

PARK INDIA PROJECT

BY

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Coming from a business development no-code background switching to IT wasn't a case of no-brainer in my career. With a growing interest in tech and finding myself somewhere in between business and marketing, I had to learn and unlearn so many things about building products. Using my experience in understanding customer needs and market trends, I devised an idea called 'Park India' and turned it into this project. I used tools like Excel and Mind maps to analyse data from customers, read in-depth, study competition behaviour, understand market demands and so on and make those amazingly smart decisions while building the product. This project reflects my passion for creating solutions that solve real-world problems and offer great value to users.

I am excited to share this project with the world.

PROBLEM STATEMENT

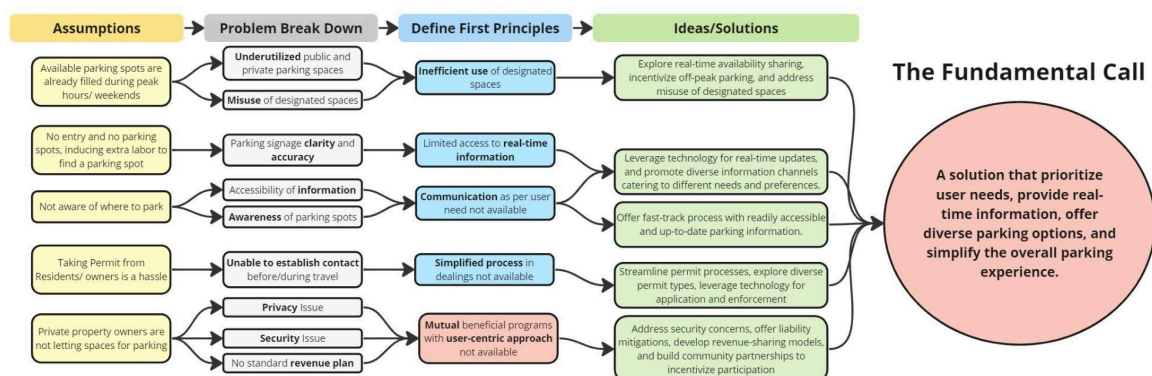
The overall parking seating available in commercial places in any given area is just **40%** of the total number of vehicles looking for a parking space. Finding the right space for parking is often a challenging, frustrating, time and fuel-consuming experience that most drivers face in a fast-paced booming and crowded city. Our objective is to help people find safe and secure parking by utilizing available land spaces that can be converted into parking spaces with the help of technology.

ROOT CAUSE ANALYSIS

Problem Identification: Here, we have used **first principles thinking** to identify the problem, frame the assumptions and break down the assumptions so that we can understand the root cause and then generate a set of ideas to address the problem.

Problem:

Commuters experience significant frustration and wasted time due to inefficient and limited parking options, leading to difficulty completing essential tasks and reduced quality of life.



The Fundamental Truth:

The real problem here is that parking systems are built more for rules and control than making things easy for people who need to park. They're less about helping you find a spot quickly and more about enforcing rules and keeping things organized. **The key issue is that the user, the person trying to park, isn't the top priority.**

RESEARCH PLAN

OBJECTIVE

To validate key assumptions, a breakdown of the problem statement and the first principles underlying the parking problem for further research and development of our product.

IDENTIFY TARGET AUDIENCE FOR RESEARCH

<i>User Base 1</i>	<i>User Base 2</i>
<ul style="list-style-type: none"> • Commuter having a valid driving license 	<ul style="list-style-type: none"> • Landowners having alternative land space
<ul style="list-style-type: none"> • Commuter possessing private vehicle: 2-wheeler or 4-wheeler 	<ul style="list-style-type: none"> • Residents who can provide parking space at homes
<ul style="list-style-type: none"> • Professionals or individuals who travel by personal vehicle 	<ul style="list-style-type: none"> • Commercial Property Owners
<ul style="list-style-type: none"> • New to the city 	<ul style="list-style-type: none"> • Real estate Owners
<ul style="list-style-type: none"> • Tier 1 city: Bangalore residents 	<ul style="list-style-type: none"> • Tier 1 city: Bangalore residents

TARGET PERSONA



Name	Subramanyam Prasad
Age	51
Location	Bangalore
Occupation	Senior Manager
Income	25 Lakhs per Annum
Status	Married

Subramanyam is a senior employee who leads a very busy life due to professional responsibilities. He prioritises his work a lot and has to travel often and attend many business meetings. He is very punctual and likes being on time for office, meetings, or any events.

<p>Behaviours and Preferences</p> <ul style="list-style-type: none"> ● Subramanyam values time and likes to streamline his tasks according to a fixed schedule. ● He prefers to use his car for business meetings and often needs a budget-friendly highly secured parking space near airports or where the meeting takes place. ● He is aware of the traffic in Bengaluru and often has to compromise on his schedule to arrive early and find parking. 	<p>Motivation and Goals</p> <ul style="list-style-type: none"> ● He is very efficient and likes to carry out his tasks without any obstruction or delay. ● He also likes to manage his expenses carefully and likes value for the services he is paying for. ● He prefers a good work-life balance and doesn't want to compromise with his family time.
<p>Pain Points and Challenges</p> <ul style="list-style-type: none"> ● Finding parking can be a challenge for Subramanyam, especially during peak hours. The heavy traffic may cause further delays. ● Finding parking availability during weekends can be a daunting task as there is not much parking available due to the outpouring number of vehicles. ● Parking near unfamiliar events places or even outside airports can create doubts and worry regarding the safety of vehicles. 	<p>Psychographic Details:</p> <ul style="list-style-type: none"> ● <i>Personality Traits:</i> Reliable, Organised, Time-Conscious ● <i>Values:</i> Responsibility, Commitment ● <i>Hobbies/Interests:</i> Travelling, Reading

RESEARCH METHOD

1. Online surveys: 1 for commuters
2. 10-12 questions in each questionnaire
3. 1:1 interviews: 5 people, 10 mins each
4. Focus interviews: NA

TIMELINE

1. Online survey: 10/03-18/03
2. 1:1 interview: 20/03-01/04
3. Focus Interview: NA
4. Gathering of quantitative data: 01/04-10/04
5. Gathering of qualitative data: 01/04-10/04
6. Analysis of overall data: 14/04-18/04
7. Internal discussion for insights and discussions: No data available

MARKET SIZING AND ESTIMATION

Considering **Bangalore** as our first geographical location, we're targeting the car parking industry in the transportation sector, aiming to solve the parking challenges in congested urban areas. Our solutions are designed to help users find available parking spaces, reserve parking spots in advance, and facilitate payments for parking services. The scope of our product ranges from easily finding a parking spot nearby and facilitating easy payment, renewing bookings, great customer support and so on.

Our target demographics in Bangalore comprise a diverse range of urban commuters and drivers who navigate the city's bustling streets. Key segments include:

1. *Urban Professionals:*
 - Age: 25-55 years
 - Occupation: White-collar professionals, executives, entrepreneurs
 - Characteristics: Tech-savvy, busy schedules, value convenience

2. *Students:*
 - Age: 18-25 years
 - Educational Institutions: Universities, colleges
 - Characteristics: Budget-conscious, mobile-dependent, seeking affordable parking options near campuses (mostly two-wheelers)
3. *Business Travelers:*
 - Age: 25-55 years
 - Occupation: Corporate professionals, sales representatives, consultants, CEOs
 - Characteristics: Regular travelers, seeking reliable parking near airports, hotels, and business districts
4. *Commuters:*
 - Age: 18-70 years
 - Occupation: Office workers, service industry employees, students
 - Characteristics: Daily commuters, reliance on public transport or personal vehicles, seeking convenient parking near marketplaces, gyms, shops
5. *Tourists:*
 - Age: 18-70 years
 - Characteristics: Visitors exploring Bangalore's attractions, seeking parking options near tourist hotspots, hotels, and restaurants, attending events and festivals

