

CS615 Project Step 4 Report

- Paper Prototyping and Low-Fidelity Testing -

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We designed preliminary sketches of our app. These sketches represent the first iteration of the app. We broke it down into three scenarios, namely:

1. Finding parking lot(Realtime parking)
2. Purchasing a parking pass
3. Handling citations

Scenario 1: Realtime parking:

We briefed the users about what they had to do for this scenario, which included logging in, selecting a parking facility, locating a parking spot, and parking in the spot, and we told them the app lets them remember where they parked the car. We also explained the key features of our app and how it would ideally work better than the current system. Many users were intrigued by the feature that lets the driver know where there are vacant parking spots, which would help them reduce wasting time. Users suggested improvements to add some changes to our interface to enhance the user experience. We have used blue ink to point out the changes we made between the two iterations of the user interface.

First Iteration:

1. LOGIN

UMB PARKING

Username

P/W :

[create account](#)
[forgot password](#)

2. LOCATE PARKING SPOT

LOT	T	D	R	%
WG				
LOT D				
CC				
BRYSIDE				

X	X								
X1									
X2									
X3									
X4									
X5									
X6	X7	X8	X9						

T - TOTAL SPOTS

D - OCCUPIED

R - REMAINING

% - PERCENTAGE OF OCCUPANCY

3. ~~SELECT PARKING APP SPOT~~
PARK AT SPOT

A hand-drawn sketch of a mobile app screen. At the top, it says "YOU'VE PARKED AT" followed by a circle containing "#3" and an arrow pointing to "WG". Below this is a button labeled "COMPLETE PAYMENT". At the bottom, it says "START TIME: 09:00".

4. COMPLETE PAYMENT & EXIT

A hand-drawn sketch of a mobile app screen showing a payment summary. It lists "START TIME: 09:00", "END TIME: 16:00", "TOTAL: 9 HRS", and "DUE:". Below this is a "CARD NO." label and a "PAY" button.



A hand-drawn sketch of a mobile app screen for payment details. It includes a "CARD NUMBER" field with "XXXX-XXXX", "VISA, MASTERCARD", "DAILY RATES:", and two buttons: "PAY IN FULL" and "INSTALLMENT". At the bottom is a "COMPLETE" button.

Second Iteration:

1. LOGIN

UMB PARKING

Username:

P/W:

[create account](#)
[forgot password](#)

2. LOCATE PARKING SPOT

LOT	T	D	R	%
W6				
LOT D				
CC				
BAYSIDE				

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

T - TOTAL SPOTS

D - OCCUPIED

R - REMAINING

% - PERCENTAGE OF OCCUPANCY

West Gate ▾

Floor #1

Floor #2

Floor #3

...

Scenario 2: Purchasing a parking pass:

Similarly, we briefed the users about what they had to do for this scenario, where they had to enter their car as well as some other details to generate a parking pass. The app can directly accept payments within the app, without having to use a third-party app. Users can also directly view payment history and previous citations through this page. Users liked the feature that instantly generates the parking pass, rather than having to wait for approval. Users suggested that we add a prepay feature, so they can leave the parking lot without having to open the app again and can leave within the designated time slots.

First iteration:

2. ENTER CAR DETAILS

ENTER CAR DETAILS

YOU ARE

IN

SELECT

☐ ON CAMP ☐ OFF CAMP

WG BAYSIDE

LC

LOTO

ADD MY VEHICLE

TAKE PHOTO

3. VIEW PARKING PASS

YOUR PASS:

STATUS: ACTIVE

4. VIEW PREVIOUS

HISTORY	
2022	-\$200
2021	-\$500
2020	
Citation 2019	-\$50

Second iteration:

1. LOGIN

UMB PARKING

Username:

P/w:

[create account](#)

[forgot password](#)

2. ENTER CAR DETAILS

←

TO U R E

SELECT

☐ ON CAMP ☐ OFF CAMP

W/ BAYSIDE

W/

CC

LOT

ADD MY VEHICLE

Time Slots ▾

- 09:00-11:00 - 2 hrs
- 09:00-12:00 - 3 hrs
- 09:00-16:00 - 7 hrs

3. VIEW PARKING PASS

YOUR PASS:

STATUS: ACTIVE

4. VIEW PREVIOUS

HISTORY

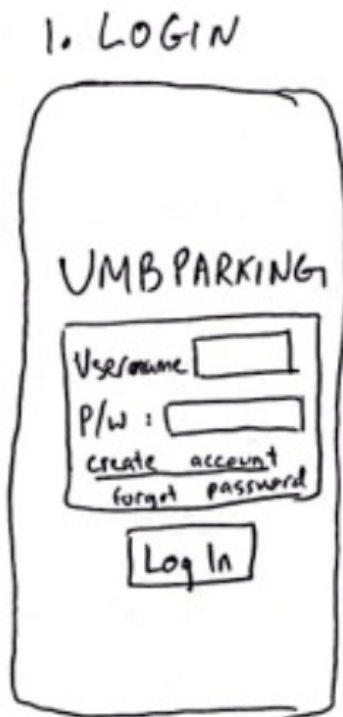
2022	-\$200
2021	-\$500
2020	
Citation 2019	-\$50

←

Scenario 3: Handling citations:

We briefed the users that this scenario is different from the other two scenarios because it is from the perspective of the parking manager, rather than the parkers' side. When a parking manager sees a violation, they can look up the license plate number, and file a report stating what kind of violation it is. The parker then gets notified of this and has the chance to correct the violation within 30 minutes. If the parker corrects the violation, they can appeal to the parking manager to have the citation removed. The parking manager can then decide whether to accept or reject the appeal. If he chooses to accept, the citation is voided, and the parker won't be charged. If not, the citation is generated and appears on the parker's account. Users commented about adding a text field to be more specific about the type of violation.

First iteration:



2. LOOKUP PLATE NUMBER

TAKE PHOTO

☐ Parked

Handicapped
Reserved
Overnight
Hydant

Generate citation

Parking Manager

Notify users
⇒

YOU ~~NEED~~
Need to
~~Take~~ Action
At WG #3

User

User corrects
his parking
⇒

Approve user
'Kim' for
~~the~~ removal of
citation

☐ Accept ☐ Reject

→ Citation Valid

→ Citation Voided

Second iteration:

