

STARSHIP

Project 1

What Can a Starship Do?

SPRING 2023 CGT 17208-002

SECTION 10:30 - 1:15

Team 13

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Overview



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04 Q&A

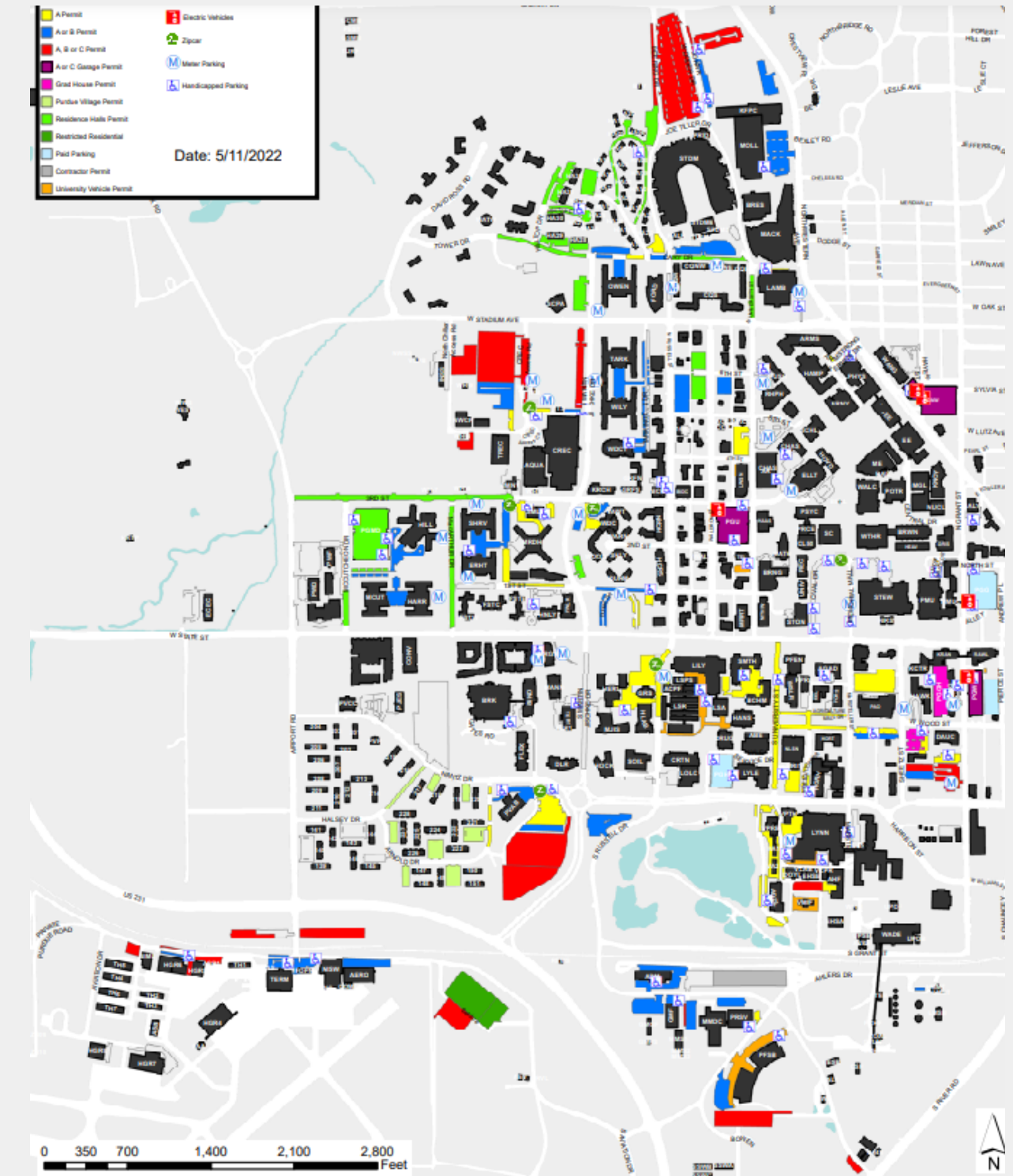
Q&A and Feedback



Problem

Problem Statement

Purdue campus affiliates are **spending more than necessary time locating parking** spots on Purdue's campus and are often finding themselves barely making it to their dedications on time even when giving themselves extra time to look for parking.




Problem Inspiration

Córdova Recreational Sports Center, the lot north of Ross-Ade Stadium and the lot south of Dauch Alumni Center near Grant and Harrison Streets.

Some students have voiced their displeasure with where free parking is located on campus and believe the university must do a better job of having more parking available and making parking passes easier to obtain.