MARKET SEGMENTATION

	<i>Urban Professionals</i>	<i>Student</i>	<i>Business Traveller</i>	<i>Daily Commuter</i>	<i>Tourist</i>
<i>What they need</i>	Time-saving, hassle-free, immediately available parking solution for daily office meetings/work	Affordable, easy to use, good navigation parking solution near college campus	Adhering to frequent uses, a reliable and safe parking solution near business venues, hotels, airports	Convenient parking solution in crowded spaces like gyms or marketplace	Good navigation, safe and reliable parking system

<i>What they can have</i>	Easy-to-use mobile parking apps, quick booking and easy payment, reserved parking availability, standard plans for renewing booking	Parking app offering parking spots with different price options, discounts near campus, basic plans with Renew booking options, multiple user profiles for two-wheelers/four-wheelers	Parking app that ensures secure parking, access to real-time monitoring, pre-booking, premium plans that automate renew booking and dynamic pricing	Parking app system that adheres to traffic rules and provides safe secure parking, also providing shortest routes to the designated parking spots, real-time availability and instant booking and cancellation	Parking app that provides proper navigation and multilingual support to the new to the city users, providing safe spots near prone-to-theft/accident destinations
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REPORTS, STUDIES AND PUBLICATIONS

- The parking space problem worsening in Bengaluru due to increasing car ownership and lack of prior arrangements.
- Bengaluru traffic police registered more than 10,00,000 cases of illegal parking as of October 2022.
- Environment NGOs highlight disregard for society/environment by car owners, leading to traffic congestion.
- Commercial buildings and showrooms often lack parking facilities, forcing customers to park on roads.
- Some commercial buildings misuse basement parking for commercial purposes, exacerbating the problem.
- Inadequate parking leads to vehicles parked on footpaths.
- The majority of available parking spaces are marked as no-parking zones, resulting in fines and public inconvenience.
- Traffic police install no-parking signboards in available parking spaces, exacerbating the issue.
- Varying paid parking charges in different areas leads to roadside parking.
- Odd-even parking is a fresh concept that started to control air pollution and traffic but hasn't been very effective. Earlier cars and bikes would be ruthlessly towed but now fines are heavily imposed that would go up to Rs.30,000. Reforms are still taking place.

ARTICLES

<https://medium.com/@statenews.com.in/parking-space-problem-bengaluru-buying-a-car-without-arranging-parking-space-in-bengaluru-2d5fef633d9f#:~:text=The%20parking%20space%20problem%20has,road%2C%20causing%20inconvenience%20to%20others.>

<https://timesofindia.indiatimes.com/city/bengaluru/of-choked-roads-parking-woes-in-bengaluru/articleshow/97016672.cms>

<https://theprint.in/india/parking-crisis-is-denting-brand-bengaluru-now-a-top-cop-with-a-phd-is-trying-to-save-the-day/1357081/>

<https://bangaloremirror.indiatimes.com/bangalore/others/park-whenever-you-can-in-bengaluru/articleshow/95612859.cms>

<https://www.thehindu.com/news/cities/bangalore/watch-why-does-bengaluru-constantly-suffer-from-traffic-and-parking-issues/article67737065.ece>

<https://www.deccanherald.com/india/karnataka/bengaluru/bengaluru-lack-of-parking-spaces-encroachments-bad-roads-are-concerns-raised-at-citizen-traffic-forum-2727329>

<https://www.thehindu.com/news/cities/bangalore/bengalurus-parking-issues-worsened-by-growing-number-of-private-vehicles/article38384728.ece>

<https://www.deccanchronicle.com/nation/in-other-news/140218/bengaluru-cant-park-its-problems-anywhere.html>

PROXY REPORT

Offices	Count	Seats	Total Employees	Commute with Car	Parking Allocation	Parking Gap	
Large IT Parks	50	5000	250000	50000	20000	30000	

Medium IT Parks	100	1000	100000	20000	8000	12000	
Small IT Parks	200	300	60000	12000	4800	7200	D-S Gap
				82000	32800	49200	60.00%
Malls	Count	Foot Falls Per Day	Total Foot Falls	Commute with Car	Parking Allocation	Parking Gap	
Large Malls	30	7500	225000	157500	110250	47250	
Medium Malls	50	4500	225000	90000	36000	54000	
Small Shopping Complex	200	10000	2000000	200000	20000	180000	D-S Gap
				447500	166250	281250	62.85%
Hospitals	Count	ICU + Cabin Seats	Total Attendants	Commute with Car	Parking Allocation	Parking Gap	
Large Size	24	3500	84000	42000	8400	33600	
Medium Size	80	1500	120000	36000	7200	28800	
Small Clinics	200	600	120000	24000	4800	19200	D-S Gap
				102000	20400	81600	80.00%
Restaurants, Gyms, Markets	Count	ICU + Cabin Seats	Total Attendants	Commute with Car	Parking Allocation	Parking Gap	
Large Size Restaurants	80	200	16000	12800	6400	6400	
Medium Size Restaurants	1000	70	70000	21000	4200	16800	

Gyms	800	70	56000	11200	1120	10080	D-S Gap
				45000	11720	33280	73.96%

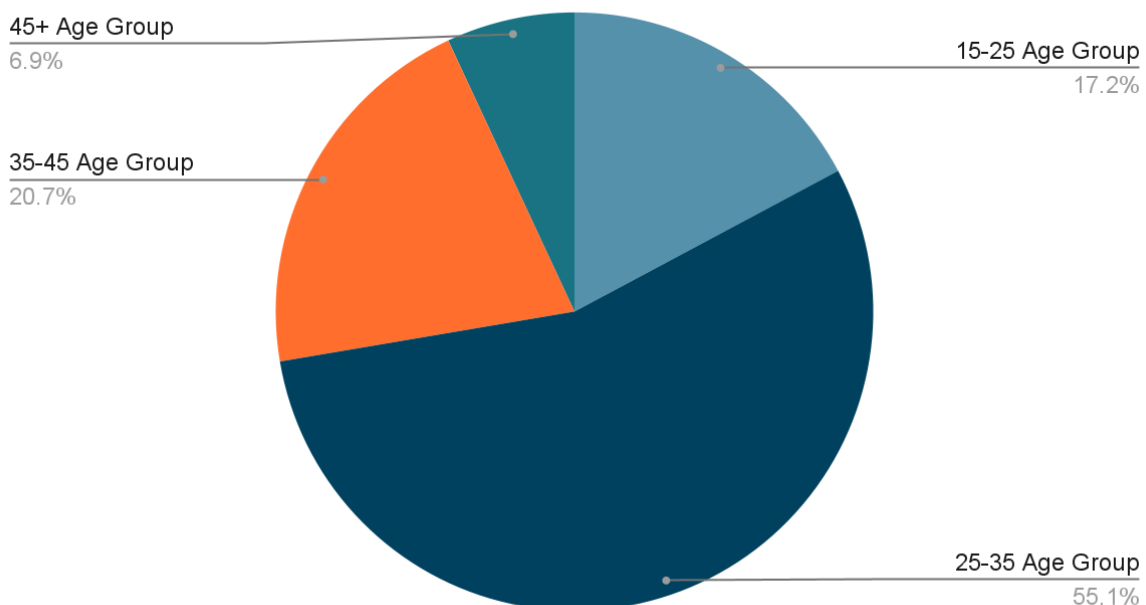
Demand-supply gap (D-S gap) is highest observed in hospitals, followed by local restaurants, gyms and supermarkets.

INSIGHTS AND KEY TAKEAWAYS FROM SURVEY

<https://docs.google.com/forms/d/1SB2Agfy99QuDWfzVmeV4kp1GTZDa1Xelqjijf1khV8E/edit>

SAMPLE SIZE AND DEMOGRAPHICS

Points scored



- Surveyed 70-80 individuals, with 35 responses received thus far.
- 71% of respondents hailed from tier 1 cities, while 25% resided in tier 2 cities.
- The predominant age group was 25-35 years, comprising 55% of respondents, followed by 35-45 years at 20%.

