

Milestone 7

Group: Team of Three

Project: FastEats

Video demo: <https://www.youtube.com/watch?v=T9qdbt1qoHo>

Problem description and motivation

When people are tired and hungry, they need ordering takeout to be as easy as possible. We want to simplify the processes of selecting a restaurant and making an order. They want to order something eat, but don't want to search on google and check every single restaurant for being open or food available, or do not want to go to something like Yelp which focuses on ratings. Therefore, we are motivated to make an app to solve the problem above. Our app can automatically show open restaurants nearby based on user's current location or another delivery location. Users can make orders, save orders and modify orders from our app.

Existing solutions

- Google Maps
 - Doesn't show all restaurants on the map (sometimes need to zoom in)
 - You can't tell right away if currently open or closed until you select it
- Yelp
 - Focused on ratings (which can be faked anyway)
 - Too complicated if you just want to find *somewhere* that delivers right away

Proposed idea

We plan to make an app that can show restaurant nearby based on location and still open. The app can also allow users and restaurant to create account. User can directly make order, save order, modify order and make payment from our app. Our app does not need a star rating, reviews, or opening hours. Simple user interface is for tired/hungry people, only displaying opening restaurant filtering by distance in default. The app is compatible with lots of different restaurants so that user doesn't have to install separate apps or go to different websites. Restaurant responds to order with time to deliver, payment confirmation. Another idea, The app is build for people want to make a plan for their family meal or party. The users can select items from restaurants and saved them as future orders. The app also helps visitor or traveller who don't know much about the direction of city. They can use the app to find out directions of all restaurants in local area.

Personas

John is currently an Engineering student at University of Victoria. Since he lives by himself on campus, he is not able to prepare food everyday. He also has a part-time job. He feels tired and hungry when he gets back home late at night after work or studying, so he has a hard time finding open restaurants and items to order. He wants to make sure that he can eat different food every day. John would like to use his smartphone to order food. He likes app that show him the photo and brand of restaurant. So he can log on and with few steps he can finish ordering food.

Jessica is 18 year old. She comes from Alaska. She is travelling around Canada for this summer. This week, she will spend time in Victoria Downtown. She really wants to enjoy climbing, hiking, and many outside activities. She doesn't want to spend time looking for a restaurant to eat. She also wonders where she can try the diverse food in Victoria. She is trying the local mobile app, that can help her to order food quickly and she can enjoy the healthy and different food. With the app, she can order food while is on the bus or on the beach. She can specify her hotel location and the time that she needs the food to be delivered. She is ready to have food after a long day travelling or exercising.

Scenarios and Use Cases

Scenario 1. **Goal: Order food (delivery)**

John enters a delivery address (his dorm, which is on the other side of campus from him) with additional instructions like which campus parking lot is nearest. He also decides to enter his billing address separately. The app displays a list of restaurants/fast-food chains that are currently open and deliver to his dorm. John feels like ordering pizza so he selects a restaurant and selects multiple dishes from a menu. Then he goes to pay for everything. He confirms the payment and then checks the app to see the restaurant's estimate of the delivery time.

Use case 1.

1. System auto-suggests a delivery address based on location data.
2. John enters his delivery address.
3. System returns to the main page of the app and displays restaurants near the corrected delivery location, (sorted by estimated location/delivery time).
4. John selects Domino's.
5. System displays the Domino's menu.
6. John adds some dishes to his order.

7. System updates the total price when each item is added.
8. John clicks on modify button to select the size and write the custom instruction. John confirms it.
9. System records the modification and jumps back to Domino's menu.
10. John clicks the checkout button.(locate the same with total price icon)
11. System displays John's order, the delivery location, quantity of each item, total price and payment methods.
12. John selects other payment method.
13. The system displays another screen with different payment methods
14. John types a new credit card information and pays with this card.
15. System asks whether John wants to save this card information.
16. John selects yes.
17. System waits while it sends John's order to the restaurant and then displays the success message with the restaurant's estimated delivery time. John have to click on "save" button , and the system will return to the home screen.

