Team Prototype 1:
Low Fidelity Storyboarding and Mid-Fidelity Wireframing

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INTRODUCTION:

With the spread of COVID-19 and its variants, restaurants are faced with developing new and creative ways to handle many health concerns about the spread of the virus. Automating specific tasks such as self-seating, contactless ordering, and the "order to kitchen, kitchen to delivery" workflow.

PROTOTYPE MECHANICS:

In our proposed prototype, patrons scan a QR code before or upon entering the restaurant (either the QR card is on the door or perhaps immediately as they enter). Upon scanning the QR code, the patron's mobile device opens the mobile web app, and they are asked for their party size. Once their party size is selected, they are taken to the table selection area of the web app.

The establishment may have different dining areas, or larger areas might be split on multiple "screens." The table selection area accounted for this by showing which dining area is selected with options to browse other/additional available tables.

Once the table is selected, the patron is instructed to go to their table with their party. Once seated, patrons scan a unique QR code located at the table to retrieve the menu and begin ordering. While ordering, the wait staff receives a notification that a new party has been seated, and they bring the appropriate table service (forks, knives, plates, napkins, etc.), including water. Once their orders are placed, they are sent to the kitchen directly with their table number. The kitchen prepares the patrons' items, and the wait staff delivers the meals when they are completed.

While dining at the establishment, patrons may tap the service menu icon and may request what they need from a list of items. A few pre-populated options will reduce the time/interaction required to get the item(s) needed; however, the patron may request that the wait staff visit the table for a specific request. There is also an emergency button in case of a medical situation or something serious to alert the staff that they require immediate assistance.

Patrons may order additional items (e.g., more drinks, additional food items, etc.).

The dining experience may end at any time and is handled individually. If a group of four are dining and one of the patrons must leave before the rest, they may simply tap the cart icon and select "I'm done," which will begin the checkout process. Once the entire table has been marked as paid, a notification is sent to the wait staff that the table needs to be bussed.

PROTOTYPE DESIGN JUSTIFICATION:

Our approach was to minimize contact and increase efficiency in the experience of dining. Justifications for our design have been explained below.

Table selection and seating:
We chose a color palette and a font that would stand out and go with the theme of the restaurant to make the app appealing. We added a drop-down menu to indicate the party number. We intend to make the drop-down menu available with a scrolling mechanism to accommodate small screen sizes. We also made the table's locations visually available on the map of the restaurant so patrons can decide where they want to be seated based on the layout of the restaurant. This also allows for easy and efficient selection. Once the table has been selected by the patron, it is indicated again in the following screen to avoid confusion. The patron who made the seating arrangements will have direct access to the menu from the last screen to avoid scanning a QR code again. The rest of the party can scan the unique QR code at the table and get access to the menu.

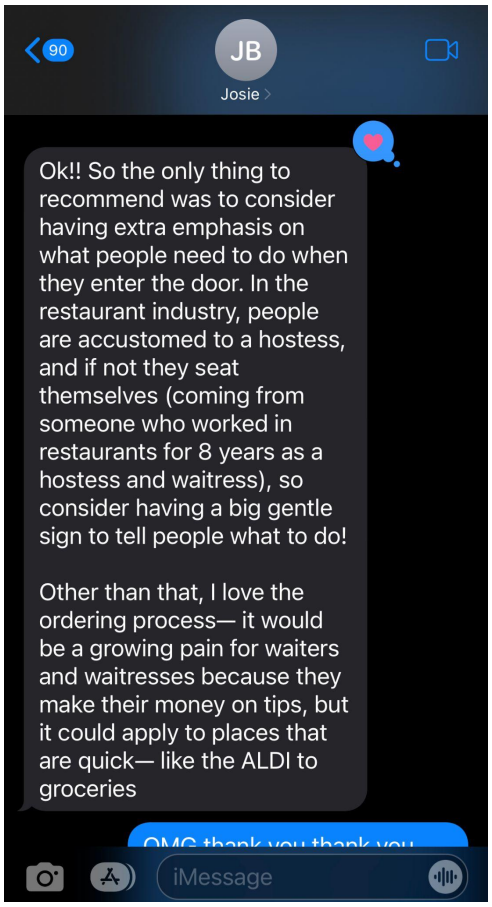
Ordering, additional service and payment:
The design of the menu and the item selection pop up was straightforward. We wanted to make it appealing, easy to navigate and understand. We added shadow effects to all our buttons to indicate what can be selected. Under our assistance tab, we decided to add an “other” option to give patrons the opportunity to describe other issues if they may arise during their dining experience. We also decided to make the emergency button bright red and visible in case there is an emergency and there is no staff around at that moment. Our payment screen is straightforward to use as well with an “I’m done” button to indicate that payment must be made only after the patron is done with their meal.

CHANGES, CONSIDERATIONS, AND THINGS LEARNED:

The process of storyboarding, getting feedback, and then wireframing had us consider our design approach. Even through the wireframing, however, things to consider or things that we decided should be in there came to fruition, showing that although design is iterative, it’s not linear– ideas will come at any time during the process.

For example, in the sketch drawings, a panel was sketched where the wait staff would field the orders for the kitchen. We later discussed that the prototype should just print order tickets directly in the kitchen for them to prepare.

Below is the written feedback we received from an outsider on our overall prototype idea and storyboards:



We also did not storyboard or wireframe the waitstaff or kitchen side of the prototype. This demonstrates that all stakeholders in the entire dining workflow experience different sides of the prototype. For instance, there may be a mechanic for wait staff to know what orders are outstanding for tables to mitigate any kitchen errors (e.g., a situation where an order ticket gets "lost," and the patron never receives their order).

Other thoughts that that came up during the process:

1. Advanced reservations and table selection for a specific date and time. We did not consider this during our storyboard or wireframe but should be considered in final design.

2. We decided to add an emergency button in the assistance tab of the application to indicate that the table needs immediate emergency assistance from the restaurant. This was a last minute “feature” that we decided was a must that didn’t get discussed in the initial planning of the wireframe.

3. Something we’re considering is the tipping process for wait staff and servers since this “efficient” way of dining reduces the presence and need for wait staff in the overall dining experience and so we’re currently coming up with ways to solve this issue brought up by Josie in the feedback that she gave us.

4. We also had doubts about whether patrons would be able to understand that the assistance tab can be opened with the icon in the middle of the bar. We intend to make a few adjustments and add labels in the following iteration.

5. Lastly, one thing we ran into during wireframing was how patrons moved from table selection/check-in to ordering. Some of us felt that each QR code on the tables was the same, and they'd scan them going through the same workflow:

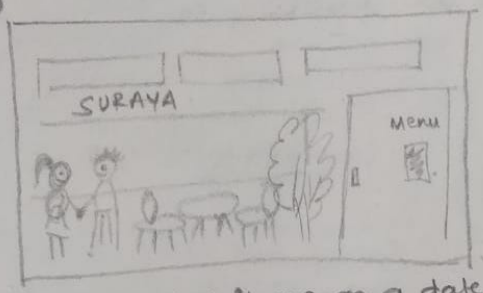
    - Scan, Select your table number, order.

Others thought that each table would have an individual QR code that sent the data of which table was being served with the menu request, which was ultimately sent to the system when ordering. This seemed to simplify the process and reduce additional steps:

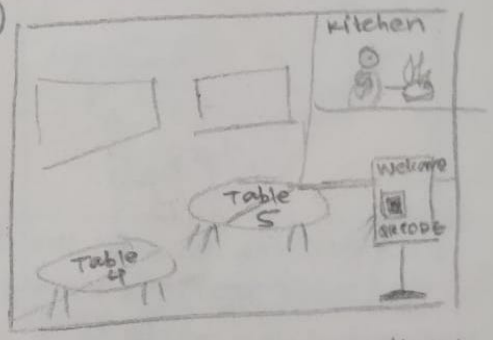
- Scan, order.

INFO 691 — Prototyping 1 — Story board.

Jenny's lunchdate at SURAYA RESTUARANT

① 

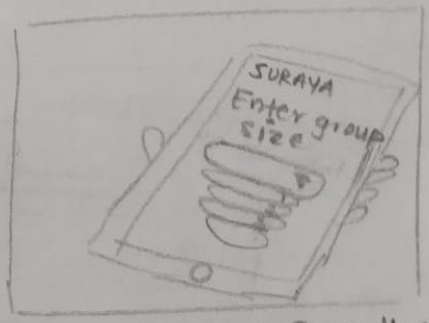
Jenny and Neil are on a date and decide to eat at Suraya

② 

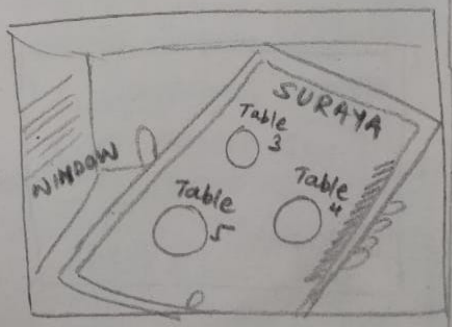
As soon as they enter they see a board that prompts them to scan the QR code

③ 

Jenny immediately scans the QR code

④ 

Jenny enters 2 → From the dropdown menu.

⑤ 

Jenny asks Neil if she can choose Table No.4 cause she wants to sit by the window.

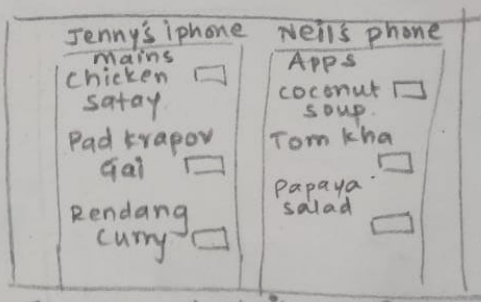
⑥ 

Excited that Neil agreed to get the window Table Jenny sits down.

(7)

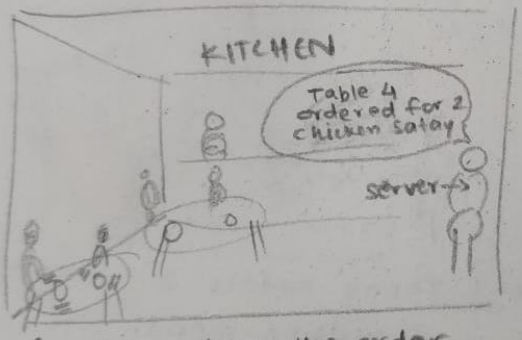
Neil decides to scan the same QR code which is on the Table - enters the table no.4 so he can look at the menu as well.

(8)



Jenny and Neil realize they can order from the menu separately and it will be brought to the Table.

(9)

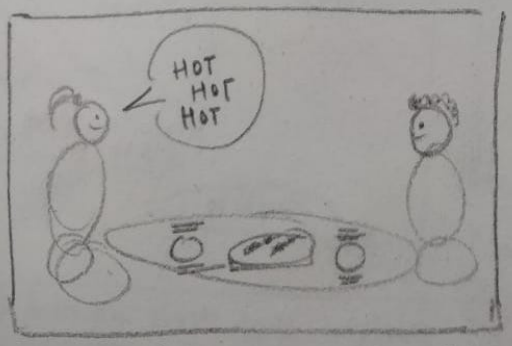


While they place the order a server places plates and cutlery on the table and water

(10)

Food is being made while Jenny and Neil talk about their Travels.

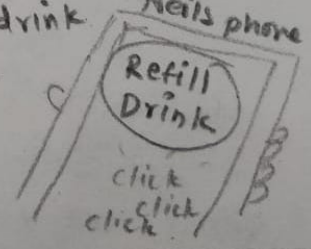
(11)



Jenny takes one bite of her satay and realises its to spicy

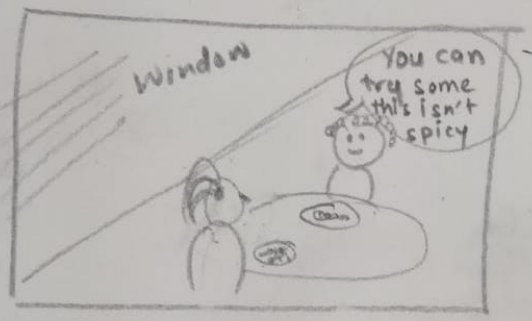
(12)

Neil presses refill drink button.



Neil notices that Jenny's drink is empty. And saves the day by getting water

(13)

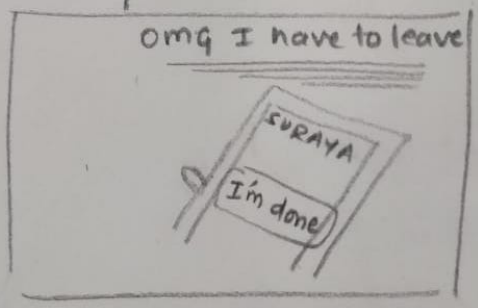


Neil decides to get Pad krapow gai - and adds that to his cart - and gets that served to the Table.

(14) JUST THEN.....

Jenny gets a call from her mother notifying her of an emergency.

(15) Jenny decides to leave.

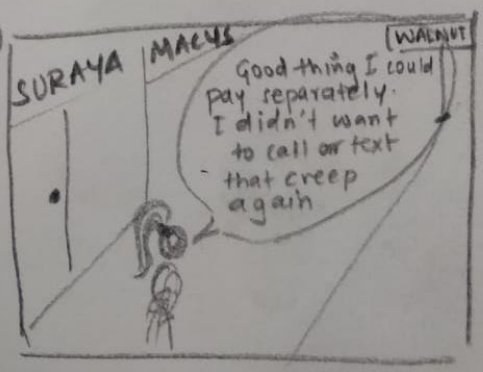


Jenny hits the I'm done button → which takes her to the payment page.

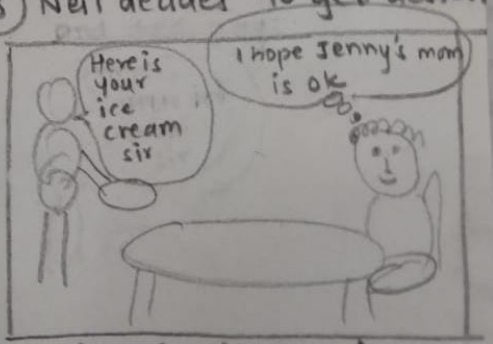
(16)

Jenny apologizes to Neil for having to leave. - Hits pay and pays for what she ordered.

(17)

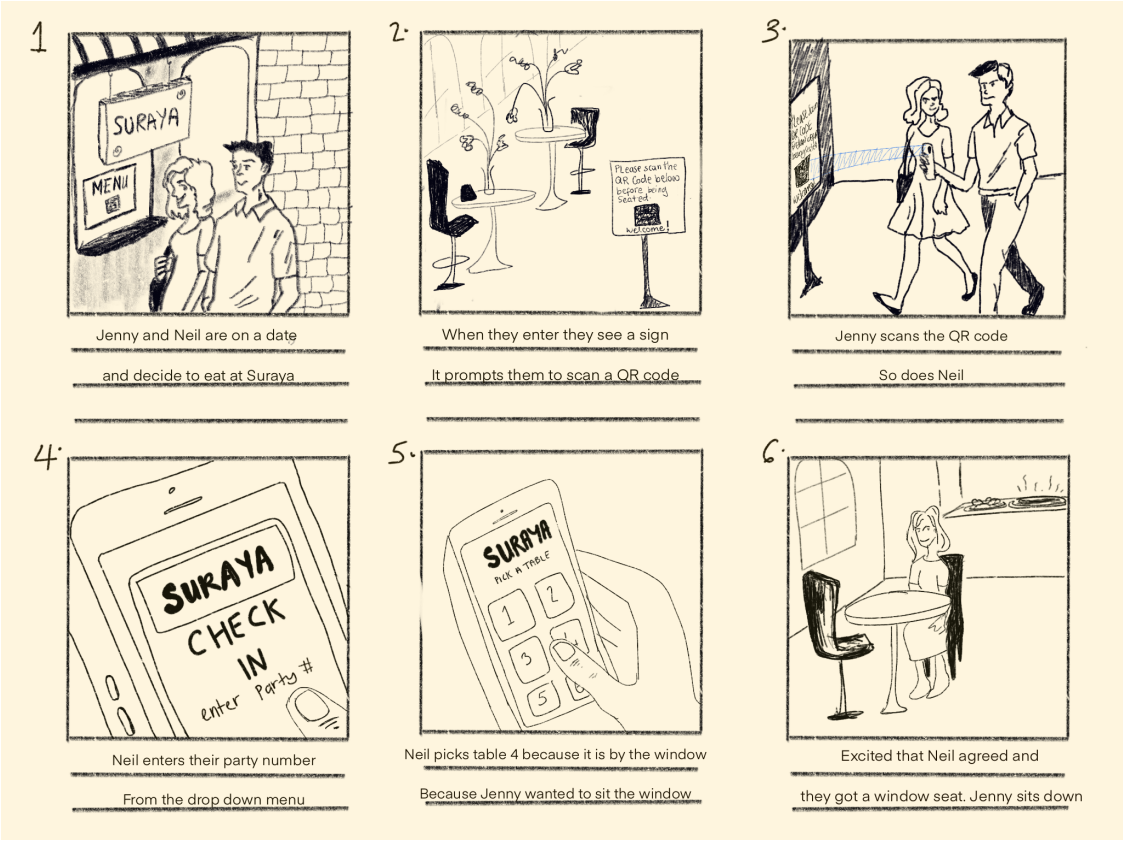


(18) Neil decides to get dessert

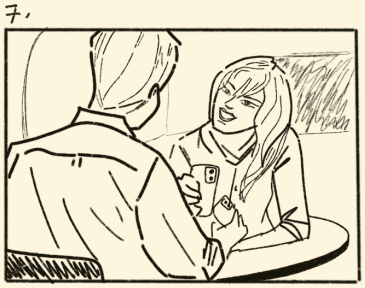


Neil hits I'm done and pays.

APPENDIX B: Digitized Storyboard Drawings



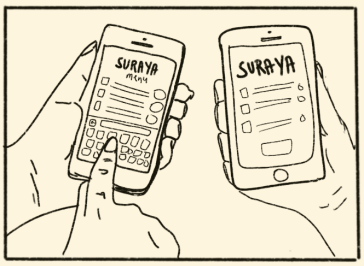
7.



Neil scans the QR code at the table

and enters table 4 to see the menu

8.



Jenny and Neil realize they can order separately

and the meal will be brought to the table

9.

While they place their order a server places

silverware and and water on their table

10.

Food is being prepared as Jenny and Neil

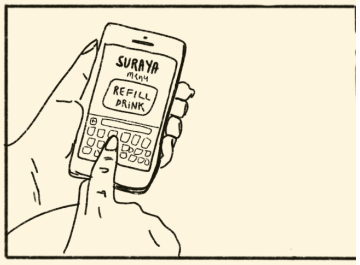
talk about their travels

11.

Their food is served and Jenny takes one bite

of her food and realizes it's too spicey

12.



Neil notices that Jenny's drink is empty

and saves the day by ordering a refill of water

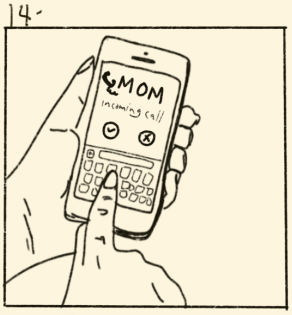
13.

Neil orders another dish from his phone

Which is then brought to their table

This dish is less spicy

14.



Jenny receives a call from her mom

It's an emergency and she has to leave

15.

Jenny hits the I'm done button

Which takes her to the payment page

16.

Jenny' s payment goes through

she says goodbye to Neil

17.

Jenny is glad they ordered their meal

Separately so she can leave

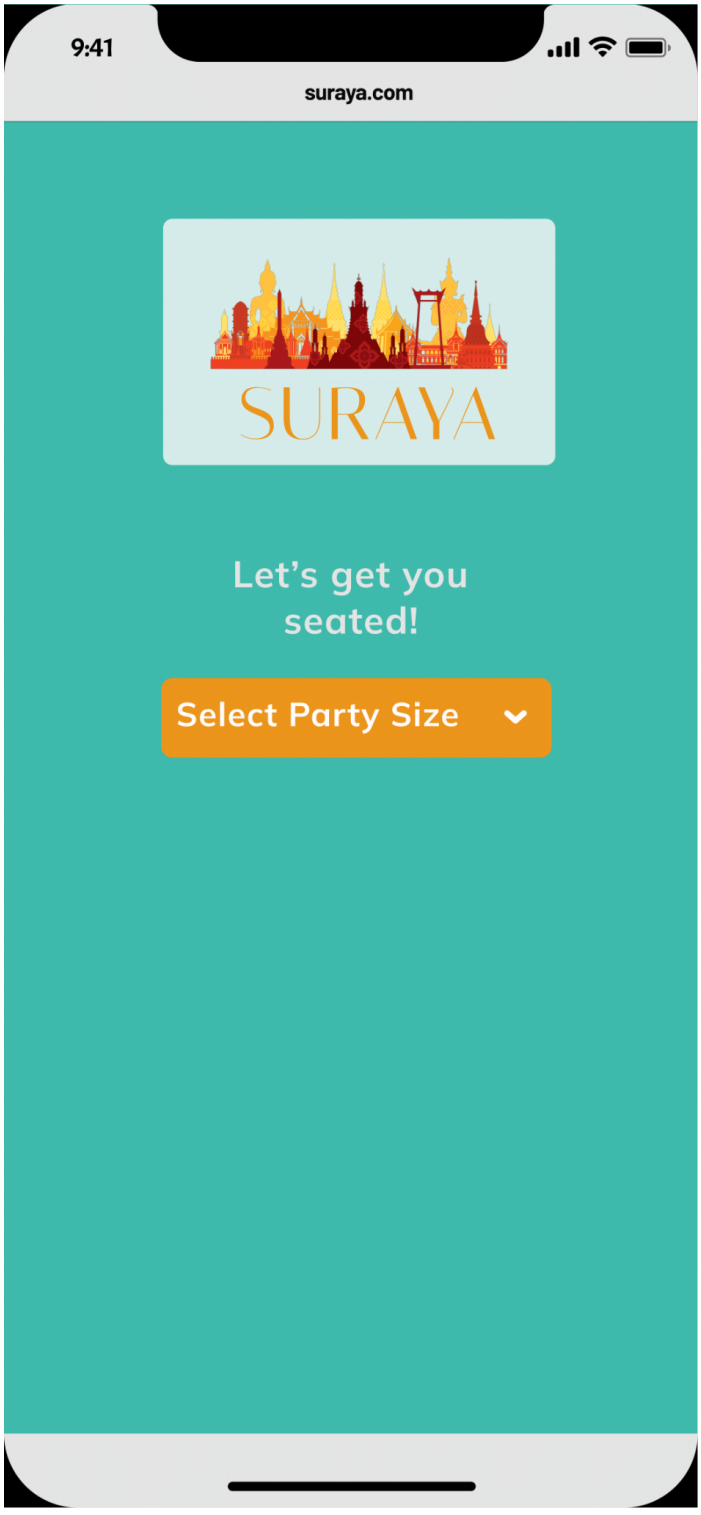
19.

Neil hits the I'm done button and

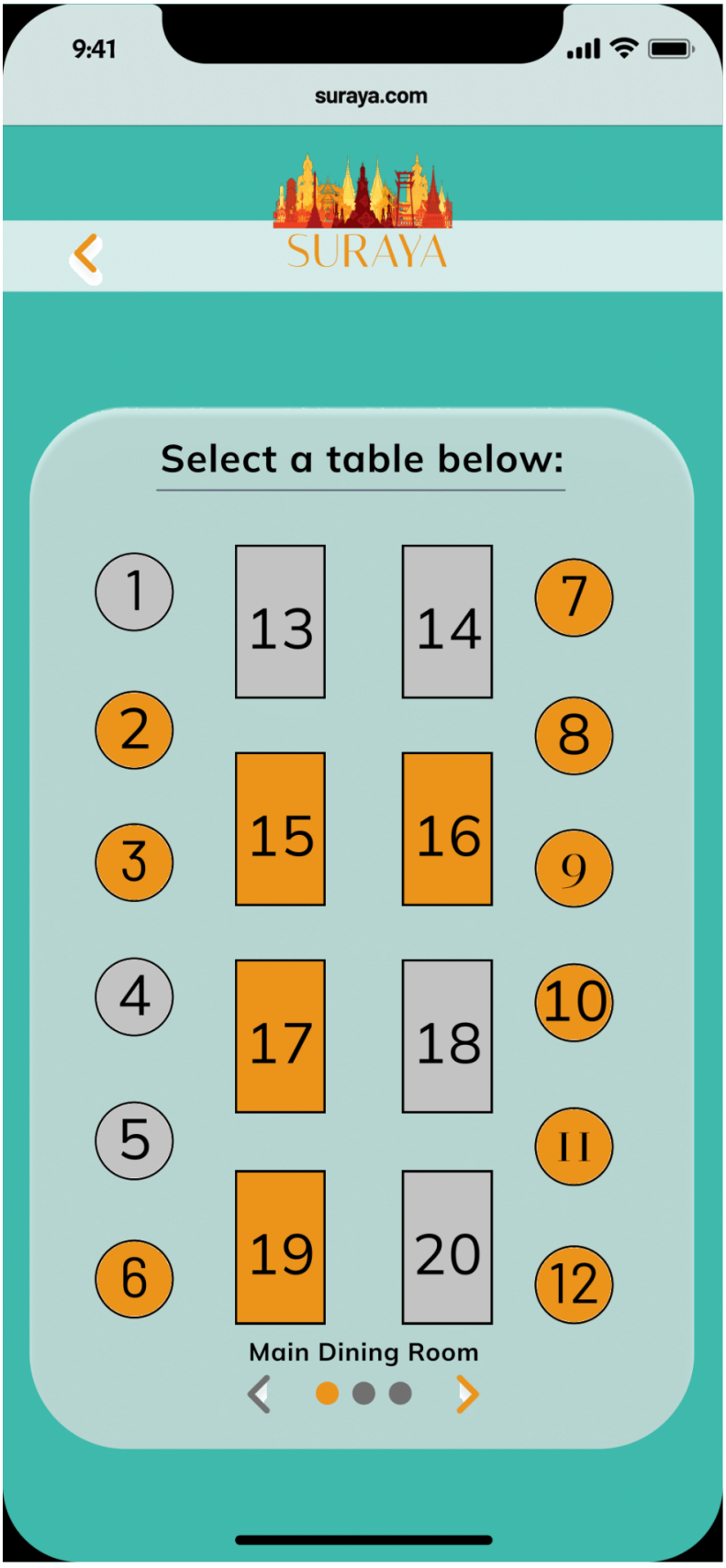
completes his order

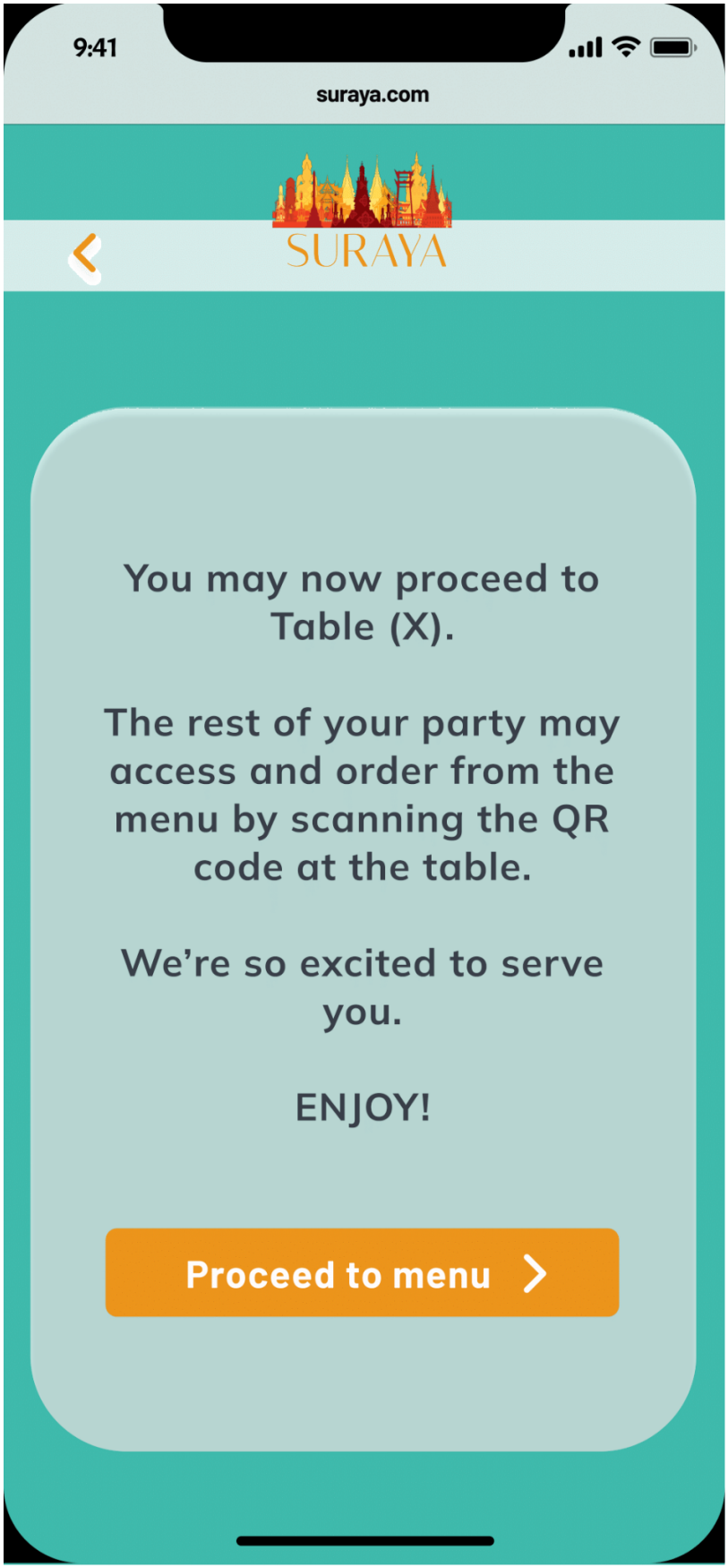
APPENDIX C: Web App Wireframes

Wireframe Sequence 1:
Check-in/Table Selection

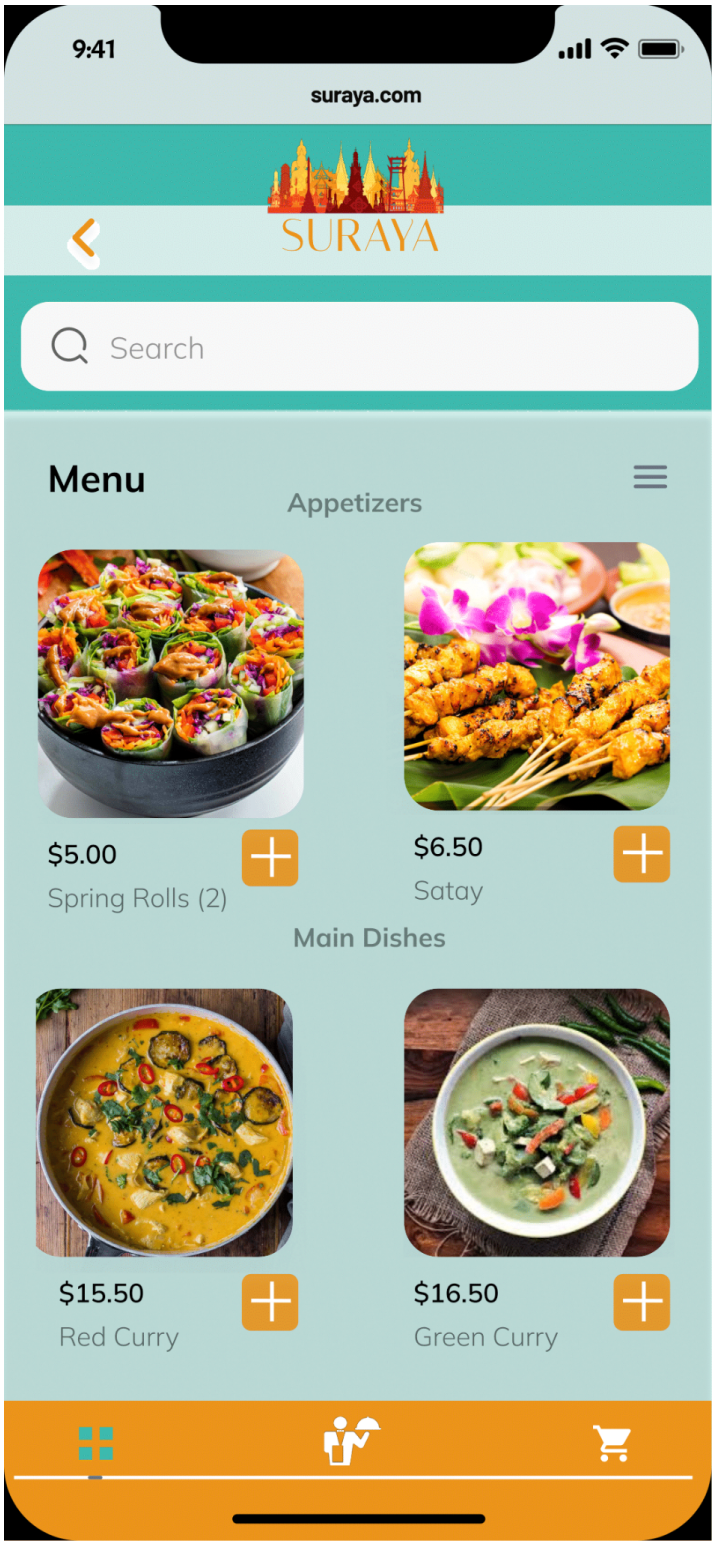



9:41
suraya.com
SURAYA
Let's get you seated!
Select Party Size
1
2
3
4
5
6
7
8
9
10


9:41
suraya.com
SURAYA
Select a table below:
1
13
14
7
2
8
3
15
16
9
4
17
18
10
5
11
19
20
6
12
Main Dining Room


9:41
suraya.com
SURAYA