REQUIREMENTS AND PAIN POINTS

- 70% of respondents require parking space for 0-3 hours daily.
- 51% of respondents reported difficulty in finding parking spaces when needed.

PARKING SEARCH BEHAVIOR

- When seeking parking, respondents primarily rely on parking signs, followed by local guides and known parking facilities.
- In instances where parking is unavailable, respondents resort to either driving around in search of parking or refraining from using their car for subsequent trips.

PREFERENCE FOR ADVANCE BOOKING

- 80% of respondents want to plan parking arrangements in *advance*, indicating a demand for proactive parking solutions.

CUSTOMER INTERVIEWS

Interviews

For our survey, we selected *Bangalore* as our prime study. We conducted interviews with five people currently residing in or who have previously resided there. Our focus was on gathering insights into their parking experiences. Through these conversations, we uncovered the challenges they faced and gained valuable perspectives that will help us better understand our customers and solve their problems.

Interview Questions

1. When was the last time you used your car or bike?
2. In the last 3 months, have you faced parking problems despite commercial properties providing parking areas?

3. Have you recently missed a meeting or were late to an event because you couldn't find parking?
4. Imagine it's the weekend, the whole city feels crowded due to the outpouring number of vehicles moving on the same day and you're unsure if you will find parking. Can you use three adjectives or words to describe how you feel that day?
5. Would you prefer to take your car/bike with you on such days?
6. On average how much time does it usually take to find an alternative parking spot?

15- 20 minutes 30- 40 minutes 45 minutes- 1 hour
7. Do you often take Uber/ola services to skip the parking hassle?
8. Does parking billing often feel not so pocket-friendly?
9. How do you usually find parking in unfamiliar places?
10. Have you ever searched for an app or website to find parking information in unfamiliar places?
11. Would you like to park your vehicle inside the gym building/mall/hospital or outside?
12. If outside, rate from 1-10 how secure you feel about your vehicle.
13. Commercial places have parking reservations which are not accessible to every common person. On busy days, mostly all parking slots are filled. How would you feel if there could be a reservation made solely for you on such days so that you don't have to wait or go through the hassle of finding parking?
14. If there could be an app that could guide you to your designated parking space, what is the one thing that you would prioritize for your vehicle?

Key Takeaways

- My interviewees have found difficulty in finding parking spaces despite commercial places providing parking, especially near gyms, marketplaces, restaurants, street stalls, event places and small clinics. Residential societies object to parking outside their houses which leaves the person clueless about where to park his car or his

bike. Illegal parking exacerbates concerns regarding the security of their vehicles.

- My interviewees are late to meetings, parties, and social events because of the parking hassle. During the rush hour, even the twenty minutes wasted to find a parking place would often lead them to frustration.
- My interviewees have used the following words to describe the parking problem- distressed, helpless, scary, tedious, unsafe, uncooperative.
- If my interviewees have an important meeting or exam, they would sometimes opt to go for cab services or even public transport for the sake of easy pickup and drop off, but majorly it is not the case- one, a hike in cab fare prices which means additional expenses and two they still rely on their private vehicle for convenience.
- Parking billing can be an additional expense, but not hefty, especially for college students and new working professionals. Given a choice, my interviewees would like to park outside their preferred establishment for shorter trips because the parking fee feels unjustified.
- My interviewees have never referred to any website for information because the right information on the internet doesn't exist. They ask locals to give directions to a parking spot nearby but those instructions are never clear. Consequently, they sometimes resort to parking without much consideration for the potential consequences, opting to wait until someone from traffic control or residents instructs them to move their car or bike.
- My interviewees feel that parking reservations should be inclusive, not just for VIPs. This would help many people who do not wish to go through the parking hassle and want to have a space ready before they arrive at their destination.
- My interviewees want parking facility *in his/her radius*, much more than the labour and time lost. They want to prioritise correct information on parking availability, followed by reservation and safety of the vehicle.

INTRODUCING PARK APP

Park App is an innovative solution designed to help users find alternative parking spaces when existing parking spaces are not available. Through our platform, individuals can easily reserve parking spaces hosted by landowners and residents looking to monetize their available land.

CONCEPT MAPPING

OBJECTIVE - To understand the product and how it customises the parking space requirement of the user and generates revenue for land owners who are willing to provide space for parking.

GOAL - To help potential stakeholders of the product understand its features and user flow, leading to prioritization of features for further development.