Scenario 2. **Goal: Find a restaurant to cater a party in future**

Updated use case 2: Jessica makes a plan for her weekend party

1. Jessica opens the app and goes to the main page.
2. System shows the default restaurant list.
3. Jessica clicks the types of restaurant button.
4. System shows a selection list with Chinese food, Japanese food, Burgers, Pizza/Pasta, Mexican food , etc.
5. Jessica selects Pizza/Pasta restaurants to look.
6. System displays only a list of Pizza/Pasta restaurants.
7. Jessica looks at the menu and select dishes from the menu. Jessica goes back select another restaurant
8. System display the menu of another restaurant.
9. Jessica selects more items and clicks checkout.
10. System displays the checkout screen.
11. Jessica saves this order.
12. Later on, Jessica opens the app and clicks the order button on the home page.
13. System displays current orders and saved orders.
14. Jessica select one of the saved order.
15. System displays the saved order information.
16. Jessica is able to add/remove items and checkout.

Scenario 3. **Goal: Find a restaurant to dine out at**

Jessica doesn't know any local or familiar chain restaurants or how to navigate Victoria, and she arrived late in the day so some places are already closed. She uses the app to display her

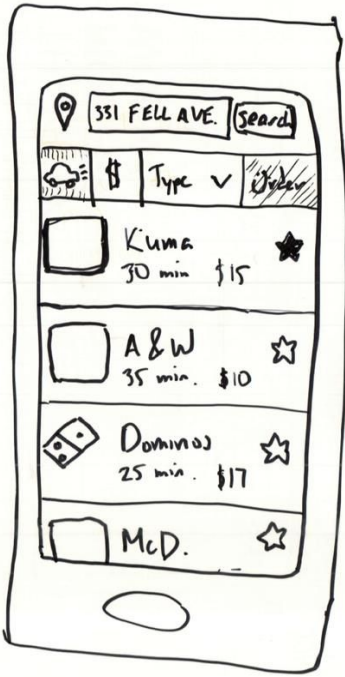
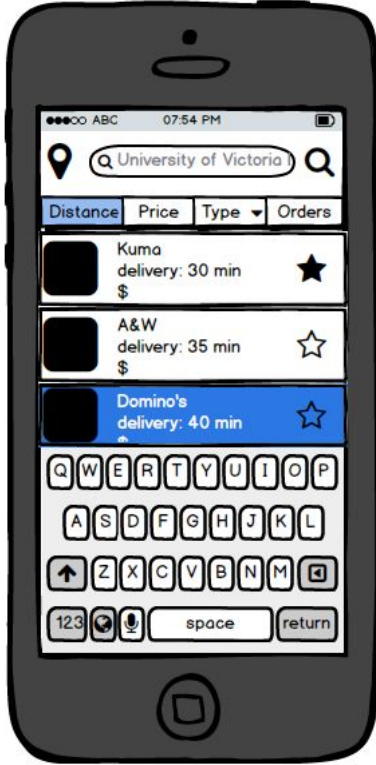
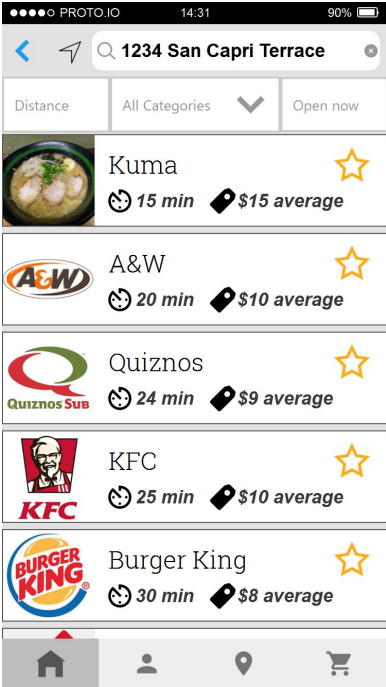
current location. She checks the list of nearby restaurants that are still open and don't require a reservation. Jessica picks a restaurant and its entry tells her the possible bus routes to get there.

