In-app payments for Restaurant App

JP

Project overview

The product:

Restaurant app with payment system integrated in the checkout flow.

Project duration:

April 2022 to Dec 2022 (9 months)

Google

Project overview

The problem:

Inconvenience for customers, cashiers and delivery drivers with handling cash payments during checkout.

The goal:

Provide a seamless way to make payments through the app as part of the checkout process.

Project overview

My role:

UX Analyst and UX Designer

Responsibilities:

- User Research
- Concept Design
- Prototyping
- Low-fidelity Design
- High Fidelity Design

Understanding the user

- User research
- Personas
- Problem statements
- User journey maps

User research: summary

The user research process involved conducting interviews with a small sample of customers who frequently visit the restaurant, the cashier, the restaurant employees who are authorized to use the cash register/billing system at time of need, delivery people accepting payments directly from customers and a focus group session for individuals who tested a beta version of the app.

User research: pain points

1

Availability of change

Handling cash transaction comes with the hassle of having to provide exact change based on the denomination avaiable with the customer

2

Longer delivery time

In addition to delivering the food, collecting payments manually, providing exact change, collecting a tip separately and returning the daily dues to the restaurant leads to longer delivery duration

3

Manual accounting

Periodic accounting becomes cumbersome when transactions will need to be accounted from multiple channels – delivery, pickups, dine-ins

Persona: **Wilson**

Problem statement:

Wilson is a restaurant food delivery driver who needs a better payment mechanism because it would help him handle food order payments better.

"I'm an energetic individual with great people skills and zest for life"

Name

Age: 22
Education: B.S.
Hometown: Florida
Family: Parents and Sister
Occupation: Theatre artist and gig worker (delivery person)

Goals

- Making a few quick bucks doing delivery work
- Instant payouts of tips and delivery fee from the restaurant chain

Frustrations

- Handling stressful customers not having change during delivery
- Inability to cash out when needed

Driving through the streets of New York City delivering food orders to customers. The frustrating part is when neither the delivery person nor the customer carries the right cash amount/change; I'd have to go looking for change. The restaurant might have a fixed payout schedule, instant delivery fee payment makes it easier for gig economy workers.

User journey map

The user journey map demonstrates the steps necessary for a user to complete the checkout process in the restaurant app. The improvement opportunities have been incorporated in the final design of the app.

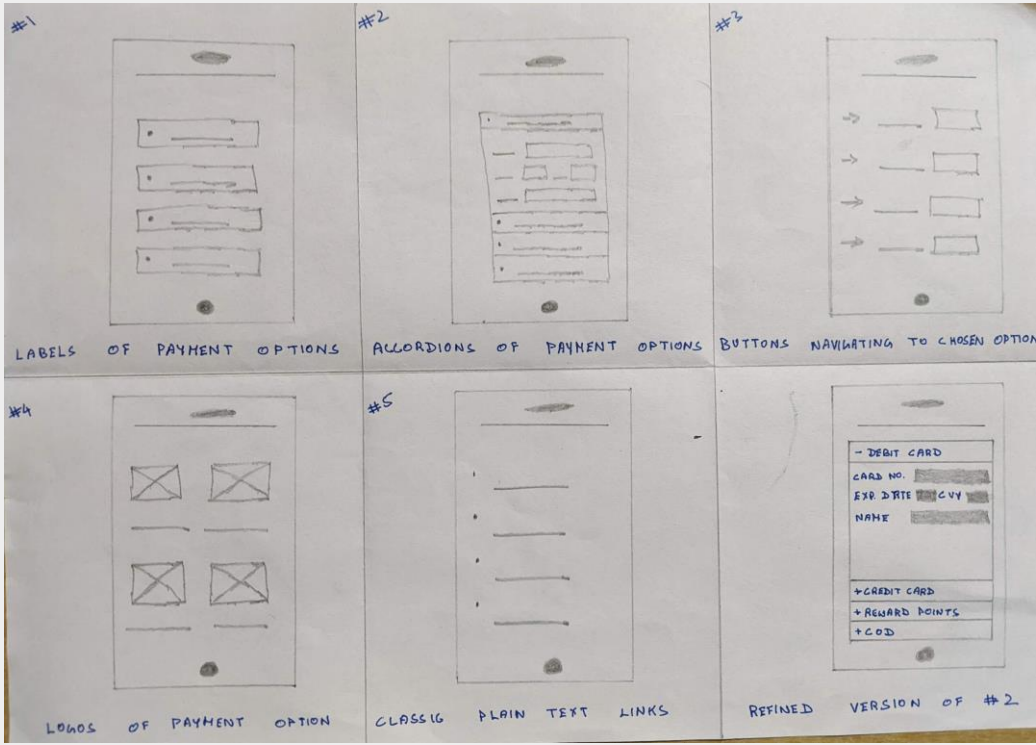
ACTION	Add Dishes From Menu	Review Itemization	Enter Payment Details	Confirm Order	Complete Process
TASK LIST	1. Browse the menu 2. Add the dishes to the cart 3. Select the quantity of each 4. Move to Cart Page	1. Confirm the list 2. Understand the pricing 3. Verify the total amount 4. Move to Payments Page	1. Choose the preferred method 2. Enter the payment details 3. Confirm the Order	1. Learn the time for preparation 2. Make a choice on delivery (or) pick-up 3. Proceed to complete	1. Head to the restaurant to pick-up (or) have it delivered through a delivery driver
FEELING ADJECTIVE	Overwhelmed	Clear	Strenuous	Informed	Gratitude
IMPROVEMENT OPPORTUNITIES	Long list of menu, keeps scrolling - inclusion of tabs to shorten scroll List of text looks dry - include images of dishes	Clear split-up of tax and service charge	Lots of details to key-in, include a way to save details for future purchase	Include a time calculator to inform on the amount of time required for preparation based on the dishes selected	For a future iteration, include "Dine-in" as an option to utilize the app as a digital menu and place order

Starting the design

- Paper wireframes
- Digital wireframes
- Low-fidelity prototype
- Usability studies

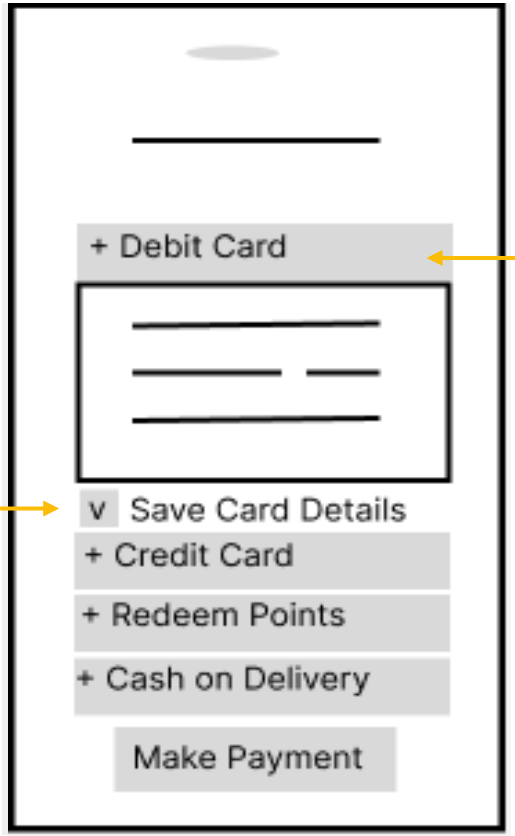
Paper wireframes

The appropriate payments page design to incorporate in the checkout flow plays a pivotal role in its adoption and successful usage.



Digital wireframes

This digital wireframe design for the Payment page chosen among the other options serves the user needs with minimal interation and page navigation requirements.



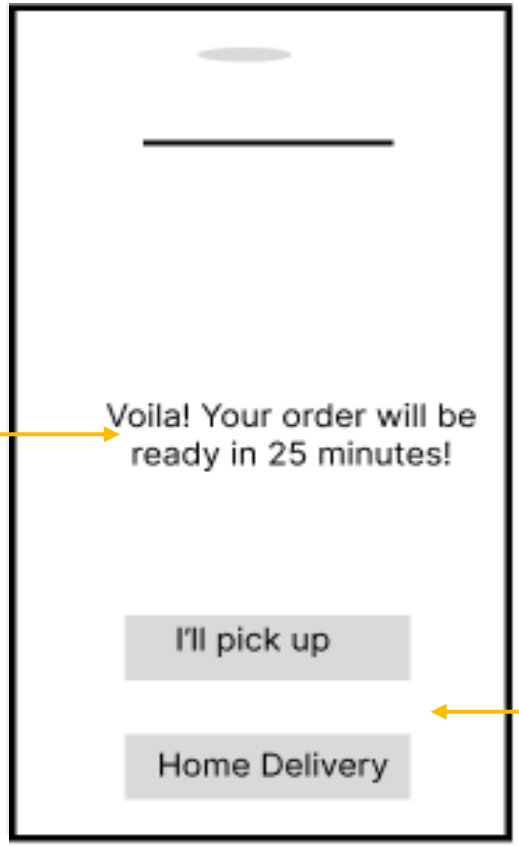
The ability to save card details is a convenience feature that allows the app to store it and have the details prefilled for the user the next time.

The accordion design structure lets the user fill the details in the preferred payment option without navigation to a new page and allows easy toggling between options to reselect, if needed.

Digital wireframes

This digital wireframe for the Order Confirmation page is designed with user convenience at the front and center of it.

The positioning of the Order Confirmation page after the Payments page permits completion of the checkout process with minimal interation for the user.



Listing the different food serving touch points avaiable through the app after informing the time it would take to fullfil the order permits the customer to make an informed decision on whether they would have the time to pick it up, or have it delivered. This design structure also permits including a "Dine-in" option to the list to serve the app as a digital menu card and billing system.

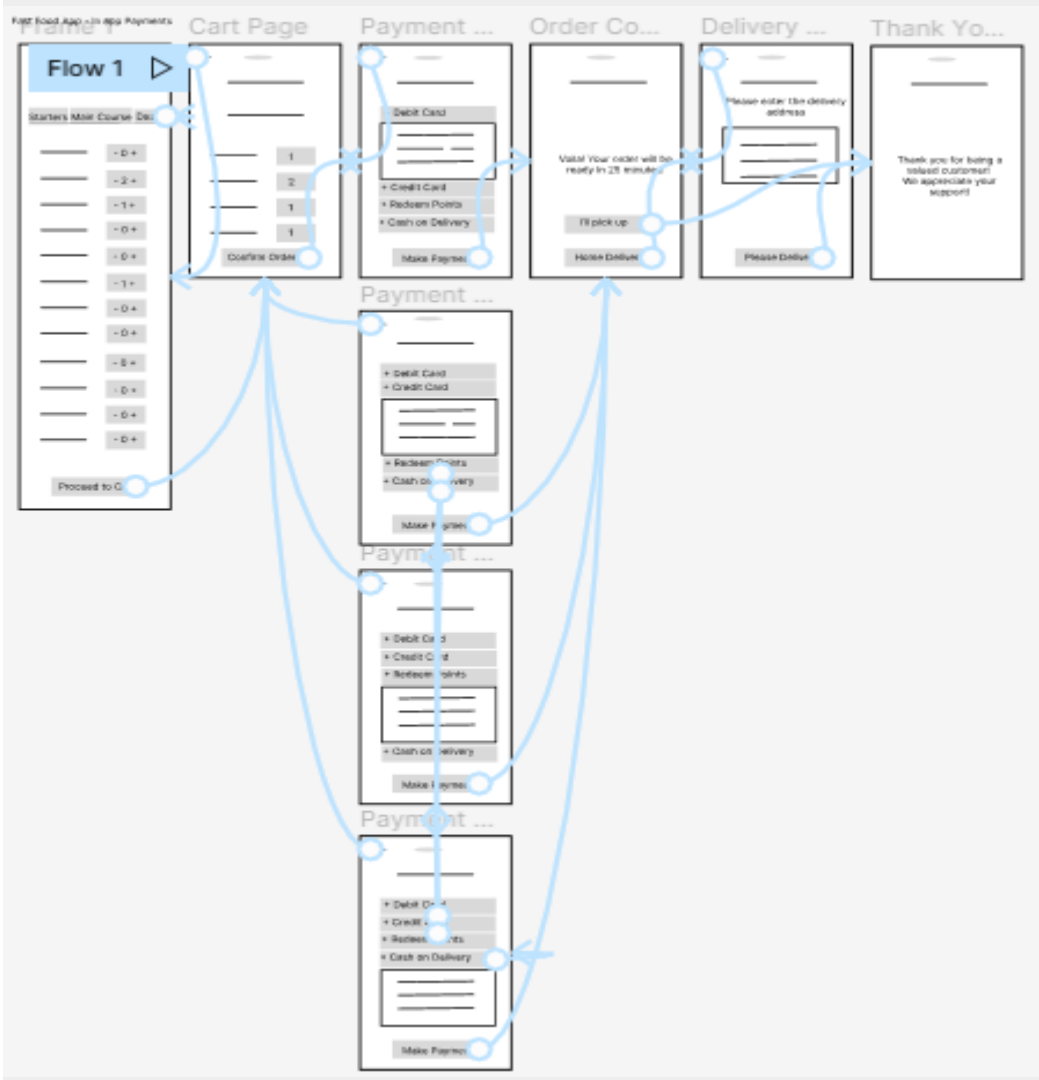
Low-fidelity prototype

Link:

https://www.figma.com/file/njysZEDwKscKTZN9pKCqOf/Low-Fidelity-Prototype---In-App-Payments?t=BWMDfGBVkAkRwLFo-1

Desc:

The navigation flow is simple and intuitive with 6-page in the user flow.



Usability study: findings

The usability study was conducted with five participants with varying levels of acquaintance using a mobile app and online payments.

Round 1 findings

1. Surprised with in-app payments
2. Concerned with security of card details
3. Debit was preferred more than credit

Round 2 findings

1. Preference to always have cash as an option
2. Clarifications about whether the bank needs to be notified
3. For payment decline scenarios, visibility into what failed – invalid details, low balance, internet connection etc.

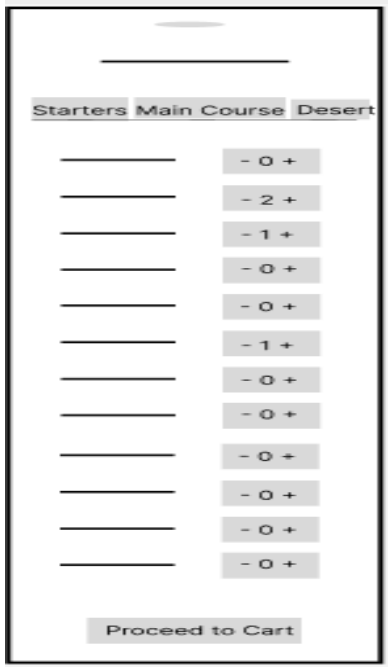
Refining the design

- Mockups
- High-fidelity prototype
- Accessibility

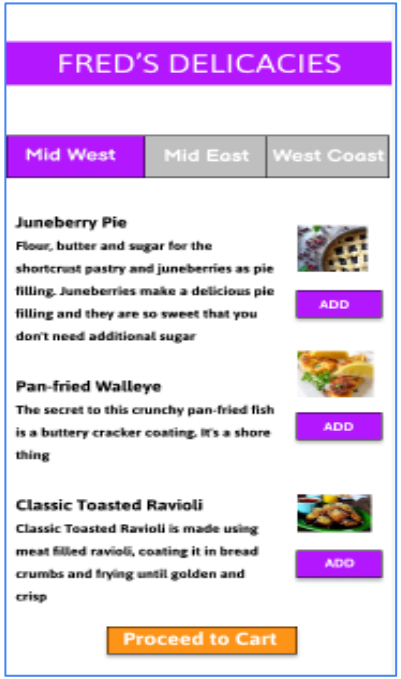
Mockups

[Your notes about goals and thought process]

Before usability study



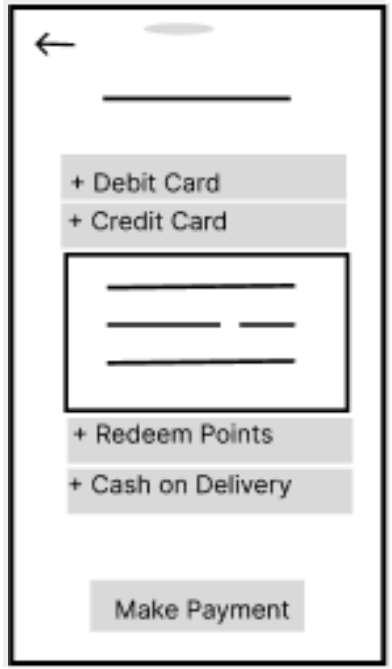
After usability study



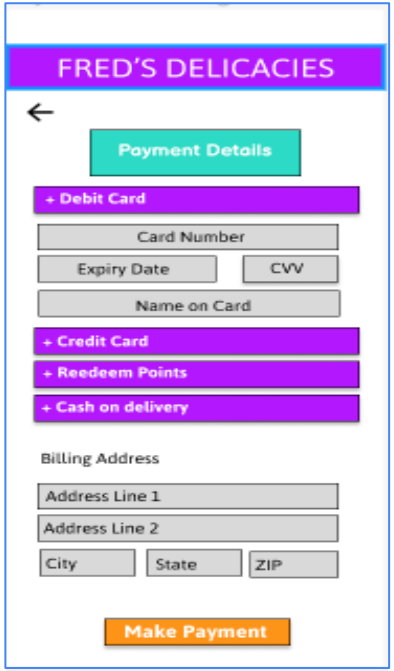
Mockups

[Your notes about goals and thought process]