 **r/Purdue** · Posted by u/mchuffle 1 day ago

276  **fucking purdue parking**

PSA 

i didn't get a ticket or anything they just suck

 46 Comments  Award  Share  Save ...

visited the parking lots that

TOP STORY

Students find difficulty parking on campus

By JACE JELLISON For The Exponent Oct 25, 2021



BoilerPaulie · 9 yr. ago

You could always fend for a spot on Russell Street somewhere between Stadium Avenue and State Street, but those spots are really hard to come by, and as soon as you take your car somewhere, you're back on the hunt when you return. But hey, make it into some kind of game and maybe it won't suck as bad.

(Also does not satisfy the "close" requirement but when you need untimed parking, it's few and far between on good options)



1



Reply

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Report

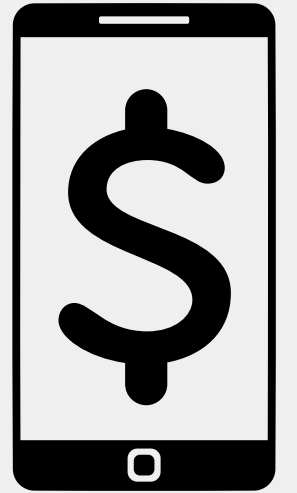
Save

Follow

"I've never parked on campus 'cause I never know where you actually can," said Carter Hall, a junior in mechanical engineering.

Problem

Inspiration



"With mobile, we have an idea of **where people are parking, how long** they're parking..."

"We have a bunch of students who **will pay for anything with their phone**, and then a bunch of visitors who aren't used to that, but... we haven't had any complaints at all about using the system."

Andy Pruitt
Parking Facilities Coordinator at Purdue

Problem

Stakeholder Story



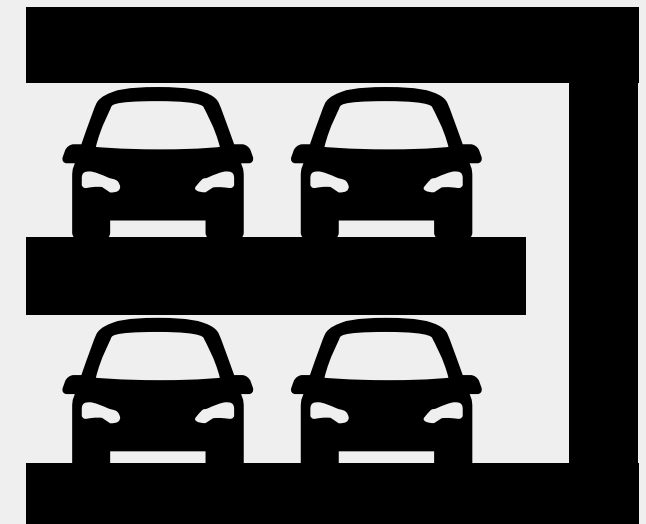
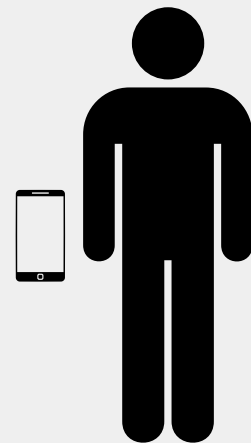
Kylee Choi

- Arriving to school 2hrs before class starts
- High stress for commuters
- Wasting gas
- Has missed entire class periods, looking for parking