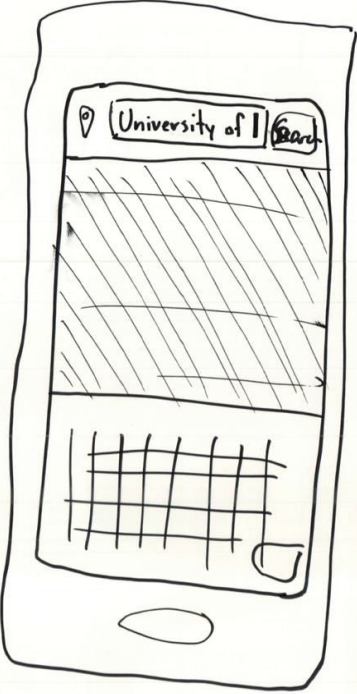
Use case 3.

1. System gets Jessica's current location
2. System displays all the open restaurants nearby, sorted by distance.
3. Jessica picks a restaurant from the list.
4. Systems shows the restaurant information page/menu.
5. System calls up phone's map app to show the restaurant location.
6. Jessica clicks on the map button
7. The system lead to the google map and shows her the direction from her current location to the restaurant.

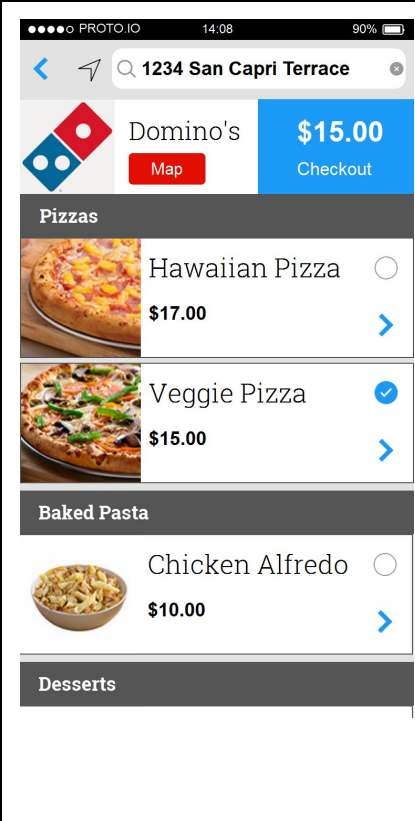
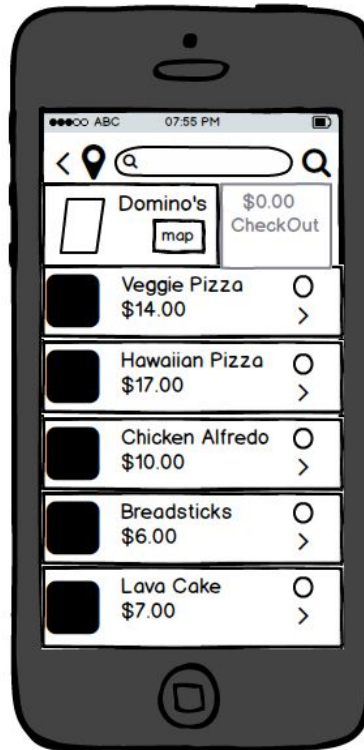
Prototype Evolution

Use Case 1: Make An Order

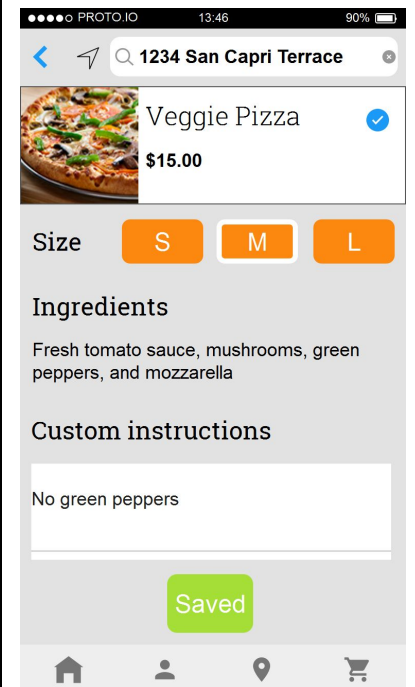
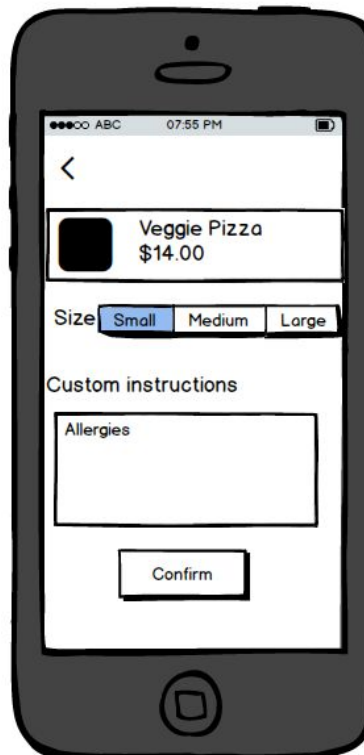
drawings	Balsamiq	Proto.io
<p>1. Starting screen - Restaurants</p> 		