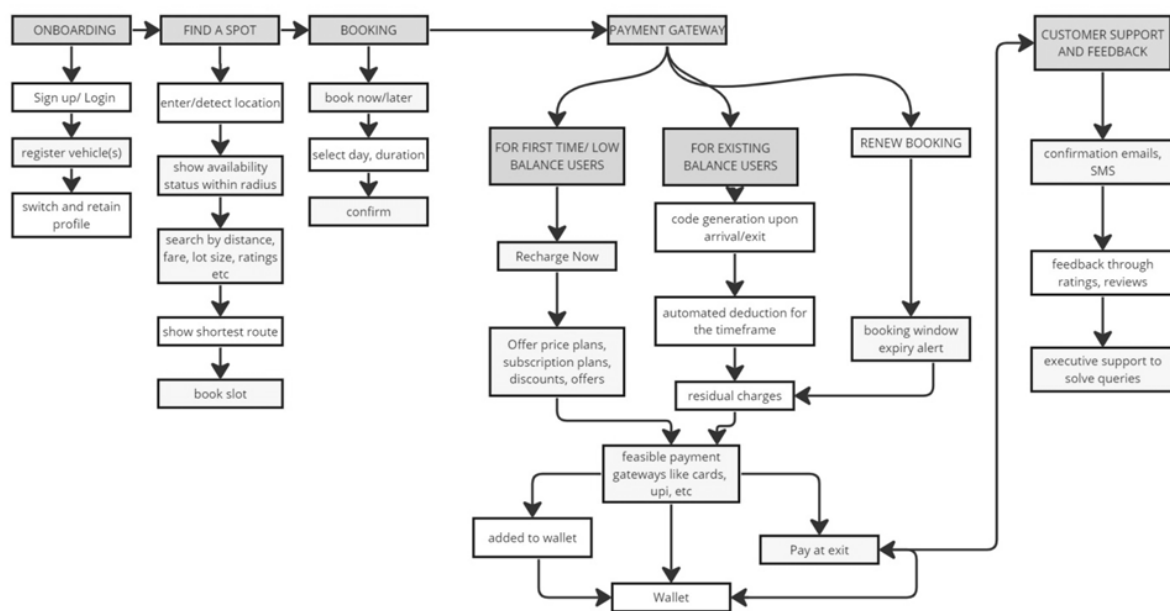


FIG: FOR VEHICLE OWNERS

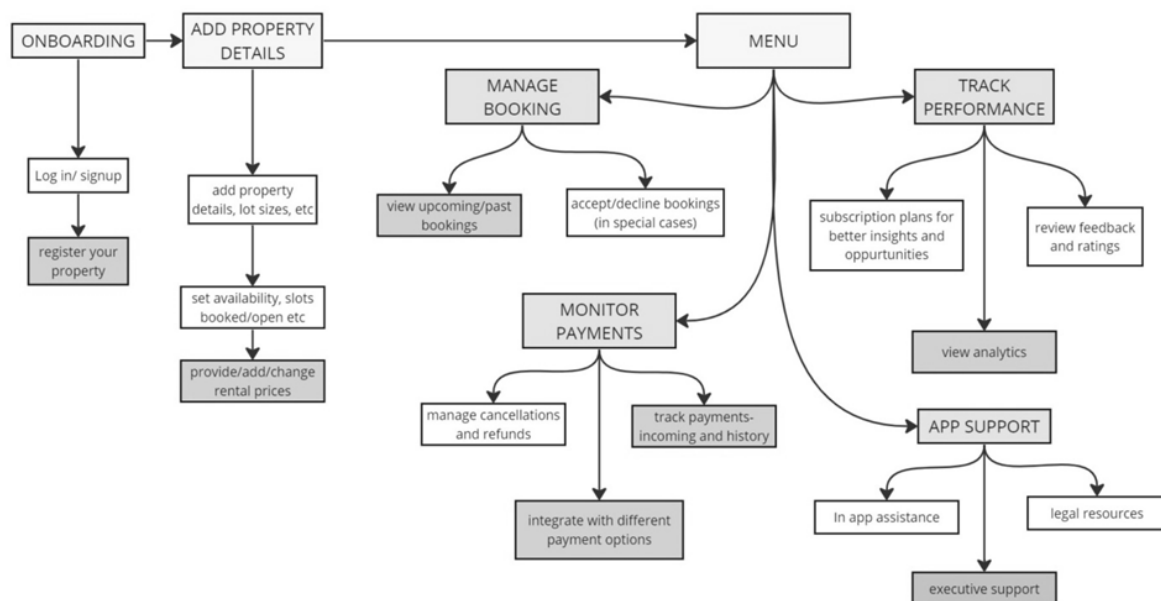


FIG: FOR LAND OWNERS

Primary features

<i>For vehicle owners</i>
A. Allow registration of multiple vehicles including two and four wheelers
B. Allow switching between different profiles and retain while using
C. Detect the exact location of the driver and parking spaces within his radius
D. Real-time update of free slots
E. Transparency in the size of the slot, rental prices, reviews and ratings
F. Assign vehicles effectively to utilize maximum space
G. Offer instant as well as advanced booking
H. Gather information for allocation for example what day, what time of the day, for what duration
I. Monitoring of parking duration to calculate fare
J. Show confirmation and parking status
K. Multiple payment options and recharge plans
L. Renew booking
M. Provide data on traffic, alternative routes and accurate ETA to designated parking

<i>For land owners</i>
a) Registration of property details
b) Edit/change/update slot sizes, availability, rental prices
c) Allow full transparency in parking regulations and guidelines
d) Manage bookings
e) Monitor payments and daily earnings
f) Access to a free Analytics dashboard
g) Access to human assistance and legal resources

Secondary features

1. Provide/experience a virtual tour of the designated place
2. 24*7 emergency support and cancellation
3. Offer plans, offers, discounts, promotions and other reward

FEATURE PRIORITIZATION

Prioritisation method applied: Weighted scoring

*In weighted scoring, the features that are prioritised are given a score based on their usefulness, how much time and cost is required to develop and implement, how long the user will keep using the features and how many users will pay for the feature. The features that got the highest score are displayed in **bold** letters.*

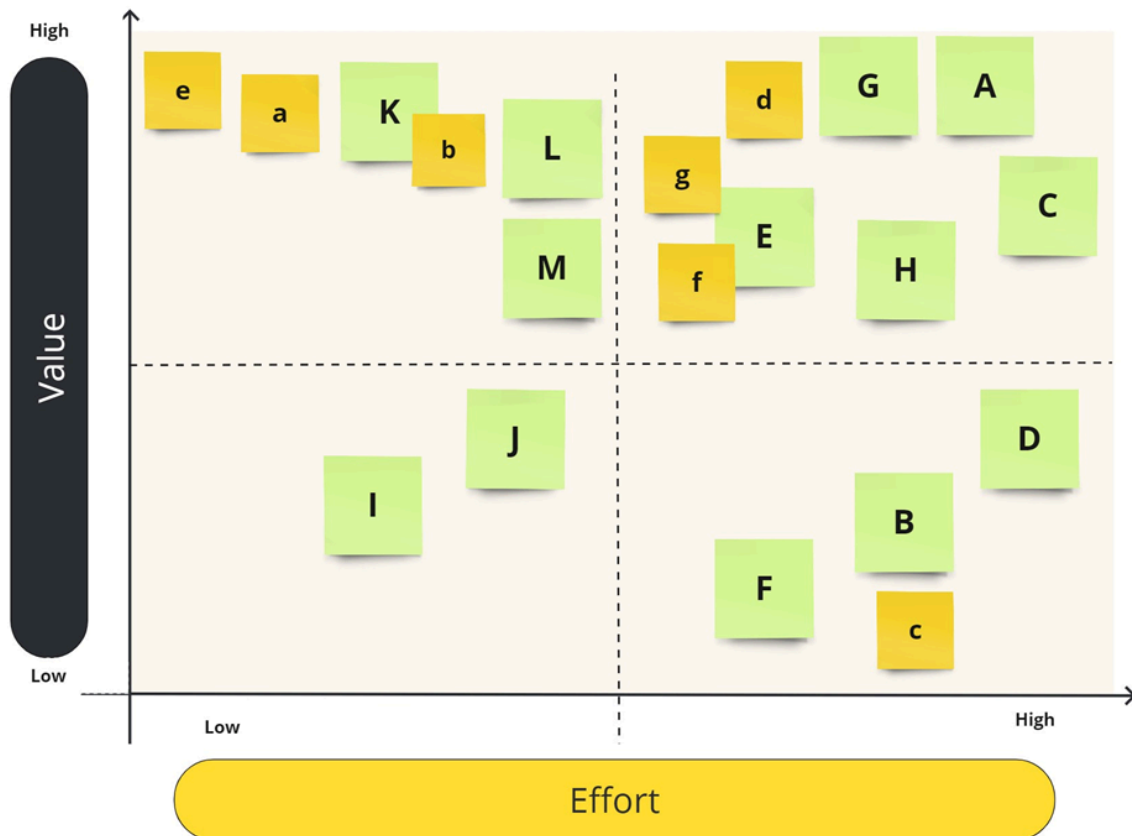
<i>Features</i>	<i>%users affected (20%)</i>	<i>Easy to implement (20%)</i>	<i>Retention value (20%)</i>	<i>Conversion value (40%)</i>	<i>Final score (100%)</i>
A	20	14	20	35	89

<i>Features</i>	<i>%users affected (20%)</i>	<i>Easy to implement (20%)</i>	<i>Retention value (20%)</i>	<i>Conversion value (40%)</i>	<i>Final score (100%)</i>
B	10	10	15	25	60
C	20	5	20	40	85
D	20	5	15	25	65
E	15	15	17	35	82
F	8	12	8	10	38
G	20	12	17	40	89
H	18	14	17	30	79
I	8	18	8	15	49
J	10	16	10	15	51
K	15	20	20	35	90
L	20	17	20	30	87
M	15	17	18	35	85
a	20	10	20	40	90
b	20	12	20	35	87

<i>Features</i>	<i>%users affected (20%)</i>	<i>Easy to implement (20%)</i>	<i>Retention value (20%)</i>	<i>Conversion value (40%)</i>	<i>Final score (100%)</i>
c	10	15	13	20	58
d	15	18	18	35	86
e	20	20	20	40	100
f	15	12	15	30	72
g	15	14	15	30	74

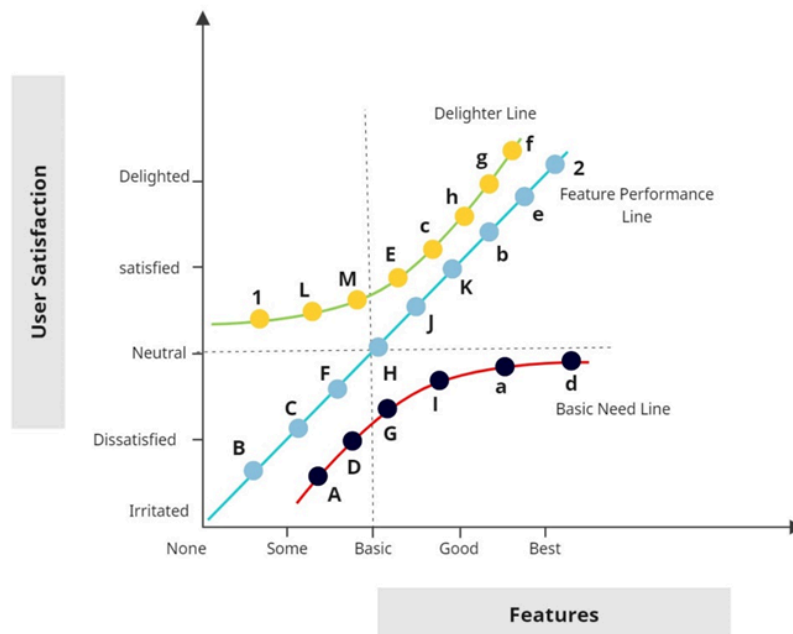
Prioritisation method applied: Value Vs Effort Matrix

Here the prioritisation method used is the value vs effort matrix. Based on the score given to each of the features, we will evaluate our top-priority and low-priority features. The features are then positioned based on how much user and business value they can provide vs the development and operational effort behind each feature as per the weighted score chart. We will be focusing on the high-value low-effort features first and accordingly aim for the high-value high-effort features. The more we understand the importance/priority of the features, the faster we plan, the faster we develop, and the faster we iterate.