Problem

User Statement

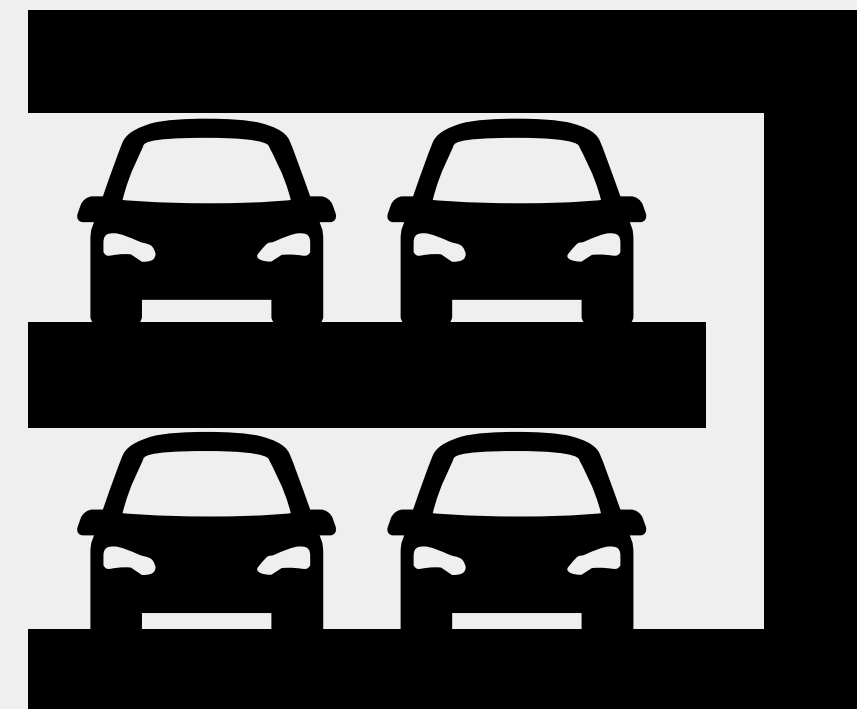
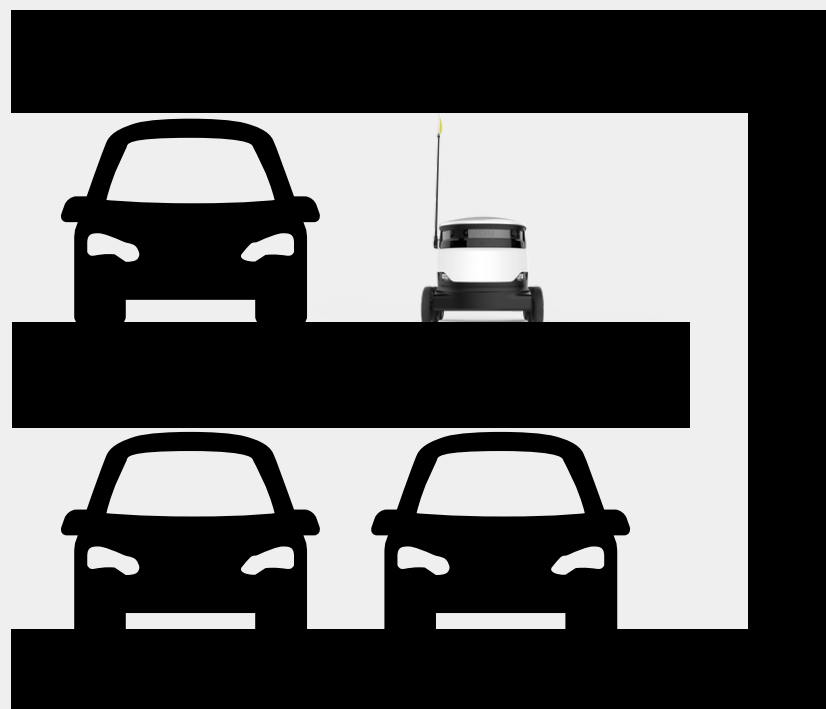
Abled Purdue students who park personal **vehicles** in **Purdue parking garages**, particularly during population-dense times (game days, weekday late mornings.)



Solution

Design

Starship parking robots **inform and reserve** parking spaces upon request in Purdue **parking garages** through an **app**.



Solution

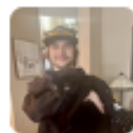
Feedback: User Concerns

- Starship speed and sensitive motion sensors can **slow down traffic**
- Starships can be **hit, malfunction, or be moved**
- Will the Starship be able to **reach my reserved spot in time?**



Kyle Graham 16 days ago

I think an important thing to add would be to ensure that nobody would steal the parking space after somebody had already reserved it. I've seen people be petty enough to steal parking spaces right in front of people, so it's something to consider.



Matthew Baldini 16 days ago

My only concern is how you would prevent students from picking up and manually removing starships. Otherwise a useful and convenient use for students and staff.



Pedro Marquez 16 days ago

As a driver, I would be quite annoyed if the bots get in the way as I try to look for parking without using the app. Especially since they are small and will be really hard to see. However, the base idea is good



Alex Rosenau 16 days ago

What happened when people move or hit the starship.



Azaria Revereza 16 days ago

Design space: Purdue Parking

- Locating live - what if the parking spot gets taken before the app updates?