<p>2. Enter correct address</p> 	<p>(combined w/ screen 1)</p>	<p>(scrapped)</p>
<p>3. Restaurants - Select restaurant</p> <p>(same as 1)</p>	<p>(same as 1)</p>	<p>Variations:</p> <p>Filter restaurants - show only pizza restaurants (see High-Fidelity Prototype section)</p>

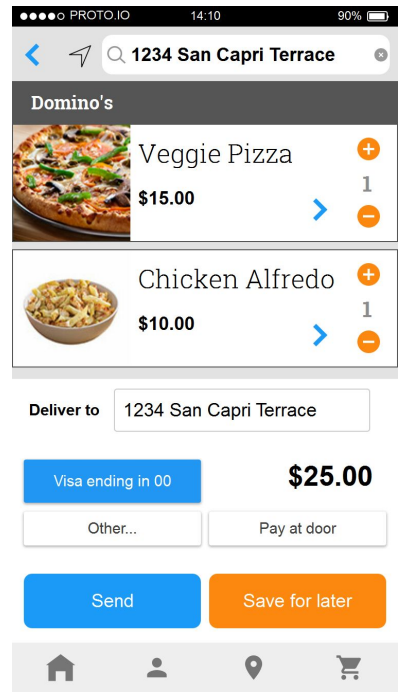
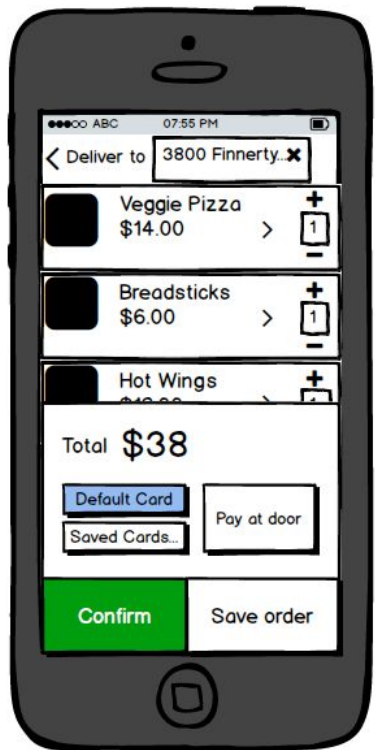
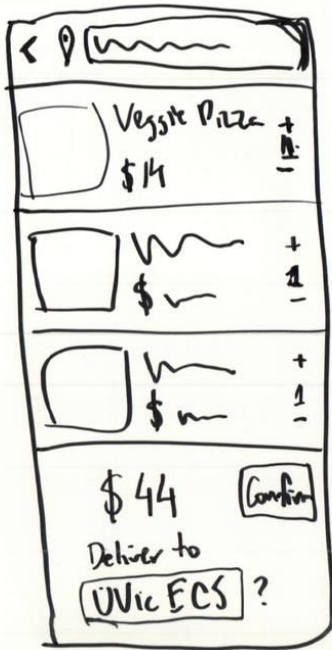
4. View restaurant menu