Prioritisation method applied: Kano Model

*Although the Kano Model is applicable after the product is completely built and launched in the market, I have tried to showcase what an **expected outcome** may look like **post** the product launch to categorize customer preferences and their impact on satisfaction. Here, I have prioritised features for maximum user delight and analysed which features will not significantly impact the success of the product. To identify how satisfied or even delighted users will be with a product/feature, I have considered the X-Y axes which are feature implementation status versus user satisfaction.*



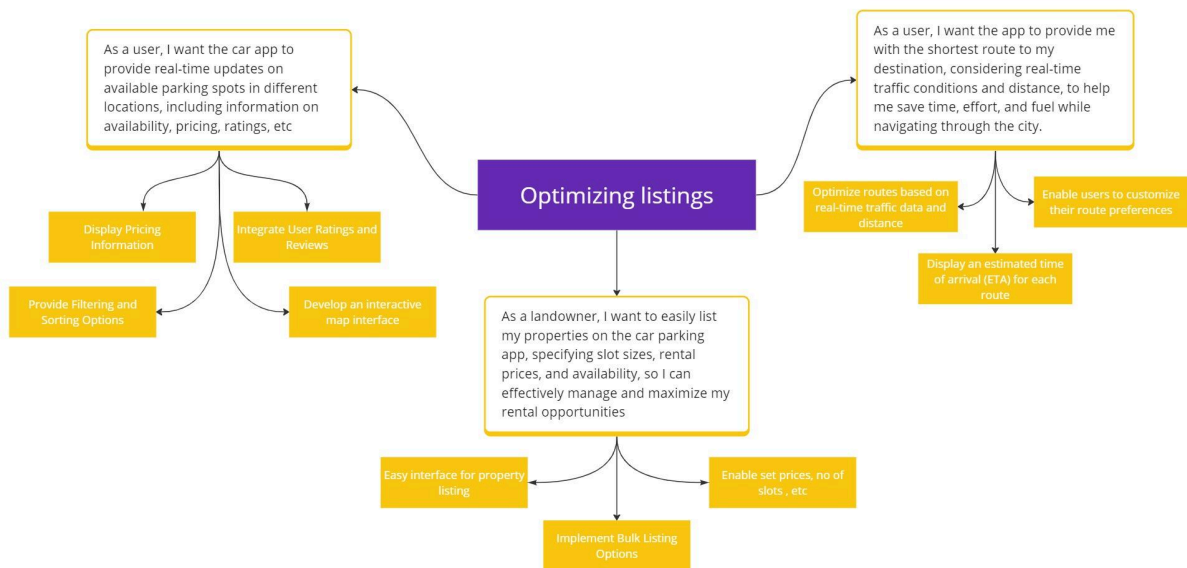
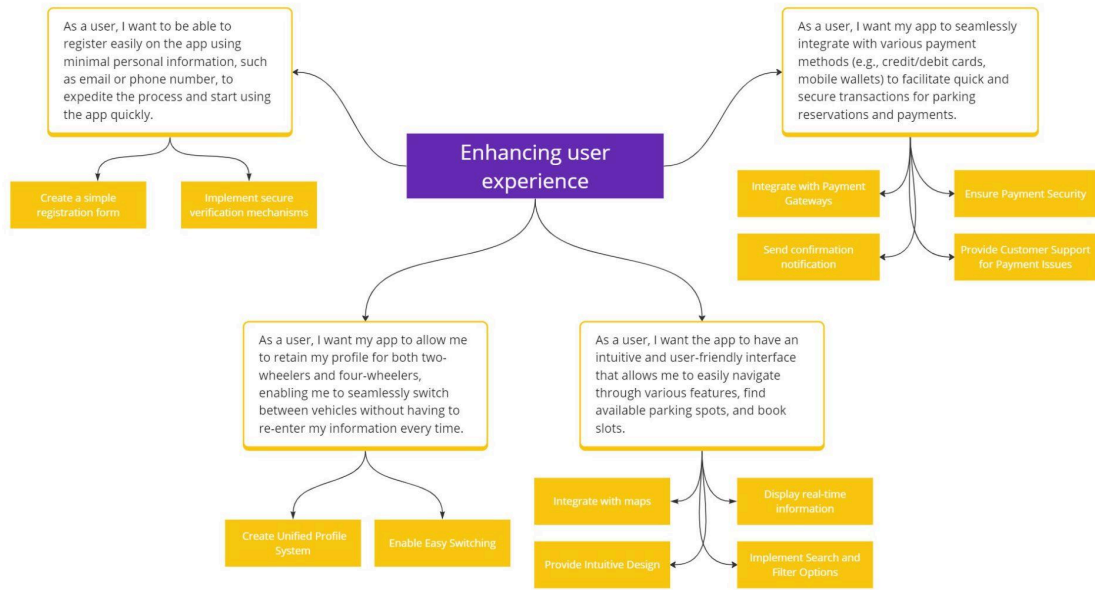
<i>BASIC FEATURES</i>	<i>PERFORMANCE FEATURES</i>	<i>DELIGHTERS</i>
Allow registration of multiple vehicles including two and four-wheelers	Allow switching between different profiles and retain while using	Transparency in the size of the slot, rental prices, reviews and ratings
Real-time update of free slots	Detect the exact location of the driver and parking spaces within his radius	Renew booking
Offer instant as well as advanced booking	Assign vehicles effectively to utilize maximum space	Provide data on traffic, alternative routes and accurate ETA to designated parking,