Solution

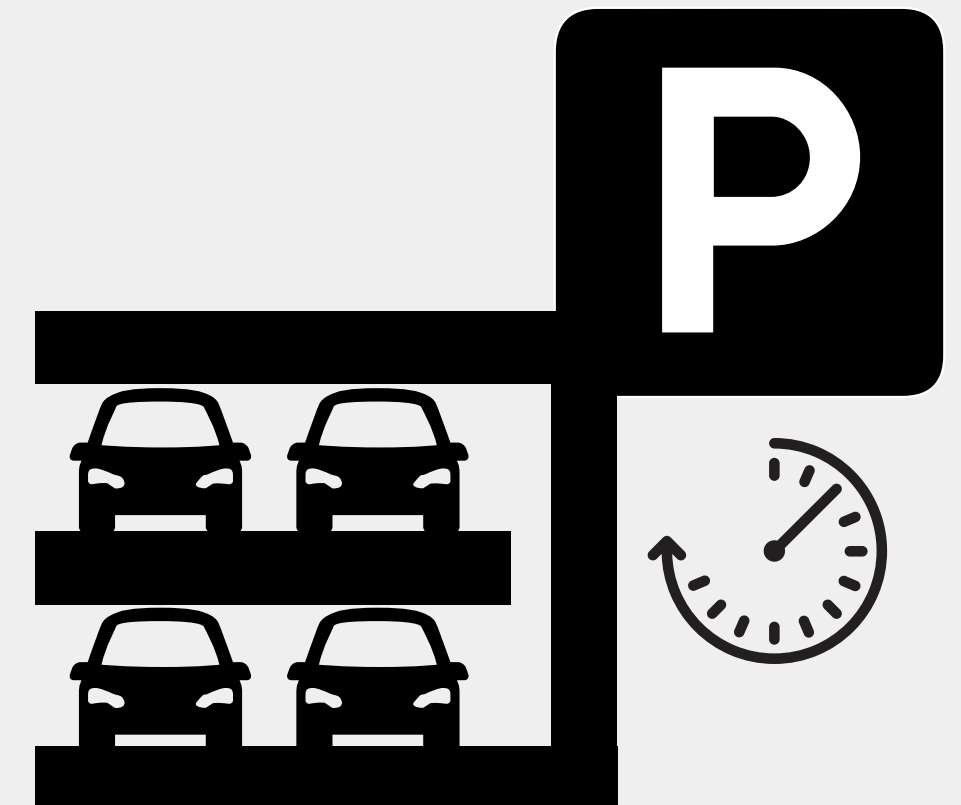
Details: Addressing Concerns



Starship parking robots will follow a pink line on the ground for safety.