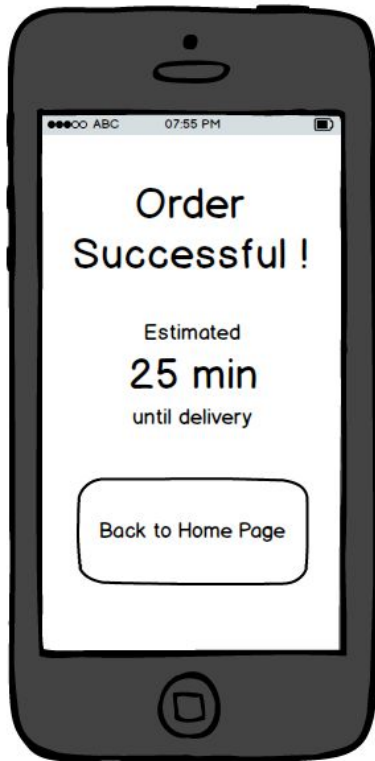
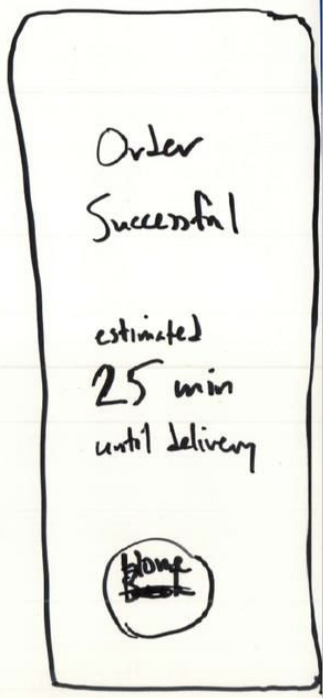
5. Customize item (not prototyped)



6. Shopping cart - confirm order



7. Order was successful



Your order is complete!

Estimated time remaining:
34 minutes

Domino's
#215-1551 Cedar Hill Cross Rd,
Saanich, BC

VeggiePizza	\$14
ChickenAlfredo	\$10
Subtotal	\$24.00
Tax	\$1.20
Total Due	\$25.20
Paid	\$25.20
Remaining	\$0.00



Evaluation Results

Cognitive walkthrough:

We received this feedback from the other groups:

- They couldn't figure out how to advance to the checkout screen when ordering. -> We added the "Checkout" label to the area displaying the subtotal, indicating you can click it. The checkout button also accompany with the total price, whenever the user select item the total price is updated.
- They were bothered by the lack of feedback/options regarding how to pay. -> We added buttons and screens for payment methods. We added several payment methods, such as: pay at the door, or pay by default credit card, or pay by new credit card.
- They were confused about the dollar amounts (average price) on each restaurant in the list -> We changed the Balsamiq prototype to have dollar-sign ratings (e.g. 1-4 dollar signs), but changed it back to "\$__ average price" in the final prototype, with a price-tag icon to further clarify it.

User study:

We gave our users 6 tasks and timed them.

- Task 1: You feel like ordering pizza for yourself, so you want to order from Domino's. [Goal: Click on Dominos.]
- Task 2: You order the veggie pizza, and then you order a pasta [Goal: Both veggie pizza and chicken alfredo are selected.]
- Task 3: You're ready to pay for the order. The payment method you're using is a new credit card that you haven't saved in the app before. [Goal: Add a credit card and go back to checkout screen]
- Task 4: You want to add custom instructions to the pizza. [Goal: Go to customize screen for Veggie Pizza and type in some text]
- Task 5: You made an order from Dominos in advance for an event that you're having tonight. Now you're ready to send it to the restaurant. [Goal: find saved orders page and open the Dominos order]
- Task 6: You're visiting Victoria for the weekend and you're not familiar with the area you're staying in, but you're counting on there being a Dominos nearby that you can walk or take the bus to. [Goal: open map with Domino's location.]

We asked 4 post-evaluation questions:

1. Is there anything you were confused about in our UI design?
2. What was the most frustrating thing about using the app, overall?
3. Was there something you appreciated about the app that would convince you to use it in real life, replacing another app?
4. What was the easiest task? The hardest task?

The bulk of the tasks (1-4) were about Use Case 1, while task 5 was from Use Case 2 and task 6 from Use Case 3.