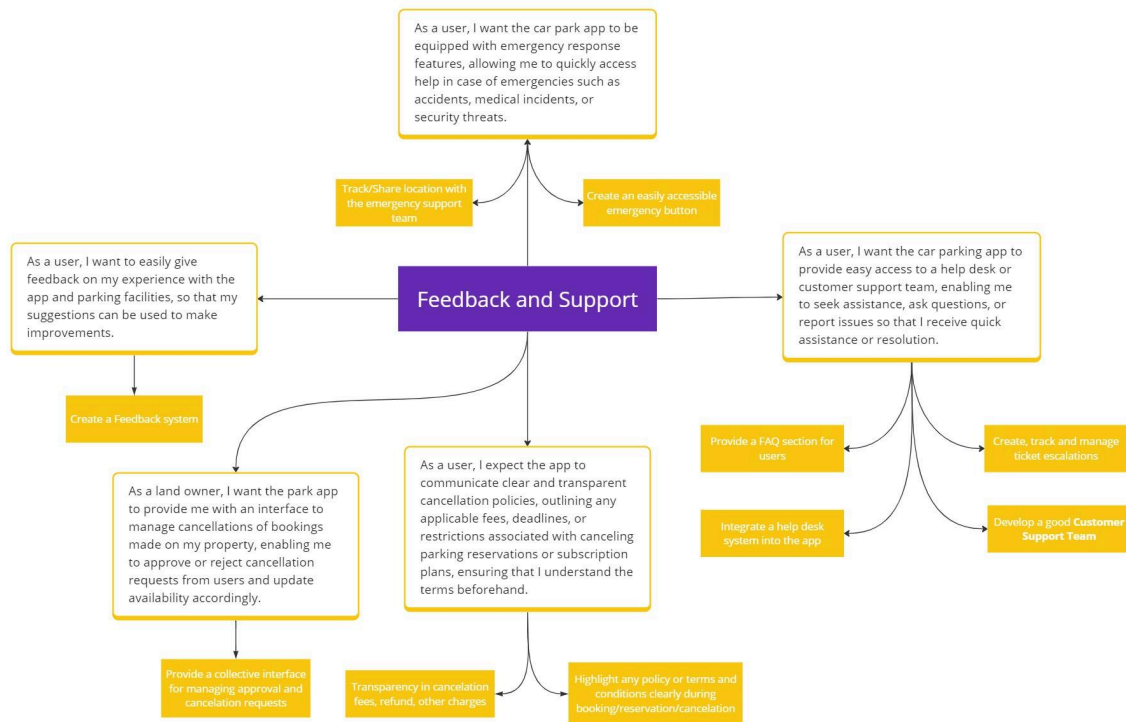
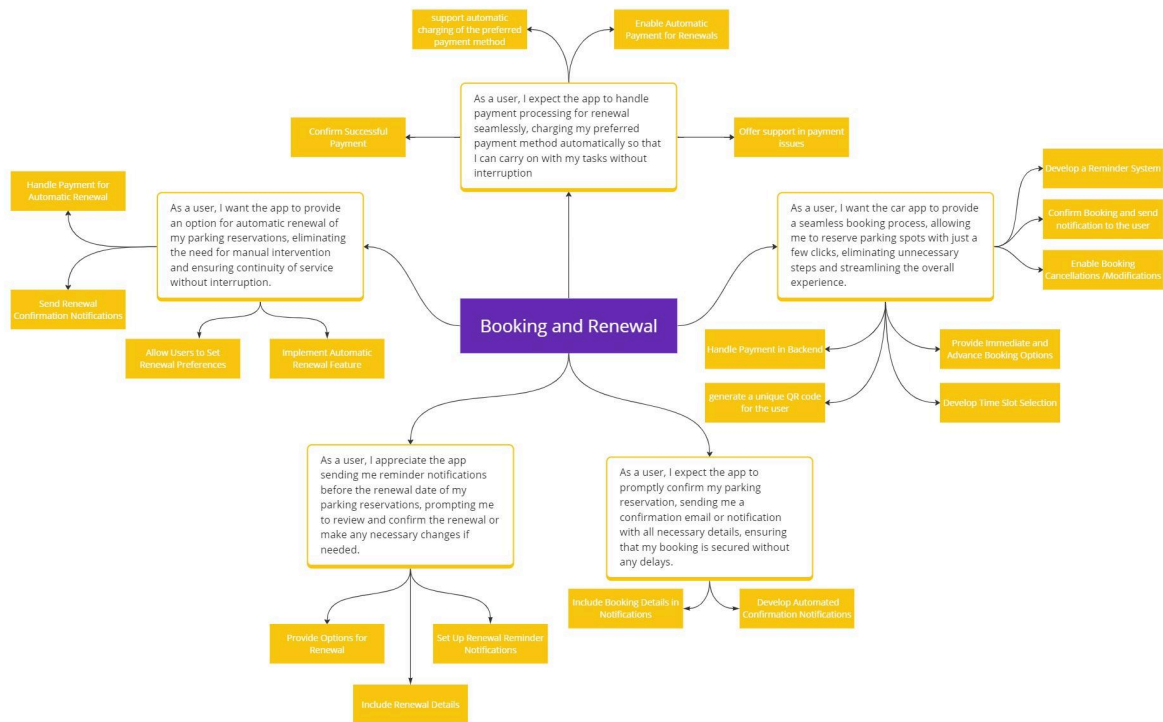
Monitoring of parking duration to calculate the fare	Gather information for allocation for example what day, what time of the day, for what duration	Allow full transparency in parking regulations and guidelines
Registration of property details	Show confirmation and parking status	Access to a free Analytics dashboard
Manage bookings	Multiple payment options and recharge plans	Access to human assistance and legal resources
	Edit/change/update slot sizes, availability, rental prices	Provide/experience a virtual tour of the designated place.
	Monitor payments and daily earnings	Offer plans, offers, discounts, promotions and other reward
	24*7 emergency support and cancellation	

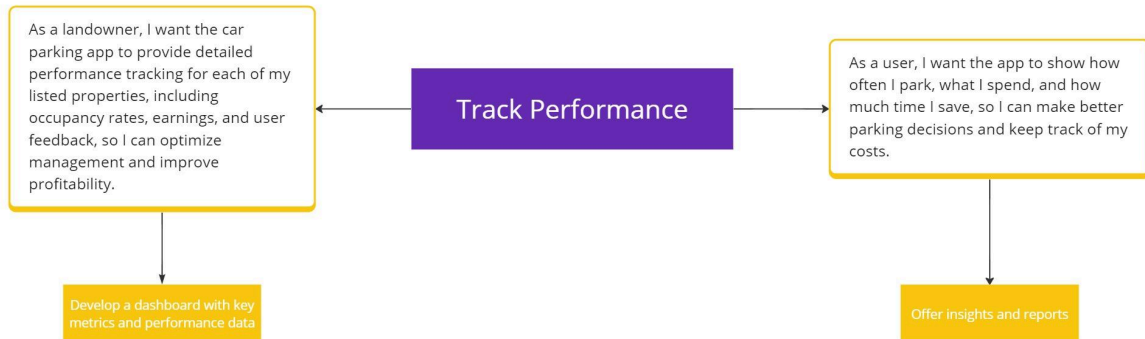
THEME

Development of the initial MVP features for a seamless parking journey for the user.

EPICS, USER STORIES, TASKS







ACCEPTANCE CRITERIA FOR USER STORIES

User Experience

<p>USER STORY</p> <p>As a user, I want to be able to register easily on the app using minimal personal information, such as email or phone number, to expedite the process and start using the app quickly.</p>	<p>USER STORY</p> <p>As a user, I want to be able to register easily on the app using minimal personal information, such as email or phone number, to expedite the process and start using the app quickly.</p>
<p>ACCEPTANCE CRITERIA</p> <p>Given that I want to register my vehicle/ property When I enter invalid/already registered email ID/phone number and set a password Then I can see the error message</p> <p>Given that I want to register my vehicle/ property When I enter my email ID/phone number and set a password Then I can finish my registration and use the app</p>	<p>ACCEPTANCE CRITERIA</p> <p>Given that I have logged in my app When I create profiles for both a two-wheeler and a four-wheeler Then the app should retain both profiles</p> <p>Given that I have logged in my app When I want to remove any profile Then the app should delete the profile</p> <p>Given that I have logged in my app When I want to select a profile Then I can see the selected vehicle profile without entering any details again</p> <p>Given that I have logged in my app When I want to retain any profile Then I should be using the last profile used as default</p>
<p>USER STORY</p> <p>As a user, I want my app to seamlessly integrate with various payment methods (e.g., credit/debit cards, mobile wallets) to facilitate quick and secure transactions for parking reservations and payments.</p>	<p>USER STORY</p> <p>As a user, I want the app to have an intuitive and user-friendly interface that allows me to easily navigate through various features, find available parking spots, and book slots.</p>
<p>ACCEPTANCE CRITERIA</p> <p>Given I am on the payment settings page When I choose to add a payment method Then I should be able to select from different payment modes</p> <p>Given I want to add a payment mode to start When I enter the required details Then I can successfully save and use my payment method</p> <p>Given I am trying to finish the payment When the payment fails Then I should receive an error message and suggestion for any alternative resolution</p> <p>Given I want to go ahead with the payment When I select/switch a saved payment method and confirm the payment Then I should be able to complete transaction successfully</p>	<p>ACCEPTANCE CRITERIA</p> <p>Given I am logged into the app When I access the main menu Then I should see all features including 'Find Parking', 'My Reservations', 'Payment Options', and 'Support'.</p> <p>Given I have found an available parking spot When I select and book the spot Then I should be directed to a confirmation page where either I book now/later</p> <p>Given that I want to find parking When I enter a location or use the map Then I can see/search/filter the available parking spots along with details such as price, distance, and availability.</p> <p>Given I have found an available parking spot When I select and book the spot Then I should be directly charged from the balance I add through my payment methods for the stipulated time</p>