Before usability study

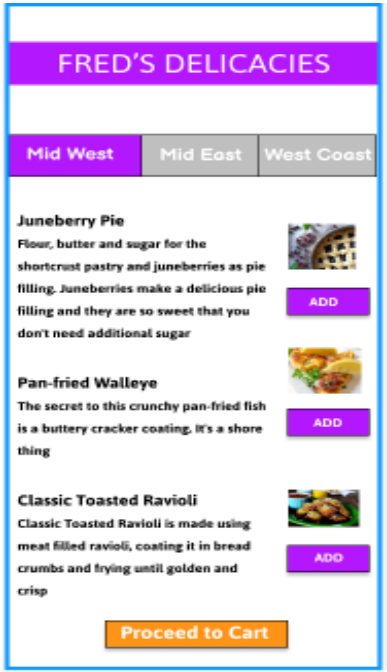


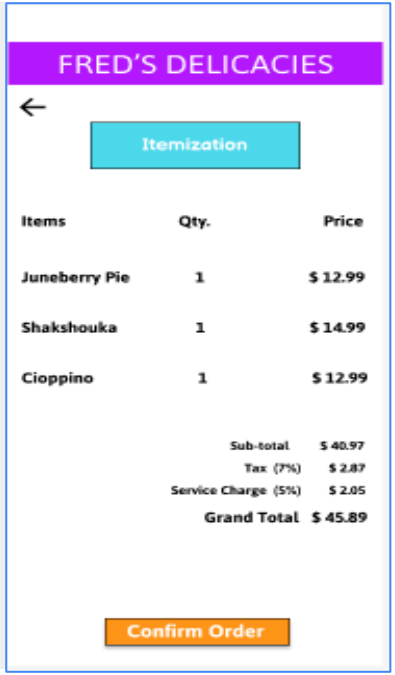
After usability study

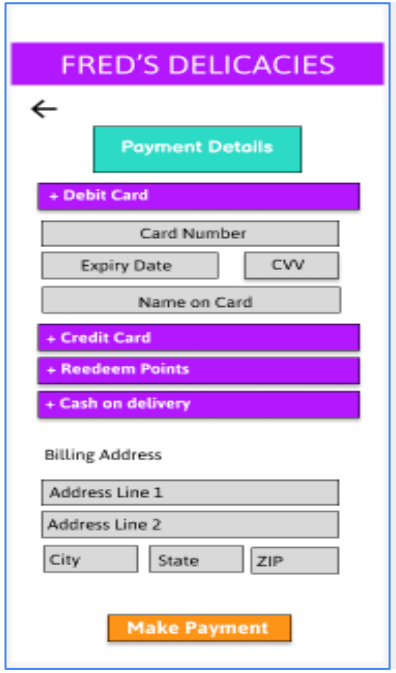


Mockups


FRED'S
DELICACIES


FRED'S DELICACIES
Mid West
Mid East
West Coast
Juneberry Pie
Flour, butter and sugar for the shortcrust pastry and juneberries as pie filling. Juneberries make a delicious pie filling and they are so sweet that you don't need additional sugar
ADD
Pan-fried Walleye
The secret to this crunchy pan-fried fish is a buttery cracker coating. It's a shore thing
ADD
Classic Toasted Ravioli
Classic Toasted Ravioli is made using meat filled ravioli, coating it in bread crumbs and frying until golden and crisp
ADD
Proceed to Cart