Feedback

The stuck button: the user couldn't find the correct button for saved order. Since there is many button on the main screen, he was confused which button should he select first.

The search box is too small - we cannot check if he type the correct text for search or address.

User thought the text box at the top was used for searching restaurant names, and tried to use it to search for "Dominos" for task #6.

The list of the restaurants in the main page is too long, he had to take time to pull down to find the restaurant.

For Task #6 in our user study, it took a few minutes for a user to figure out what action they needed to perform (wanting to get the restaurant location -> clicking on the Map button).

Payment method buttons weren't clear, especially the "Other..." button.

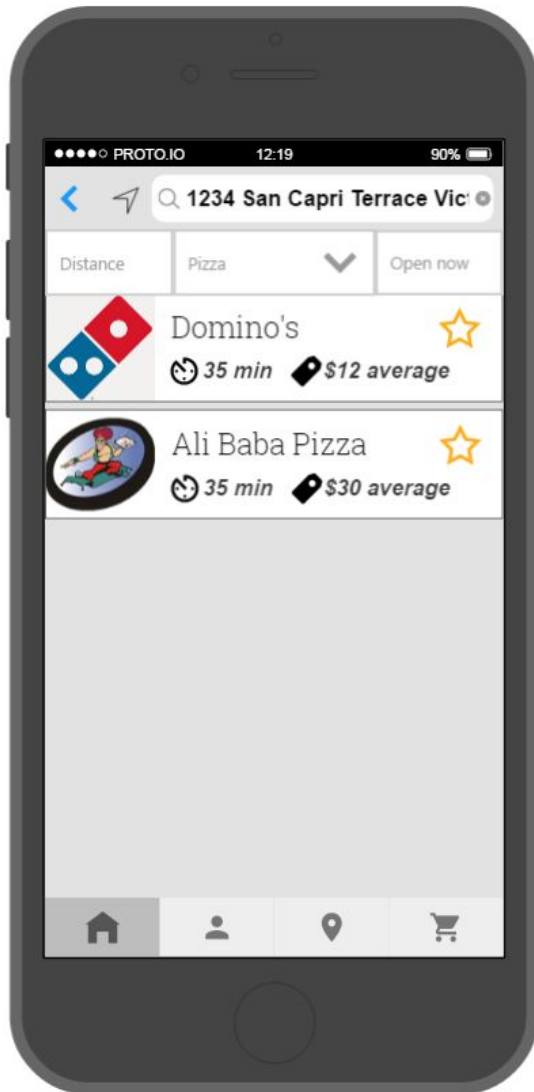
Changes Made

- After milestone 3 & cognitive walkthroughs - added "Checkout" label to checkout button
- Menu bar changes (a lot)
- Add a toolbar at the bottom of the page
- Move the deliver to text input to the confirmation area