alarms/reporting if it gets hit or moved

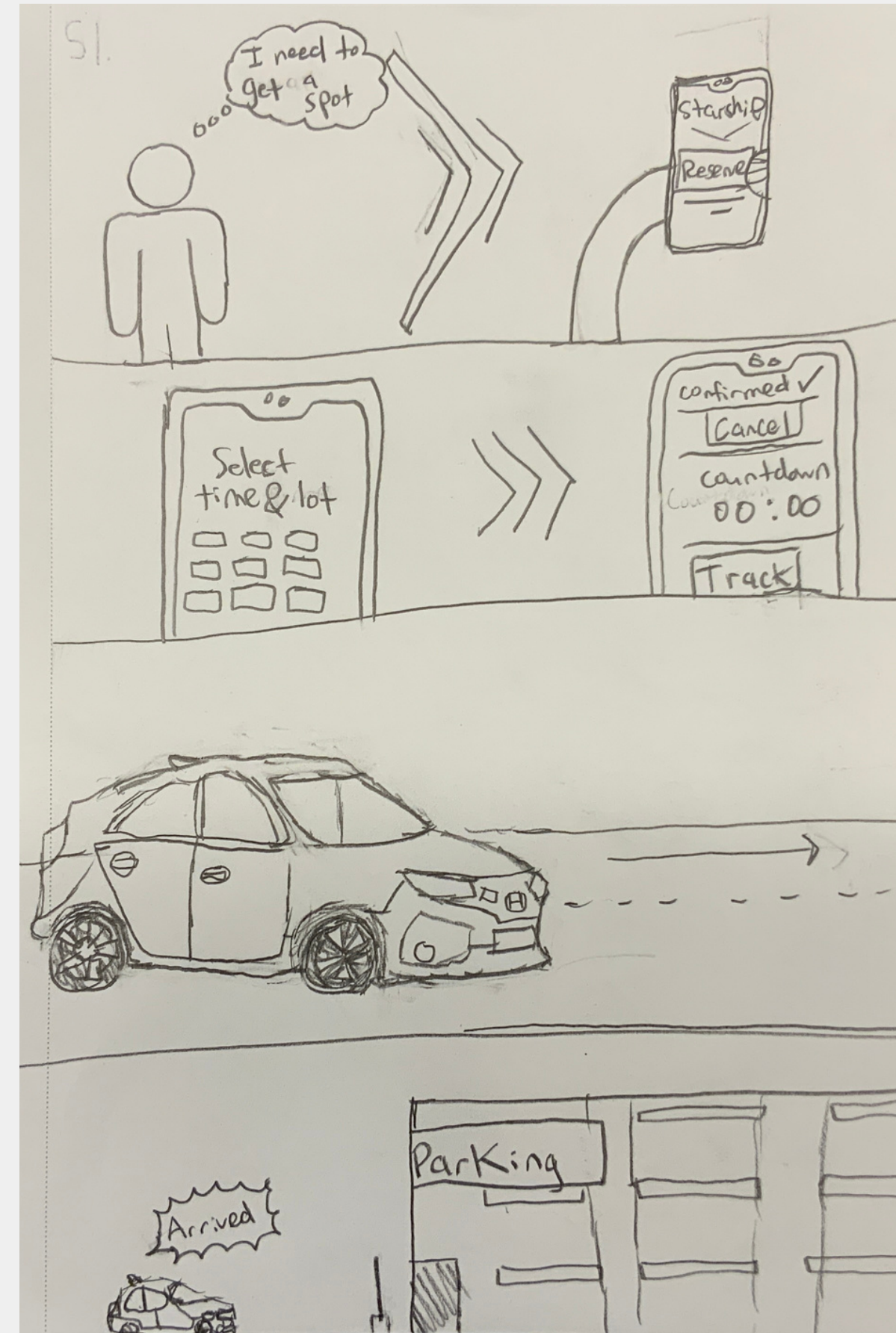


Reserving lot and not individual spot.
Reserving time slot with countdown timer.

Solution

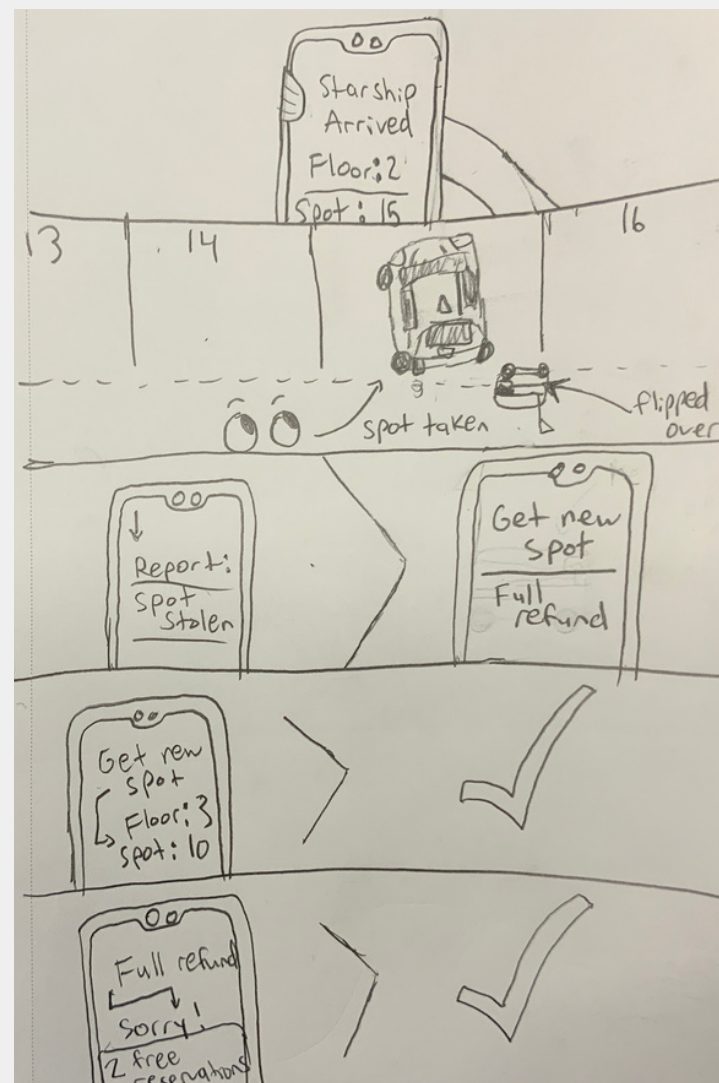
Storyboard

General scenario where the user reserves a parking space and drives to the parking lot.

