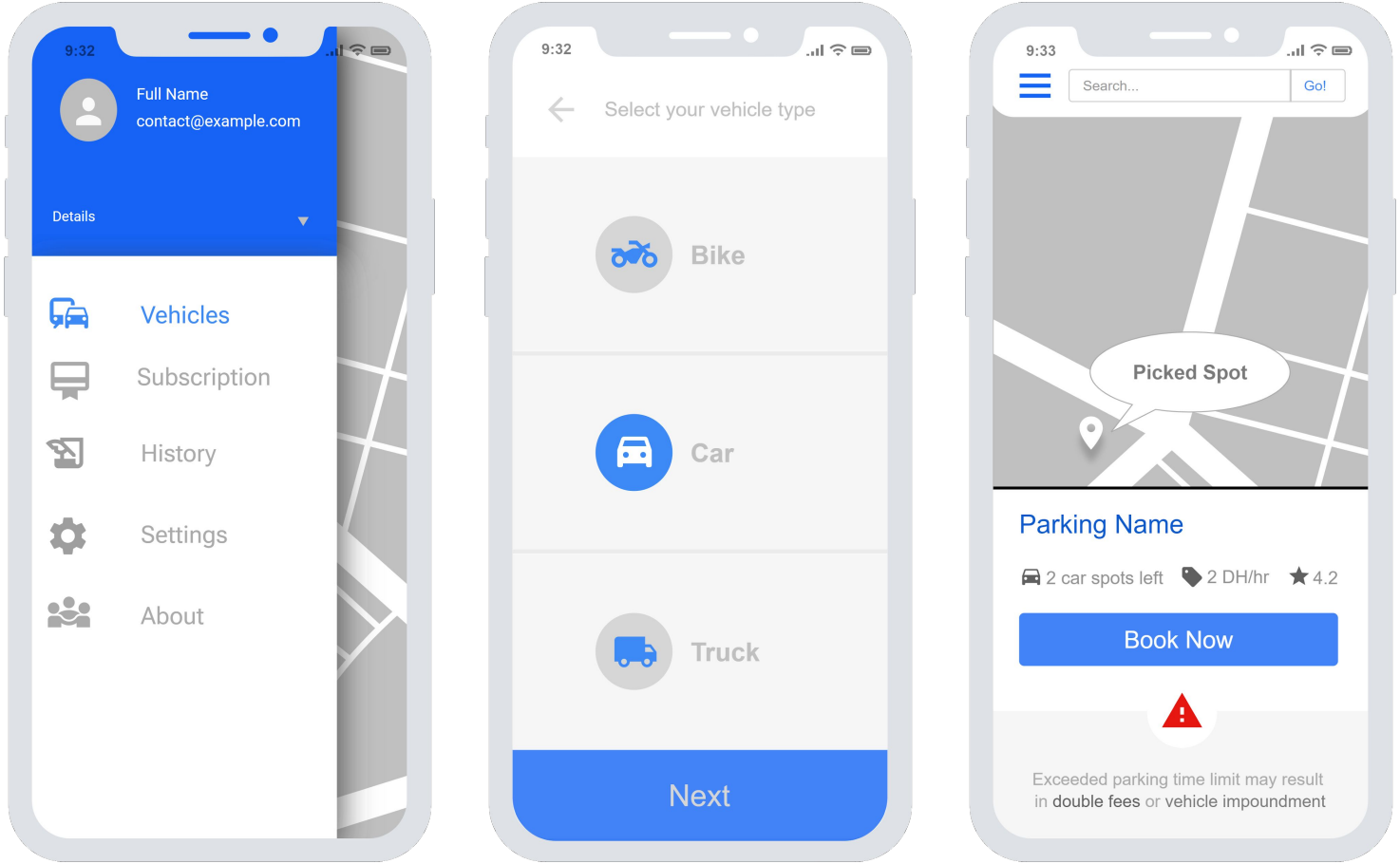
Resend Code

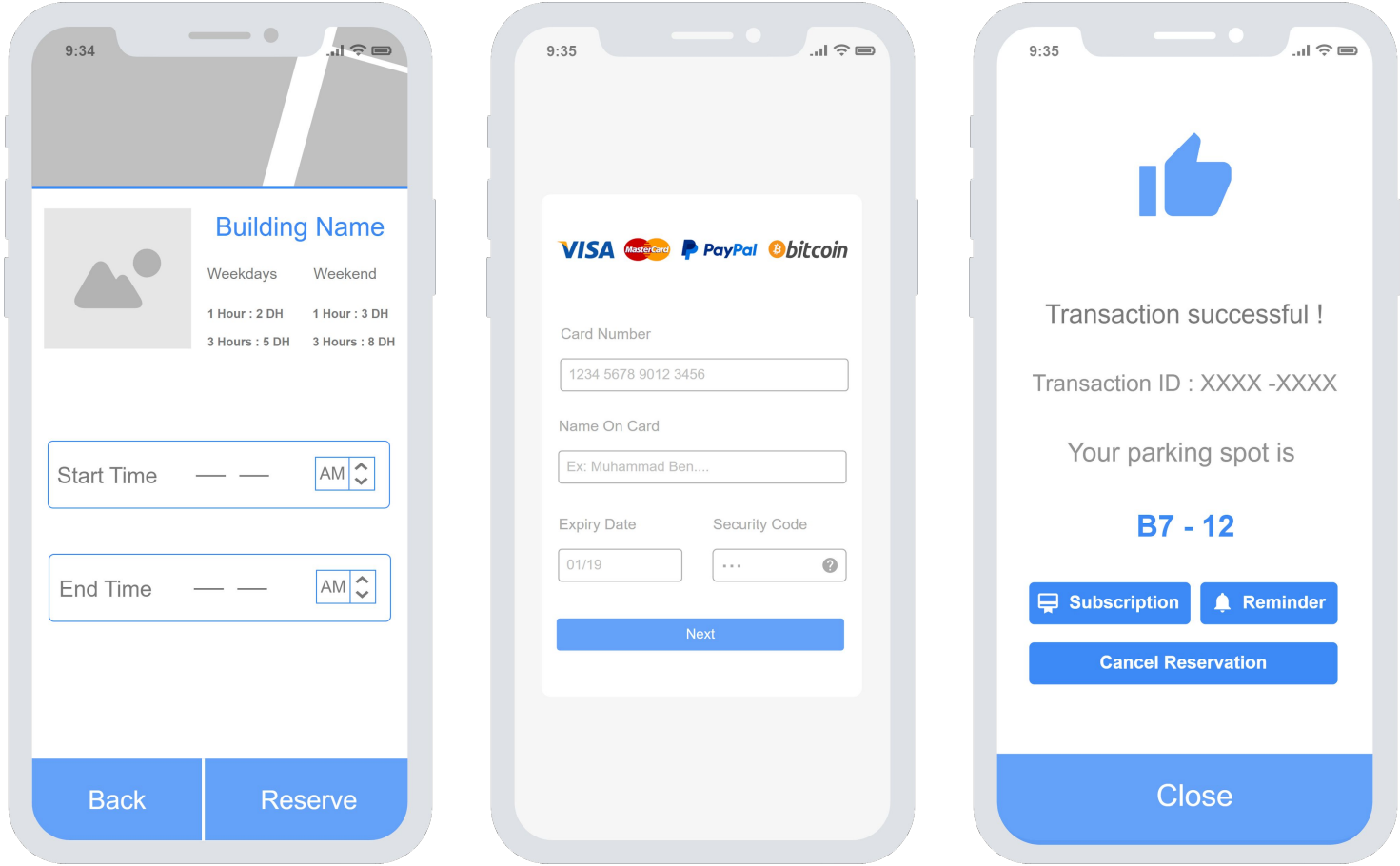
9:32

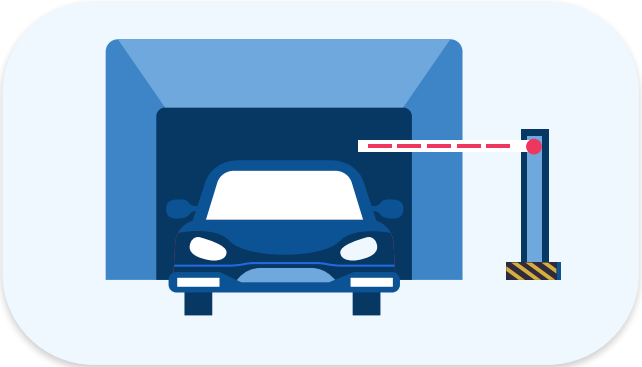
Search... Go!