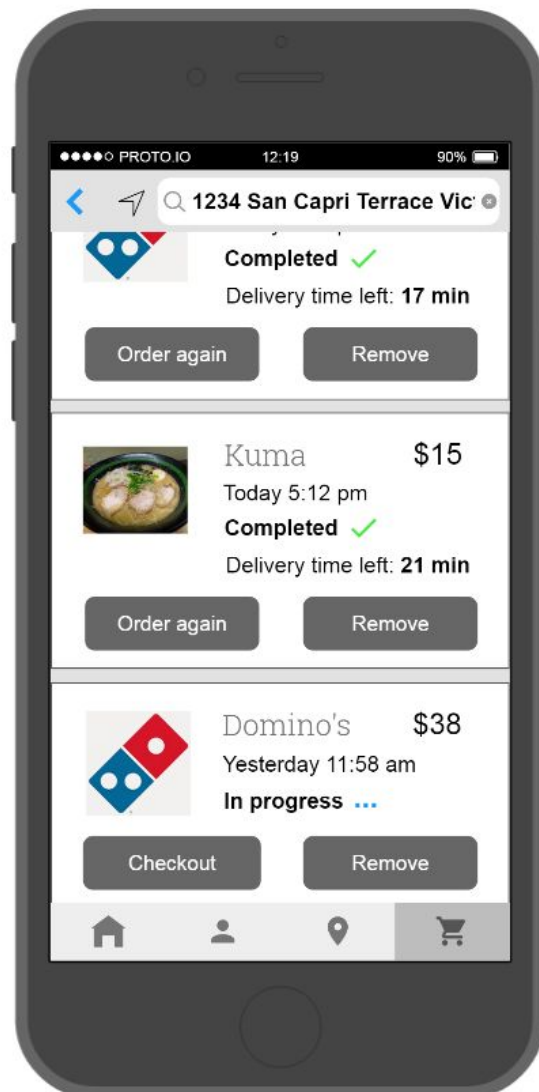
High Fidelity Prototype

Live preview (Proto.io): <https://pr.to/M22B9L/>

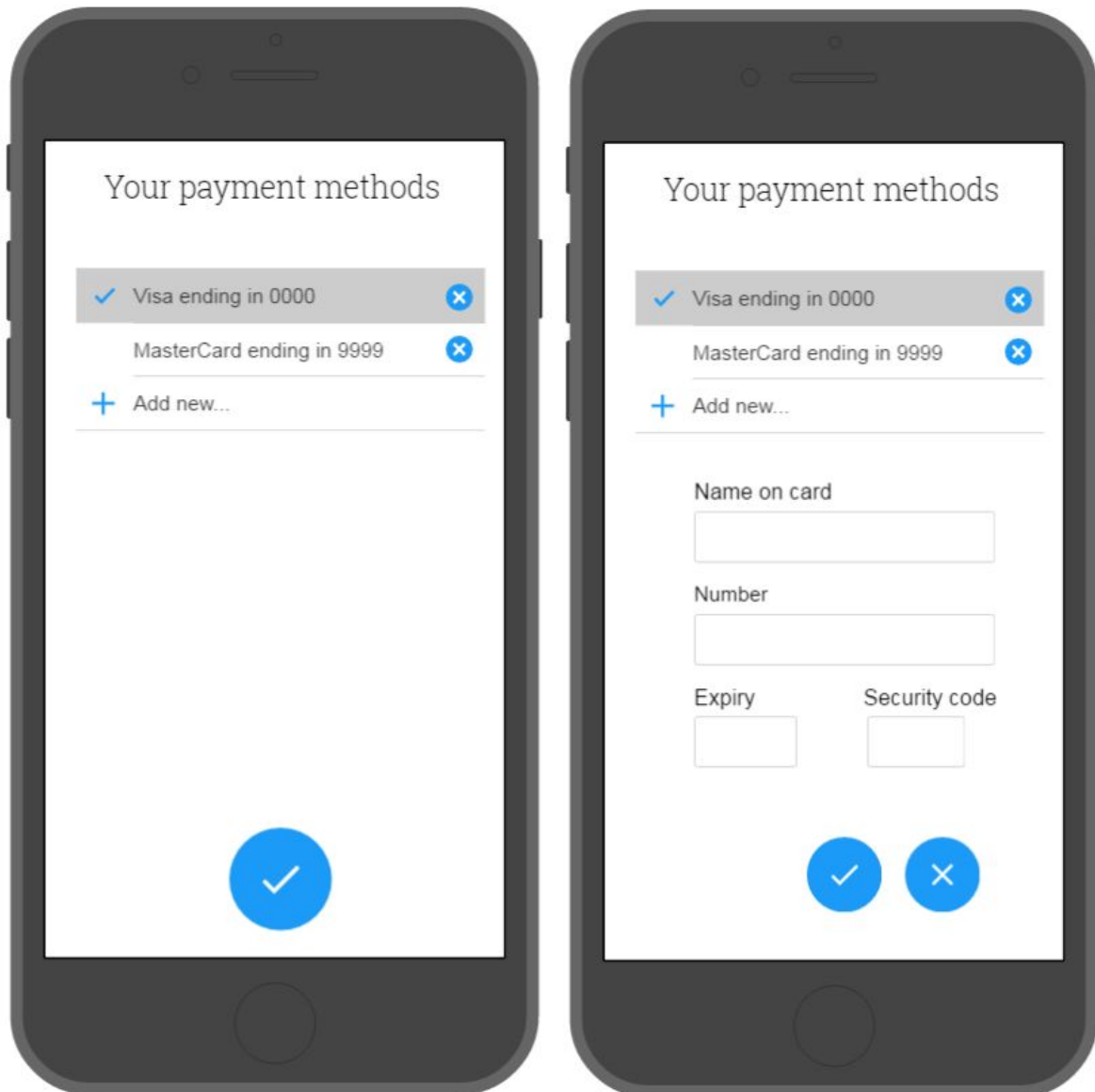
Screens not featured in the video or in-lab demo:



Left: Main screen, filtered by restaurant type (Pizza)



Right: Order history screen, showing both completed and pending orders



Left: Payment methods screen (the OK button goes back to the checkout screen)

Right: Payment methods screen after tapping "Add new..."

Future Work

We can bring back icons for the menu bar! E.g. replace the Sort By Distance/Price dropdown with icon buttons that toggle states.

We want to expand the prototype horizontally. The bottom tab bar has incomplete functionality: we would add login/register, user profile, and location history screens.

We would prototype the sorting system more fully, adding states for showing both currently closed and open restaurants, restaurants sorted by price, etc.

We would prototype the favouriting restaurants system, e.g. should the favourite restaurants be sorted at the top of the restaurant list? Should we make a screen that holds all favourites for a user?

We would also add a map view that pops up when the location bar is used. Competing apps like Google Maps can display restaurants on a map as well, so we might think about implementing that.

We would also address some users' expectations of being able to search for a restaurant using the top search bar (which we implemented as a location bar).

We may add more filter options in our app, such as popularity, discount, etc. We can also let users view an archive of their order history (which would be permanent and linked to their account, unlike the list of recent orders on the Orders screen).

Lessons Learned

Alina: We had a lot of design sessions where we disagreed on the design of specific parts of the UI like the main menu bar (sort/filter restaurants) and the add payment methods form. I think my teammates were assuming some desktop UI elements would just carry over, e.g. drop-down menus that don't take over the whole screen, or forms made up of text boxes and radio buttons instead of more interactive and legible forms. Whereas I really pushed for mobile design paradigms like not hiding the sort by distance/price in a dropdown, and having the categories dropdown fill the screen. In the end, the constraints of Proto.io made us use dropdowns for those two elements anyway. We went through a lot of discussions on the menu bar alone.

What I found valuable was having other people tell me what was clear and what wasn't while designing. Everyone has different intuitions about what's "obvious" or not and I can't assume that my mind follows the same steps as someone else's, or the target users'.

I wish I'd brought up executive dysfunction when we were designing the personas and onward. I was kind of a personal motivation for me, but I wasn't sure how everyone else would react.

Jinmin: We have such a small group with just 3 people and we have to finish the work for 5 people. This is a big challenge for our group though the whole term and we spent much more time than other groups in project. However, since we have a small group, each of us devoted a lot to the project so that we learned more about how each step of the project goes. There were many insufficiencies in our paper prototype that users may feel confused. We changed and expanded many screens in our medium and high fidelity prototype.

Thinh: from this course I have learned lot of UI design techniques. At the beginning, it was very challenging for us coming up with idea of what we are going to design. I think the effective design is based on our experience about the project. I have been working in the restaurant for couple years, so I understand how the chanllegence of a server listening on the phone while the restaurant is busy. Sometime the server writes wrong number of item, or sometime server forgot to write the the customize instruction. After a week to think about the topic of our project, we decided to pick the "DELIVERY FOOD" as our topic, but later on we realized that the name is very simple, so we changed the name as "FASTEATS". Another challenge that we experienced during the design is we don't know which button or icon will be put on the correct location. We drew the paper prototype, and we discussed and changed. The idea occurred from one by one. Another challenge, when we was tried to put everything together something wrong happen. They doesn't know matched each other. For example, from the menu of Domino's restaurant, we can select the item without selecting the size or customization. That was a logical issue since we don't have a default size for the user. We discuss and decide to put a default size in the menu screen. Anyway, the project is a good opportunity for us to learn how to use the knowledge we learn from SENG 310. We work hard and we satisfy with it.