You may now proceed to Table (X).
The rest of your party may access and order from the menu by scanning the QR code at the table.
We’re so excited to serve you.
ENJOY!
Proceed to menu

Wireframe Sequence 2:
Menu Selection, Service Request and Checkout



9:41

suraya.com

SURAYA

GREEN CURRY

Spicy Green Curry with Coconut Cream

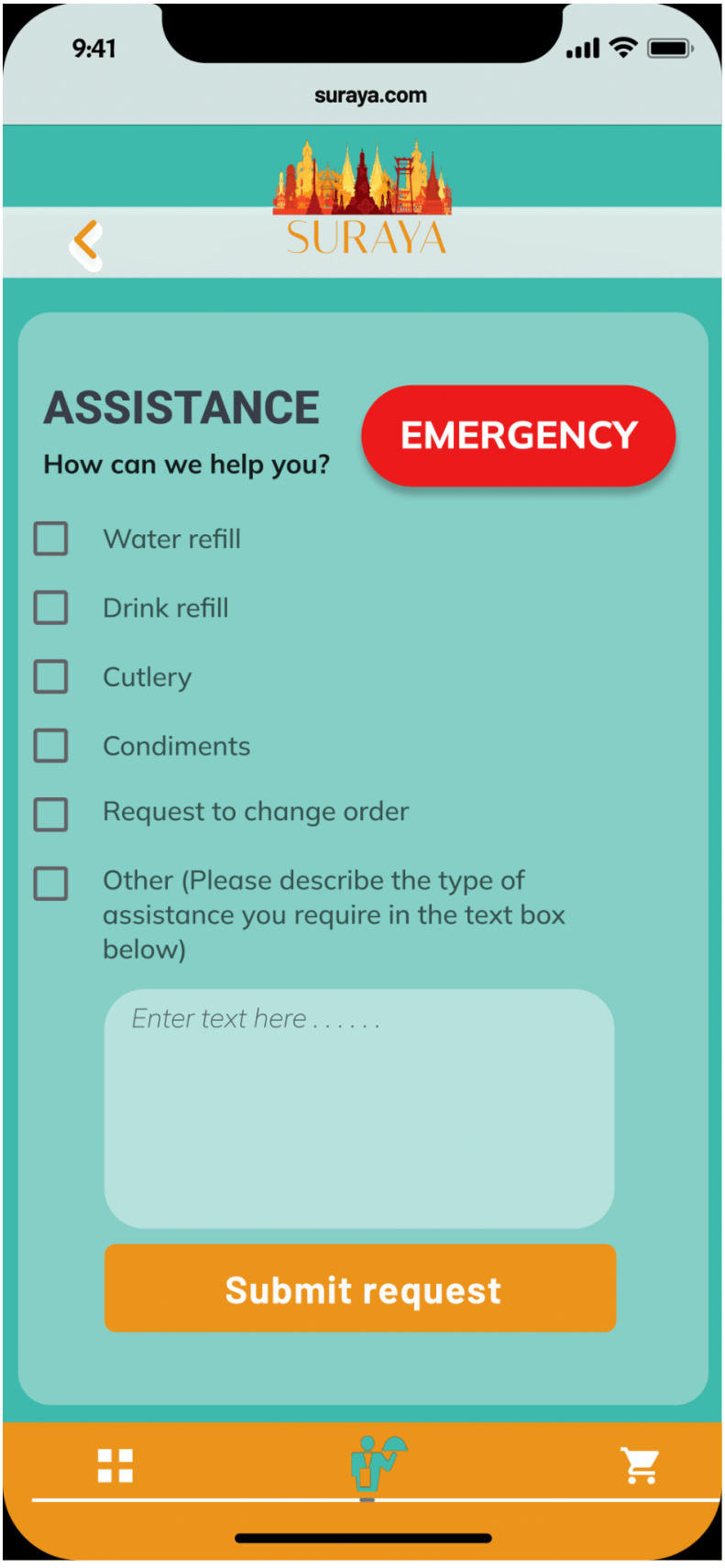
One of our most popular Thai curry dishes. Choice of protein with onion, eggplant, carrots, and bell peppers.

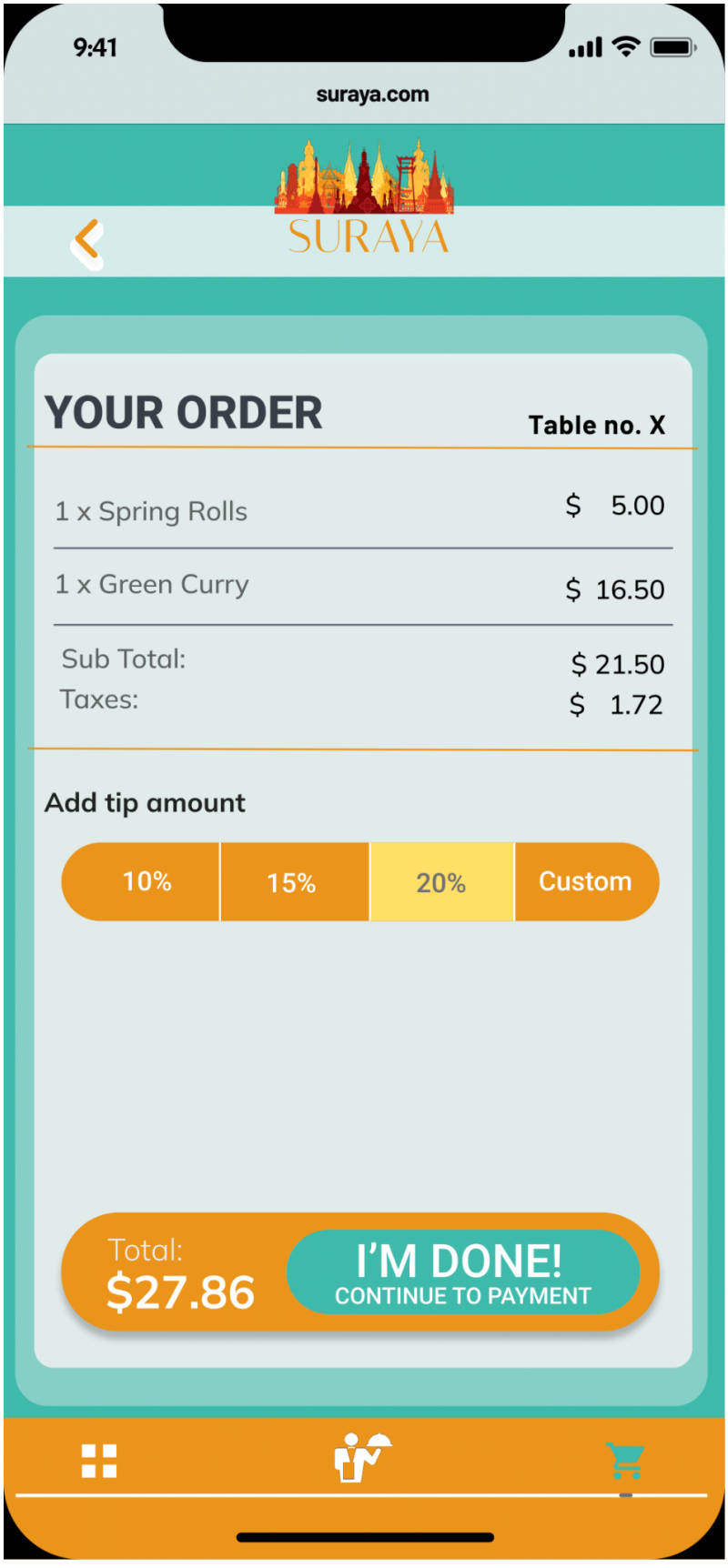
SELECT PROTEIN

SPICE LEVEL

Price
$ 16.50

ADD TO ORDER


9:41
suraya.com
SURAYA
ASSISTANCE
How can we help you?
EMERGENCY
Water refill
Drink refill
Cutlery
Condiments
Request to change order
Other (Please describe the type of assistance you require in the text box below)
Enter text here . . . . . .
Submit request


9:41
suraya.com
SURAYA
YOUR ORDER
Table no. X
1 x Spring Rolls
$ 5.00
1 x Green Curry
$ 16.50
Sub Total:
$ 21.50
Taxes:
$ 1.72
Add tip amount
10%
15%
20%
Custom
Total:
$27.86
I'M DONE!
CONTINUE TO PAYMENT