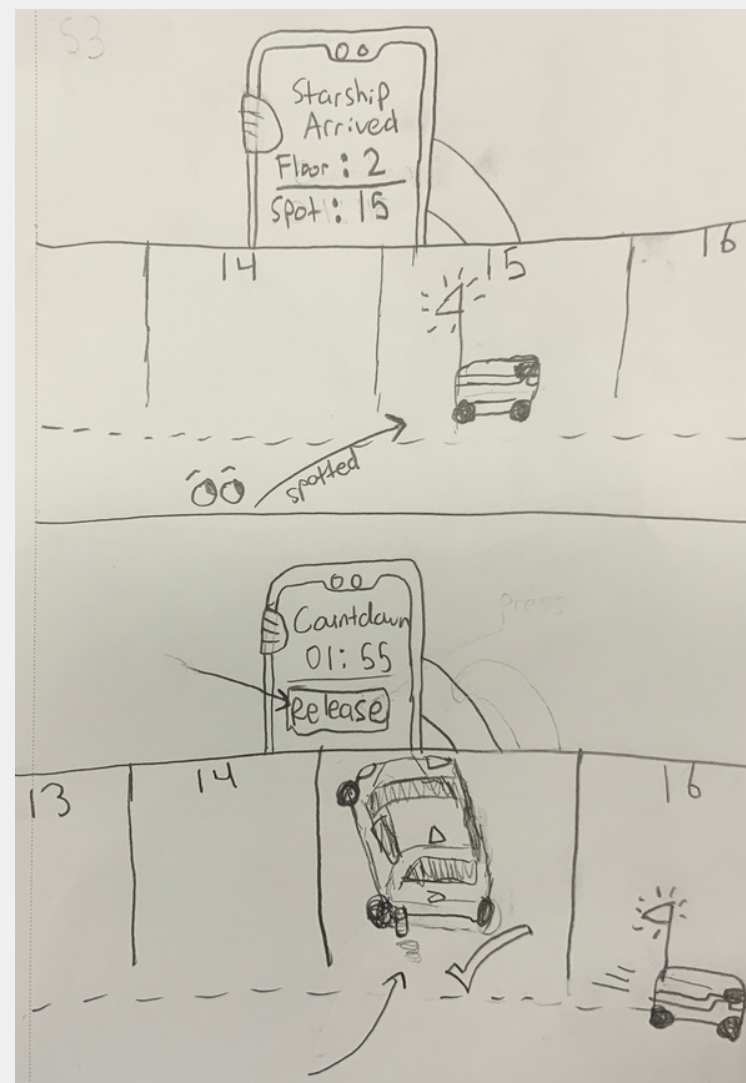


Solution

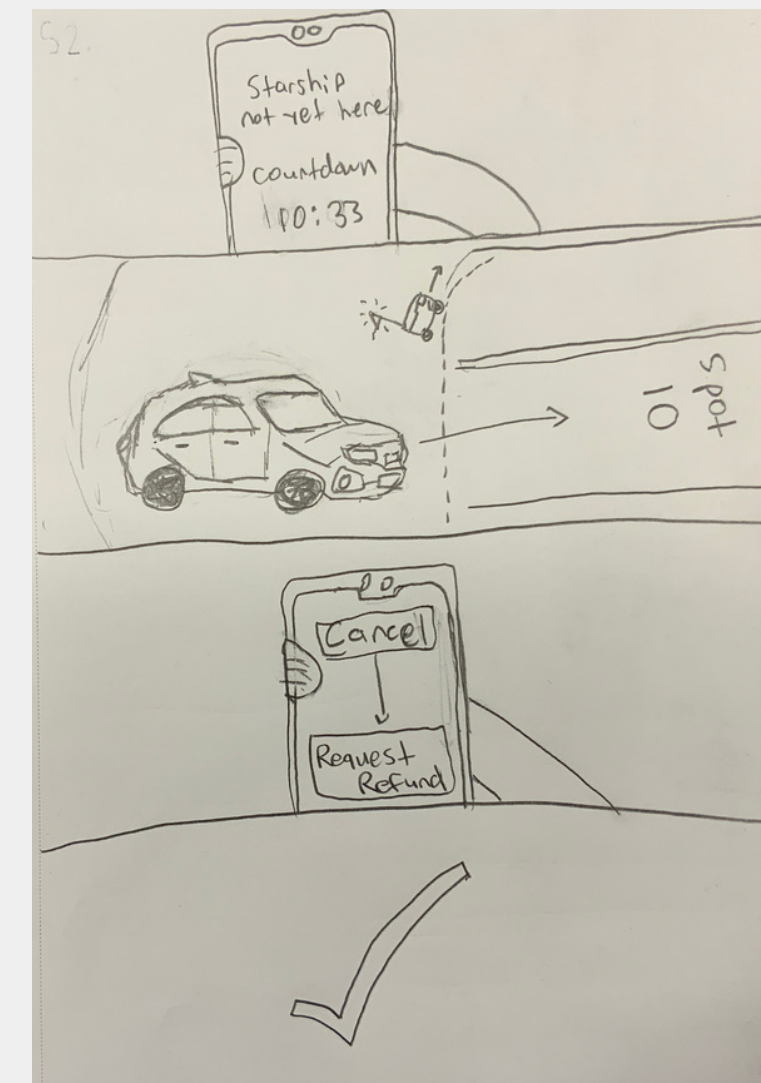
Storyboard



When the spot is taken by a different vehicle.