Dashboard Parking Notifications Profile

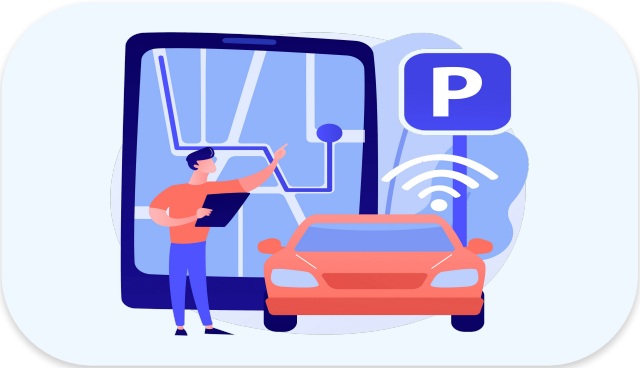

9:32
Full Name
contact@example.com
Details
Vehicles
Subscription
History
Settings
About
9:32
Select your vehicle type
Bike
Car
Truck
Next
9:33
Search...
Go!
Picked Spot
Parking Name
2 car spots left
2 DH/hr
4.2
Book Now
Exceeded parking time limit may result in double fees or vehicle impoundment


9:34
Building Name
Weekdays
Weekend
1 Hour : 2 DH
1 Hour : 3 DH
3 Hours : 5 DH
3 Hours : 8 DH
Start Time
AM
End Time
AM
Back
Reserve
9:35
VISA
PayPal
bitcoin
Card Number
1234 5678 9012 3456
Name On Card
Ex: Muhammad Ben....
Expiry Date
Security Code
01/19
Next
9:35
Transaction successful !
Transaction ID : XXXX -XXXX
Your parking spot is
B7 - 12
Subscription
Reminder
Cancel Reservation
Close



- **Lack of notifications or reminders for parking time limits**: Users expressed a need for notifications or reminders to ensure they are aware of when their parking session is about to expire.

- **Concerns about the security of personal and payment information**: Users expressed worries about the security of their personal and payment information when using the app



- **Action 1** : Taking this feedback into account, we plan to incorporate notifications or reminders within the app to alert users when their parking time is about to expire. This will help users avoid penalties and provide a convenient way to extend their parking if needed.

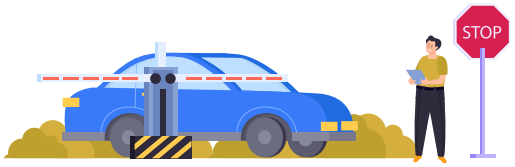
- **Action 2** : Taking user security concerns seriously, we plan to prioritize the implementation of robust security measures, including encryption protocols and secure data storage practices. This will help safeguard user information and build trust in the app's security.

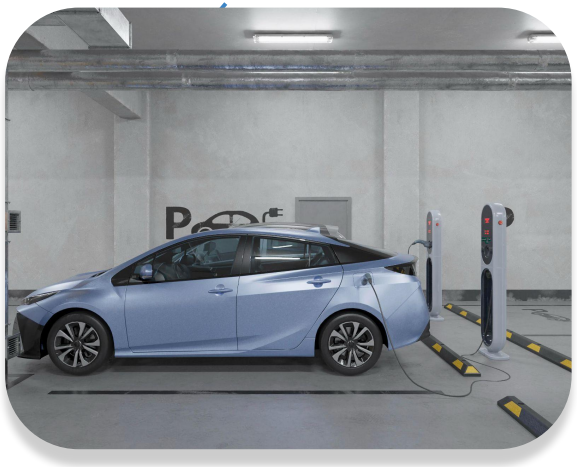
If given funding to continue working on the solution, I would pursue an ambitious direction by incorporating advanced technologies such as Satellite Imagery and Geographic Information Systems (GIS) to assess land suitability for parking solutions worldwide. By integrating Satellite Imagery and GIS data, the app would analyze factors like population density, traffic patterns, urban planning, and existing infrastructure to identify optimal locations for parking spaces. This data-driven approach would enable users to find parking areas with higher availability, minimize congestion, and optimize land utilization.

In addition to land suitability assessment, I would explore several enhancements for the app. Collaborating with local municipalities and city planners, the app could integrate with smart city infrastructure like sensors or IoT devices to provide real-time information on parking occupancy and adjust recommendations based on demand. By leveraging advanced algorithms, the app could offer optimized navigation routes considering real-time traffic data, parking availability, and user preferences. This would guide users to the nearest and most suitable parking spaces, saving time and reducing frustration.

Moreover, to cater to the growing needs of electric vehicle owners, integrating information about nearby charging stations and availability into the app would promote sustainable transportation options. By offering comprehensive parking solutions, real-time data, enhanced navigation, and integration with electric vehicle charging infrastructure, the app would revolutionize the way users find and utilize parking spaces globally..

The **ParkOp** comprehensive features, real-time data, and user-centric approach have the potential to revolutionize the way people find and manage parking spaces. By addressing the pain points of convenience, parking availability, navigation, and payment, the solution aims to make an important difference in improving urban mobility, reducing congestion, and enhancing the overall parking experience for users.





Thanks!