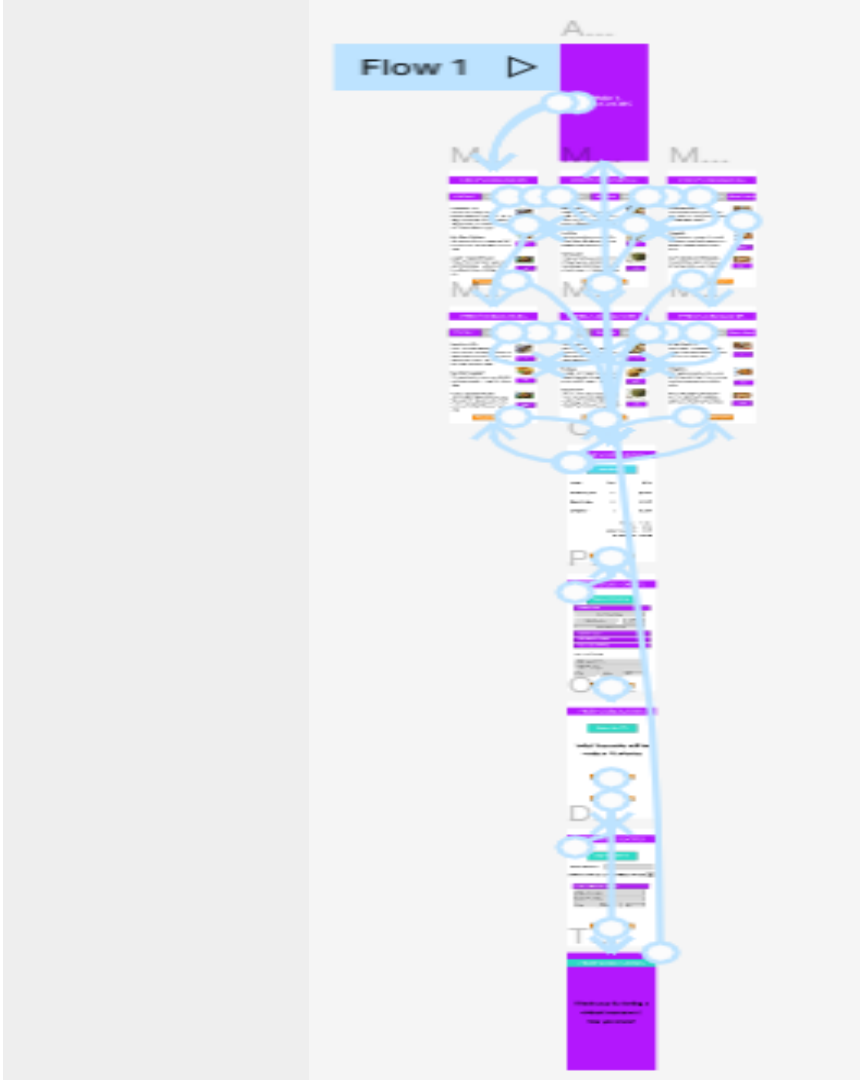

FRED'S DELICACIES
Itemization
Items
Qty.
Price
Juneberry Pie
1
$ 12.99
Shakshouka
1
$ 14.99
Cioppino
1
$ 12.99
Sub-total
$ 40.97
Tax (7%)
$ 2.87
Service Charge (5%)
$ 2.05
Grand Total
$ 45.89
Confirm Order


FRED'S DELICACIES
Payment Details
+ Debit Card
Card Number
Expiry Date
CVV
Name on Card
+ Credit Card
+ Reedeem Points
+ Cash on delivery
Billing Address
Address Line 1
Address Line 2
City
State
ZIP
Make Payment

High-fidelity prototype

Link:

https://www.figma.com/proto/7NcLGI7aKZXrsYLdltR7ML/Foundational-Design-Elements---High-Fidelity?node-id=1%3A2&starting-point-node-id=1%3A2



Accessibility considerations

1

The usage of bright contrast colors was a key consideration to support the accessibility needs of users/

2

In addition to images of dishes, a textual description of the dish is included to all items in the menu to support the screen reader and test-to-speech tools.

3

In an effort to keep number of page navigation requirements at a minimal level, in-page toggle options have been utilized for the menu and payments page.

Going forward

- Takeaways
- Next steps

Takeaways

Impact:

A restaurant app with the end-to-end checkout process including a payments system provides the ability to reduce friction at the different customer touch points serving all parties of the market place – the restaurant, the customer and the delivery driver.

What I learned:

A thorough usability study, taking into account every user persona can help make informed design decisions on what is most effective for all participants.

Next steps

1

Test the working prototype with participants to see areas of fine tuning.

2

Build a backlog of feature line-up to incorpoarte in the future based on design priority.

3

Share the high-fidelity designs for review, approval and build into production.

Thank you!