When the spot is reserved by a starship and you arrive on time

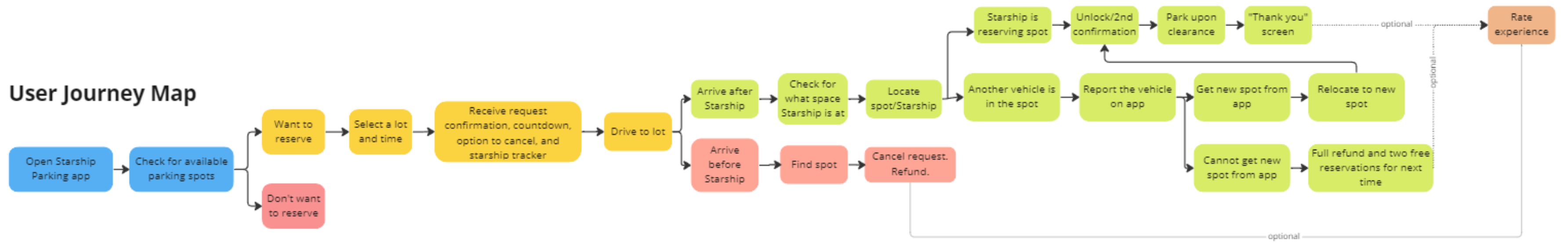


When user arrives at the lot and parks before the starship

Solution

User Journey

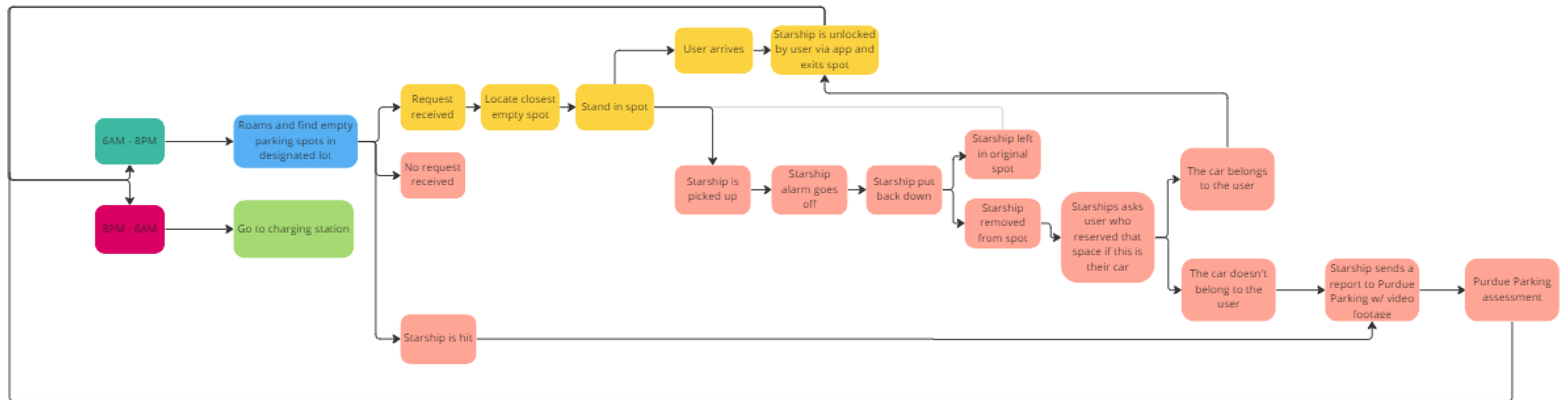
User Journey Map



Solution

Starship Journey

Starship Journey Map



Conclusion

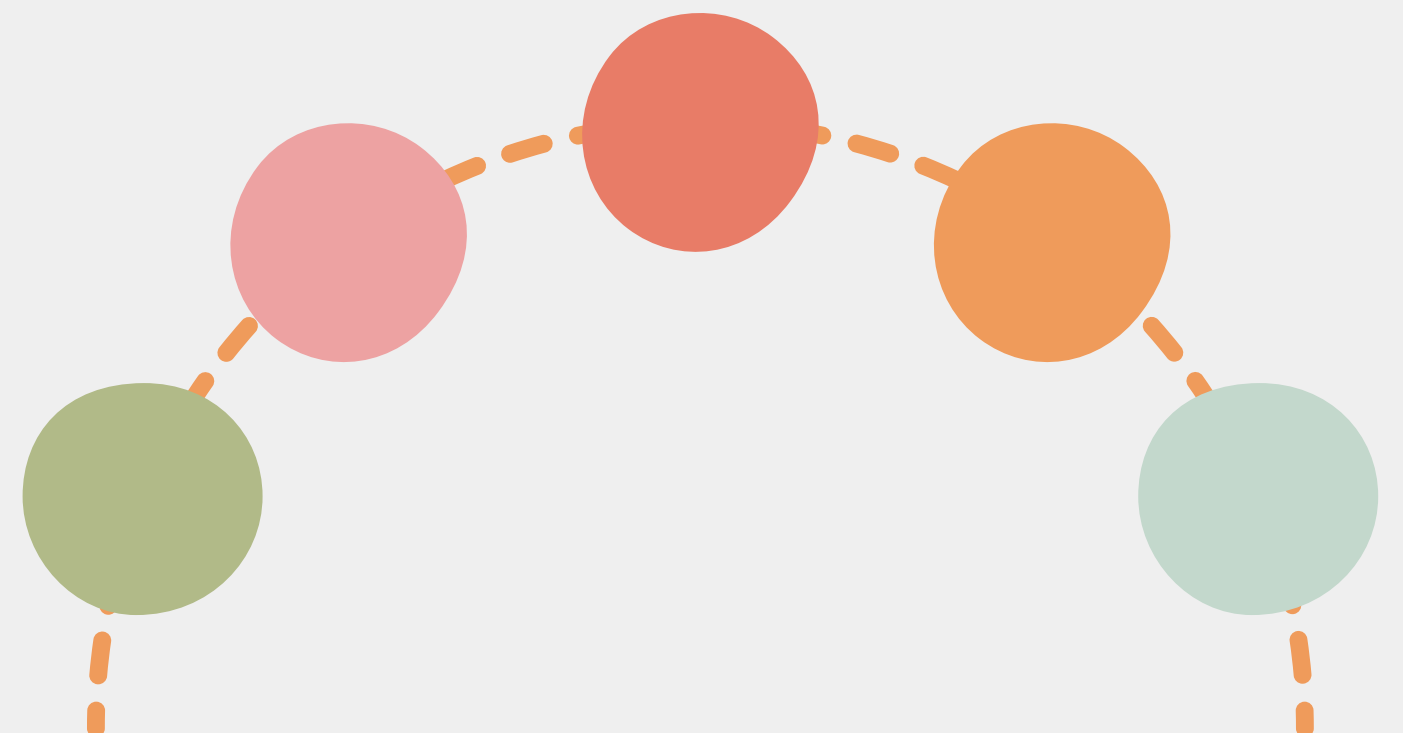
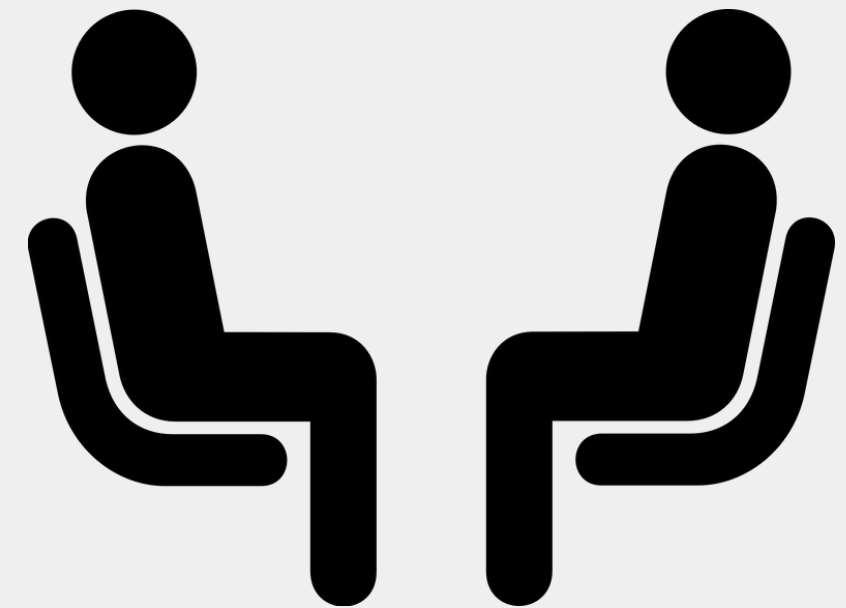
Reflection

What would we have done differently?

- **Interview** experts and more users
- **Testing** with users and Starships
- Potentially **redesigning** the physical Starship

What did we learn from our project?

- **Affinity diagramming**
- How to make GOOD **storyboards**



Thank You

Questions?