Booking and Renewal

USER STORY	As a user, I want the car app to provide a seamless booking process, allowing me to reserve parking spots with just a few clicks, eliminating unnecessary steps and streamlining the overall experience.		USER STORY	As a user, I appreciate the app sending me reminder notifications before the renewal date of my parking reservations, prompting me to review and confirm the renewal or make any necessary changes if needed.	
ACCEPTANCE CRITERIA	Given I have found the preferred parking spot When I select the spot Then I should be able to book and confirm in two to three steps	Given I already have my balance recharged When I make a reservation Then the app should automatically charge from the existing balance	ACCEPTANCE CRITERIA	Given I have an upcoming booking renewal When my existing reservation time is about to expire Then I should receive a reminder notification via the app	Given I receive a renewal reminder notification When I click on the notification message Then I should be directed to the Renew your booking section where I can review and confirm the renewal
ACCEPTANCE CRITERIA	Given I have completed the booking process When I finalize my spot Then I should receive an instant confirmation via the app, email or SMS, with reservation time and location details.	Given I want to cancel or change my reservation When I select/switch a saved payment method and confirm the payment Then I should be able to complete transaction successfully	ACCEPTANCE CRITERIA	Given I am reviewing my upcoming reservation for renewal When I decide to extend or cancel the reservation Then I should be able to easily make changes directly from the renewal screen.	Given I have decided to renew my parking reservation When I confirm the renewal Then I should receive an immediate confirmation message through the app or email/SMS
USER STORY	As a user, I want the app to provide an option for automatic renewal of my parking reservations, eliminating the need for manual intervention and ensuring continuity of service without interruption.		USER STORY	As a user, I expect the app to handle payment processing for renewal seamlessly, charging my preferred payment method automatically so that I can carry on with my tasks without interruption	
ACCEPTANCE CRITERIA	Given I want my booking renewed automatically When I select the option for automatic renewal provided in the app Then the app should confirm/disable the setting and renew/not renew the reservation automatically	Given I want my booking renewed automatically When my existing booking is expiring Then I should receive a notification reminding me of the upcoming automatic renewal so that I can accept, change or cancel it	ACCEPTANCE CRITERIA	Given I want to renew my parking reservation When I have confirmed for renewal Then the app should automatically charge from existing balance without any manual intervention from me	Given I want to renew my parking reservation When my existing balance expires Then I should receive an immediate notification and arrange for payment of residual fees via different payment modes
ACCEPTANCE CRITERIA	Given I have the renewal option enabled When my existing booking is expiring Then I should receive an 'automatic' renewal confirmation via the app, email or SMS, with reservation time and location details.	Given I have the renewal option enabled When my booking expires and there is no renewal in the closing hours Then I should receive an immediate notification about the issue, with instructions on how to resolve it or make alternative arrangements			

Listing Optimization

USER STORY	As a user, I want the app to provide me with the shortest route to my destination, considering real-time traffic conditions and distance, to help me save time, effort, and fuel while navigating through the city.		USER STORY	As a landowner, I want to easily list my properties on the car parking app, specifying slot sizes, rental prices, and availability, so I can effectively manage and maximize my rental opportunities	
ACCEPTANCE CRITERIA	Given I am on the search page When I enter my destination Then the app should immediately show parking listings, with apt distance highlighted in color and real-time traffic data to show the best route	Given I have selected a spot in the app When I request a route to my destination Then the app should provide me with at least two route options, highlighting the shortest route and another feasible alternative option	ACCEPTANCE CRITERIA	Given I am a registered landowner on the app When I choose to list a new parking property Then I should be presented with an easy-to-use form to enter details such as location, slot sizes, rental prices, and availability dates	Given I am a registered landowner on the app When I am listing or editing a property and provide the specifics of the parking slots Then I should be able to specify different sizes and set different prices for each size
ACCEPTANCE CRITERIA	Given I am on my way to my designated spot When I want to change my route for other reasons Then the app provide the option to switch to the more efficient route from the point where I am with my vehicle		ACCEPTANCE CRITERIA	Given I am a registered landowner on the app When I choose to list a new parking property Then I should be presented with an easy-to-use form to enter details such as location, slot sizes, rental prices, and availability dates	Given I am a registered landowner on the app When I set the availability Then I should have options to set specific dates and times for availability
USER STORY	As a user, I want the car app to provide real-time updates on available parking spots in different locations, including information on availability, pricing, ratings, etc.				
ACCEPTANCE CRITERIA	Given I am on the search page When I have entered my live destination Then I should see information in gist in a small box adjacent to the spot on screen including the spot size, pricing, and user ratings	Given I have entered my live destination When I am viewing the list of spots Then I should have options to filter by price, distance, rating and sort the results (closest, cheapest, highest rated) to find the most suitable parking based on my preferences			
ACCEPTANCE CRITERIA	Given I have entered my live destination When there are very less spots available Then the app should refresh the availability data every minute or sooner if triggered by significant changes in spot availability	Given I have entered my live destination When a specific parking location is fully booked and I want to be notified if a spot opens up Then I should receive a push notification or an alert when a parking spot becomes available			

Feedback and Support

<p>USER STORY</p> <p>As a user, I want the car parking app to provide easy access to a help desk or customer support team, enabling me to seek assistance, ask questions, or report issues so that I receive quick assistance or resolution.</p>	<p>USER STORY</p> <p>As a user, I expect the app to communicate clear and transparent cancellation policies, outlining any applicable fees, deadlines, or restrictions associated with canceling parking reservations or subscription plans, ensuring that I understand the terms beforehand.</p>
<p>ACCEPTANCE CRITERIA</p> <div><div><p>Given I am using the car parking app</p><p>When I navigate through the app's menu or settings</p><p>Then there should be a clearly dedicated button for accessing the help desk or customer support</p></div><div><p>Given I am facing a problem and raise a ticket</p><p>When I want to raise a ticket and track its status</p><p>Then I should receive a confirmation message indicating that my request has been received, along with option to view the status of my request</p></div></div>	<p>ACCEPTANCE CRITERIA</p> <div><div><p>Given I am using the park app</p><p>When I navigate to the settings or account section</p><p>Then there should be an option for accessing the cancellation policies</p></div><div><p>Given I have already reviewed the cancellation policy</p><p>When I make a reservation or subscribe to a plan</p><p>Then I should be required to acknowledge that I have read and understood the cancellation policies before proceeding with the transaction</p></div></div>
<p>USER STORY</p> <p>As a land owner, I want the park app to provide me with an interface to manage cancellations of bookings made on my property, enabling me to approve or reject cancellation requests from users and update availability accordingly.</p>	<p>USER STORY</p> <p>As a user, I want the car park app to be equipped with emergency response features, allowing me to quickly access help in case of emergencies such as accidents, medical incidents, or security threats.</p>
<p>ACCEPTANCE CRITERIA</p> <div><div><p>Given I am logged into the park app as a landowner</p><p>When I access the app management dashboard</p><p>Then the app should have an option for managing cancellation requests</p></div><div><p>Given I want to review all the cancellation requests</p><p>When I review the dashboard</p><p>Then my app should provide me with a list of pending cancellation requests with details such as reservation ID, user information, and reason for cancellation</p></div></div>	<p>ACCEPTANCE CRITERIA</p> <div><div><p>Given I am using the park app</p><p>When I need to report an emergency</p><p>Then there should be an emergency button in the account section</p></div><div><p>Given I have already tapped on the E-button</p><p>When I want immediate help</p><p>Then my current location should be automatically shared with the emergency responders</p></div></div>

SPRINT PLAN

SPRINT PLAN

INTRODUCTION TO STRATEGY

VISION

To create an advanced parking system by integrating quick and simple technology with drivers' lives.

