

Group Project Part 2 Report

User Requirements & Design Sketches

CMPT 363 Spring 2024

Team 9
Michael Kwan (301541356)
Ryan Vincent Mitchellin (301540810)
Joel Tai (301347412)
Cyrus Ng (301553946)
Huy Bui (301575130)

Part 1: Problem statement

Our usability tests revealed that while Siri is a great assistant for many daily tasks, ordering food isn't one of them. Siri can list restaurants nearby, give directions, and even offer to call them, but it couldn't place the order itself. When explicitly specifying a delivery app like DoorDash or Uber Eats, Siri only opens the app, requiring the user to complete the rest of the process manually. This lack of integration for food ordering creates a less streamlined experience than anticipated by many users.

We propose a solution to bridge this gap with a food ordering extension for Siri. This extension enables users to place food orders entirely through voice commands. Imagine simply telling Siri what you want to eat, and the extension handles the rest – no more picking between apps or manually typing out orders. This not only addresses the current usability gap but also signifies a step towards a more intuitive and efficient interaction model.

Part 2: Interviews with potential users

Objective

Our user interviews aim to better understand the challenges users face with food ordering and the performance of Siri in facilitating these tasks. Specifically, we aim to identify issues such as difficulty in selecting food or restaurants, as well as instances where users find Siri to be unresponsive or inefficient. We are particularly interested in understanding situations where users perceive a delay or interruption in their tasks after attempting to use Siri, leading to a longer completion time than if they were to just do things themselves. Through these interviews, we seek to gain a comprehensive understanding of users' experiences and frustrations, their expectations for virtual assistants like Siri in assisting with food-related tasks, and gather feedback on potential improvements to enhance the overall user experience.

Participants

We aim to gather in-depth insights from individuals with exposure to technology and have therefore selected our participants to be computing science students at Simon Fraser University who frequently order food online and have some familiarity with Siri. We anticipate a diversity of experiences and perspectives, influenced by factors like personal preferences and usage patterns.

Interview questions

We've developed questions to help us better understand how users interact with food ordering apps and Siri. We also inquire about any frustrations or positive experiences they've had with the app. This approach allows us to gain insights into user needs and identify areas for improvement or new features that can enhance the user experience.

Summary of findings

The study is centered on the user experience of those who often use online food ordering services, and it specifically targets people who have some background in technology and exposure to Siri. These people usually find themselves in scenarios when making meals at home is impractical, including during exam season or when they're looking for a quick dinner. The results point to a common problem with users' inability to choose appropriate meals or restaurants from a wide range of possibilities, which causes discontent and a tendency to stick with options that they are acquainted with.

These users follow two unique patterns: some order the same cuisine over and over again and have been seeking for more simplicity and efficiency in this process, others are adventurous and want to try new foods but also value saving time. Many users become frustrated since they have to manually put orders again because they cannot readily reorder earlier selections, even if the system is efficient in facilitating speedy transactions and is easy to use once set up. Furthermore, the sheer number of options offered by expansive menus sometimes proves to be daunting, made worse by the difficulty in pinpointing particular items among the offerings of many restaurants.

Siri's appeal is rooted in its capacity to optimize the ordering process for takeout, satisfying consumers' needs for multitasking and ease of use. However, instances of Siri misunderstanding user requests, such as suggesting irrelevant restaurants or failing to pinpoint the nearest restaurants, highlight areas for improvement in the system's accuracy and responsiveness. When it comes to payment methods, Apple Pay seems to be the most popular option for a lot of users, but in order to satisfy a range of tastes, credit/debit cards and other alternatives must be included. In addition, consumers advocate for features like face verification to increase payment security and user confidence in the system, expressing a need for stronger security measures during transactions.

Conclusion

Based on our interviews with individuals who frequently order food and rely on Siri for efficiency, it's clear that convenience and time-saving are top priorities. These users often find themselves in situations where cooking at home isn't feasible, such as during office rush hours or when seeking a quick meal solution. While they appreciate the ease and speed of online food ordering platforms, they encounter challenges in selecting food or restaurants, especially when faced with extensive menus or the desire to explore new culinary options without sacrificing time efficiency.

A notable frustration for many users is the absence of an option to easily reorder their favorite meals, forcing them to manually find and order items again from scratch as preferences are not kept noted. Additionally, sifting through multiple menus to find a specific dish or restaurant can be cumbersome. These obstacles lead to a desire to potentially use Siri for a more seamless and convenient food ordering experience, allowing users to save time and be more productive.

Part 3: Tentative list of requirements

Absolutely must include:

1. Recommendation based on history, preferences, dietary requirements

This feature represents a pivotal component of our service, as it harnesses user data to deliver tailored recommendations. By analyzing past orders, dietary preferences, and any specified dietary restrictions, the system can generate suggestions that align closely with each user's individual tastes and requirements. Incorporating this capability ensures that users feel understood and catered to, fostering a deeper level of engagement and satisfaction. Moreover, personalized recommendations not only streamline the decision-making process for users but also serve as a key differentiator for our service in a competitive market landscape. Through continuous refinement and adaptation based on user feedback and evolving preferences, this feature has the potential to significantly enhance the overall user experience and drive long-term user loyalty.

2. Ordering with voice/Siri

The ability to order using voice commands or through virtual assistants like Siri is integral to modernizing the food ordering experience. By enabling users to interact with the system verbally, we eliminate the need for cumbersome manual input, offering a more intuitive and frictionless ordering process. This feature caters to the growing demand for hands-free and efficient interactions, particularly in situations where users are multitasking or unable to physically engage with their devices. Embracing voice-based ordering not only enhances accessibility for a broader user base but also aligns with contemporary technological trends. As such, integrating this feature into our service is imperative to meet user expectations and maintain relevance in a rapidly evolving digital landscape.

3. Checkout with Apple Pay

Seamless checkout functionality is essential for ensuring a hassle-free and secure transaction process. Apple Pay, with its widespread adoption and robust security measures, offers an ideal solution for facilitating quick and secure payments within our platform. By integrating Apple Pay as a checkout option, we provide users with a familiar and trusted payment method, reducing friction during the final stages of the ordering process. Additionally, Apple Pay's biometric authentication features, such as Touch ID or Face ID, further enhance security and instill confidence among users when making transactions. Incorporating this feature not only enhances the overall user experience by simplifying the checkout process but also contributes to building trust and credibility in our service. As such, it is a fundamental component that must be included to deliver a seamless and user-centric ordering experience.

4. Order confirmation and tracking with Live Activities

This feature enhances user experience by providing immediate order confirmation details and real-time tracking updates. Users receive reassurance upon placing orders, knowing that their requests have been successfully processed, while real-time tracking allows them to monitor the status of their orders, including preparation, dispatch, and estimated delivery or pickup times. This functionality not only instills confidence and reduces uncertainty but also offers practical benefits such as better planning and anticipation of any potential delays, ultimately streamlining the food ordering process and enhancing user satisfaction.

Should include:

1. Better error handling (e.g., ask for clarification for ambiguous requests)

Implementing improved error handling mechanisms represents a significant enhancement to the user experience, albeit not as critical as core functionalities. By proactively addressing potential ambiguities or misunderstandings in user requests, the system can minimize frustration and streamline interactions. For instance, when encountering ambiguous requests, such as vague food preferences or unclear instructions, the system can prompt users for clarification or offer suggested options to refine their query. This proactive approach not only reduces user effort in correcting errors but also fosters a more seamless and intuitive interaction process. While not a core functionality, prioritizing better error handling demonstrates a commitment to enhancing usability and user satisfaction, ultimately contributing to the overall success of the service.

2. Ask Siri to list all restaurants with a certain dish

Introducing the capability for users to query Siri about restaurants offering specific dishes adds a layer of convenience and utility to the service, albeit as a "should include" feature. While not as essential as core functionalities, this feature enhances the user experience by providing additional functionality and addressing specific user needs. For example, users may have cravings for a particular dish and wish to explore nearby restaurants offering it without browsing through individual menus. By enabling users to request a list of restaurants serving a specific dish, the system empowers users with greater control and efficiency in their dining choices. While not a priority for initial implementation, integrating this feature aligns with the service's commitment to delivering comprehensive and user-centric functionality, further enriching the overall user experience.

Could include:

1. Voice-based updated status, e.g., "Food arrives in 5 mins, Driver arrives at the restaurant"

Introducing voice-based status updates represents a potential enhancement to the user experience, although it falls under the category of "could include" features. While not essential for the core functionality of the system, this feature has the potential to provide users with

valuable real-time information, enhancing their overall experience. By leveraging voice technology to convey updates such as food preparation status or the arrival of delivery drivers, users can stay informed without needing to actively monitor their devices. While resource constraints may currently limit its prioritization, integrating this feature in future iterations could further elevate the service's appeal by offering a seamless and hands-free experience, fostering greater user engagement and satisfaction.