PRODUCT SUCCESS METRICS

<i>CATEGORIES</i>	<i>WHAT I WANT (Output Metrics)</i>	<i>WHAT TO TRACK (Input Metrics)</i>
<i>Acquisition</i>	New Registration	Number of app downloads
<i>Acquisition</i>	Acquisition Budget	Number of visitors on the website, conversion rate (website visitor to app download), CTR on ads, CPA
<i>Activation</i>	Easy Onboarding	Form Conversion Rate
<i>Activation</i>	Conversion	DAU, conversion from DAU to booking(Lead Conversion Rate), Checkout Abandonment Rate
<i>Retention</i>	User Bookings	User Retention, Churn Rate, Feature Adoption Rate, DAU, MAU
<i>Retention</i>	User Satisfaction	NPS, customer satisfaction (CSA), Customer Compliance Resolution Time
<i>Monetisation</i>	Financial Performance	Revenue, Net Sales, Gross Profit and Margin, Net Income, EBITDA, ROI
<i>Operations</i>	App Performance	Uptime, Downtime, Leadtime, Change Success Rate, Compliance Rate, Cycle time
<i>Costs</i>	Financial Performance	Operating expenses(OPEX), Customer acquisition cost

OBJECTIVE AND KEY RESULTS (OKRS)

OBJECTIVE 1 *Onboarding of new users*

KEY RESULT 1 50,000+ app downloads and conversion rate from download to user registration is at least 70% within 6 months.

ACTION PLAN 1 Identify the target audience through market research and launch advertising campaigns on social media platforms and websites.

ACTION PLAN 2 Implement a referral program that incentivises users to refer friends and family to download the app.

ACTION PLAN 3 Personalise onboarding in-app tutorials to guide new users through the app.

KEY RESULT 2 10,000+ New active users within the first month of product launch.

ACTION PLAN 1 Collaborate with relevant partners such as local restaurants, events, or gyms to promote the app to their customers.

OBJECTIVE 2 *Enhancing user engagement*

KEY RESULT 1 User Engagement growth increased by 15% within 3 months coupled with positive reviews, ratings, and a higher NPS score.

ACTION PLAN 1 Implement in-app feedback and response systems from both the user base.

KEY RESULT 2 DAU growth by 25% within 3 months.

ACTION PLAN 1 Implement push notifications to remind users to check parking availability and provide updates on their reserved slots.

OBJECTIVE 3 *Enhancing User Experience*

KEY RESULT 1 Increased Lead conversion rate by 50% within 3 months.

ACTION PLAN 1 Make the registration page intuitive and simple

ACTION PLAN 2 Minimise the number of steps required for the selection of parking space and booking.

KEY RESULT 2 Decreased churn rate by 90% within 3 months.

ACTION PLAN 1 Implement push notifications, or in-app messages to encourage the users to return to the app and complete their journey, from registration to booking.

KEY RESULT 2 Reduced average search time and booking completion time for users by 50% within 3 months.

ACTION PLAN 1 Personalize search results based on user preferences

ACTION PLAN 2 Provide an intuitive map that embeds most of the information that will help the user make the decision.

ACTION PLAN 3 Provide simple two-three steps to finish the booking process.

KEY RESULT 3 Improved User satisfaction rate by 75% by indication of positive NPS score within 3 months.

ACTION PLAN 1 Collect user feedback at various levels within the app, such as after completing a booking or using a parking spot.

ACTION PLAN 2 Conduct an NPS on usability, performance, and overall user experience to understand whether the user will use the app again.

KEY RESULT 4 Reduced customer complaint resolution rate by 60% within 3 months.

ACTION PLAN 1 Provide good customer support that can resolve complaints and make informed decisions quickly.

ACTION PLAN 2 Update customers on the status of their inquiries on time.

ACTION PLAN 3 Provide self-service options within the app or website, such as FAQs, knowledge bases, or troubleshooting guides.

ACTION PLAN 4 Take feedback from customers who have had complaints resolved and escalate queries if they remain unresolved.

OBJECTIVE 4 *Improve financial performance*

KEY RESULT 1 Increase monthly revenue by 30% within 6 months.

ACTION PLAN 1 Develop and iterate on a competitive commission from the transaction that is market-competitive and reasonable to both vehicle owners and parking space providers.

ACTION PLAN 2 Onboard parking space providers who can offer different types of services for example other types of parking lots, valet services, EV charging stations, car wash, etc

ROADMAP

STRATEGIC

EXECUTION -

 **Roadmap**

EXTERNAL -

 **ROADMAP EXTERNAL**

USER JOURNEY MAP

 **User Journey Map**

USER FLOW DIAGRAM

 **User flow diagram**

WIREFRAMES

Wireframes

PRODUCT REQUIREMENT DOCUMENT

<i>Overview</i>	<p>Park App is an innovative solution to help users find alternative parking spaces when existing ones are unavailable. Through our platform, individuals can easily reserve parking spaces hosted by landowners and residents looking to monetise their available land. This document outlines the requirements and features necessary to develop the Park App.</p>
<i>Objectives</i>	<ul style="list-style-type: none">● Provide a user-friendly interface allowing users to find and reserve parking spaces quickly.● Provide GPS and mapping technologies for location-based search and navigation and offer real-time updates on parking space availability.● Ensure secure and convenient payment methods.
<i>User Personas</i>	<ul style="list-style-type: none">● Vehicle Owners - Working professionals, businessmen, students, daily commuters● Land Owners - Land Providers, Real estate Owners, Residential Property Owners

Use Cases	<ul style="list-style-type: none"> ● As a user, I want to have multiple profiles for different vehicles. ● As a user, I want to search for available parking spaces near my destination. ● As a user, I want to see the shortest, traffic-free route to my destination. ● As a user, I want to reserve a parking space in advance. ● As a user, I want to see real-time updates on parking space availability. ● As a user, I want to make secure payments within the app. ● As a user, I want to receive notifications about my reservations. ● As a user, I want to read reviews and ratings of parking spaces before booking. ● As a user, I should be able to rate and review post-booking service. ● As a property owner, I want to manage parking space listings and monitor booking requests.
Functional Requirement	<ol style="list-style-type: none"> 1. Frontend Development: <ol style="list-style-type: none"> 1.1. Login/Registration screen 1.2. Map view with parking space symbol 1.3. List view with detailed information and booking options 1.4. Reservation confirmation and payment screens 1.5. User profile(s) 1.6. Property owner dashboard 2. Backend Development: <ol style="list-style-type: none"> 2.1. User authentication and authorisation 2.2. Parking space database management 2.3. Real-time availability updates 2.4. Payment gateway integration 2.5. Notification system
Non	

<i>Functional Requirement</i>	
<i>Assumptions and Constraints</i>	<ul style="list-style-type: none"> • Most users will be urban dwellers who own vehicles and regularly need parking spaces. • Users will have an Android operating system on their smartphones and 5G internet access to use the app. • The app will use standard API integrations for payments, mapping, and notifications. • Parking providers will comply with local regulations to provide information and services on parking spaces.
<i>Timeline and Development Plan</i>	<ul style="list-style-type: none"> • Phase 1: Requirements Gathering and Analysis (5 weeks) • Phase 2: UI/UX Design (4 weeks) • Phase 3: Backend Development (4 weeks) • Phase 4: Frontend Development (4 weeks) • Phase 5: Integration and Testing (4 weeks) • Phase 6: Beta Testing and Feedback (8 weeks) • Phase 7: Final Release (6 weeks) • Total Duration: 35 weeks (9 months approx)
<i>Product Flow and Design Specification</i>	<ul style="list-style-type: none"> ☰ Wireframes ☰ User flow diagram ✚ User Journey Map