2. Ask Siri to list all dishes with ingredients, e.g., "Show me all dishes with chicken from McDonald's"

Enabling users to query Siri for a comprehensive list of dishes based on specific ingredients adds a layer of convenience and sophistication to the service, aligning with the "could include" category of features. While not critical for the core functionality of the system, this feature enhances the user experience by providing enhanced search capabilities and catering to users with specific dietary preferences or restrictions. By allowing users to specify ingredients and receive tailored results, the system empowers users with greater control and flexibility in their dining choices, contributing to a more personalized and satisfying experience. While it may not be a priority for initial implementation, integrating this feature in future iterations could enrich the service's functionality and appeal to a broader user base, further solidifying its position as a comprehensive and user-centric food ordering platform.

3. Integration with Siri Shortcuts

Integration with Siri Shortcuts enhances user convenience by enabling the creation of custom voice commands for frequent orders or preferred restaurants, thereby streamlining the food ordering process. By allowing users to personalize their interactions with Siri, they can effortlessly initiate orders with a simple voice command, eliminating the need for repetitive manual inputs and reducing the time and effort required to place orders. This seamless integration empowers users with greater control and efficiency, enhancing their overall experience with the Siri extension and fostering increased engagement and satisfaction.

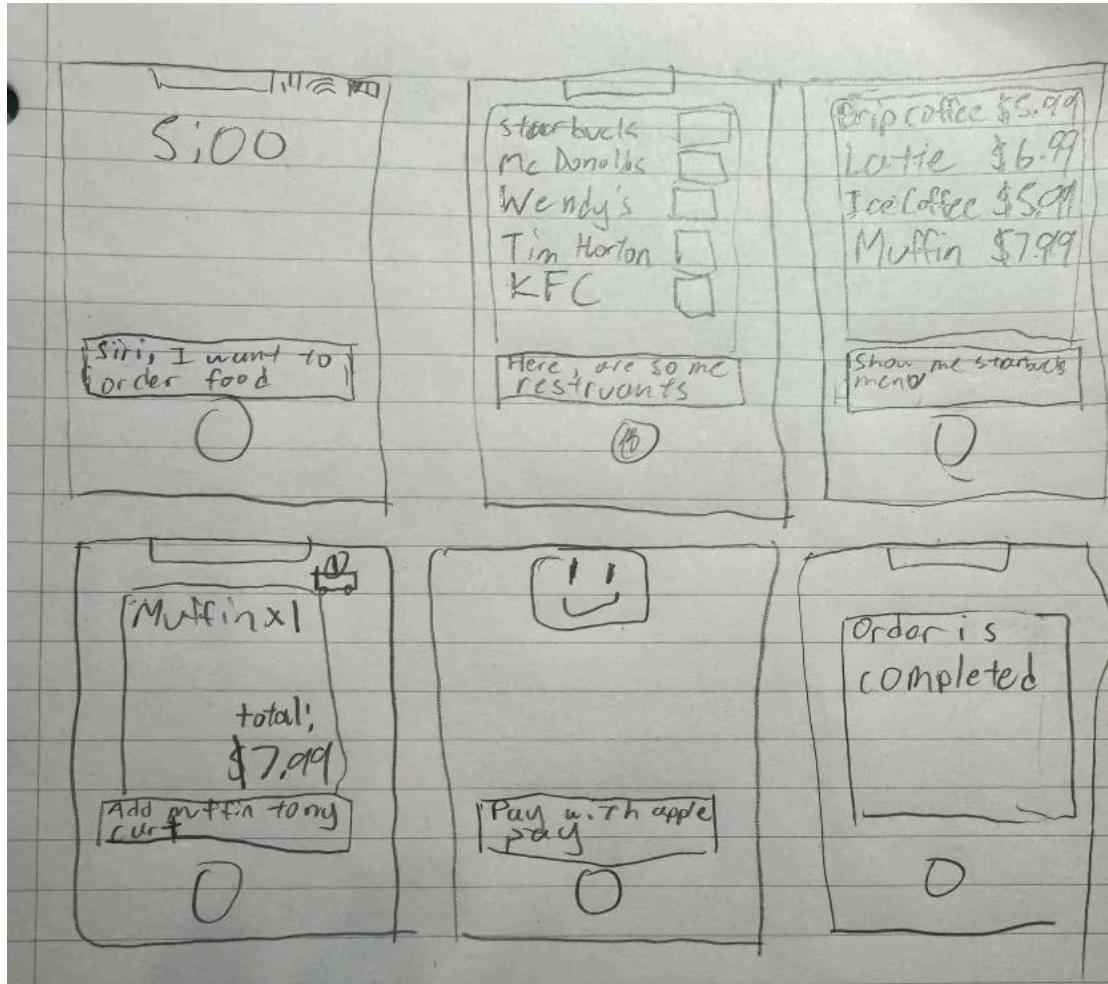
Exclude:

1. Face verification before doing checkout

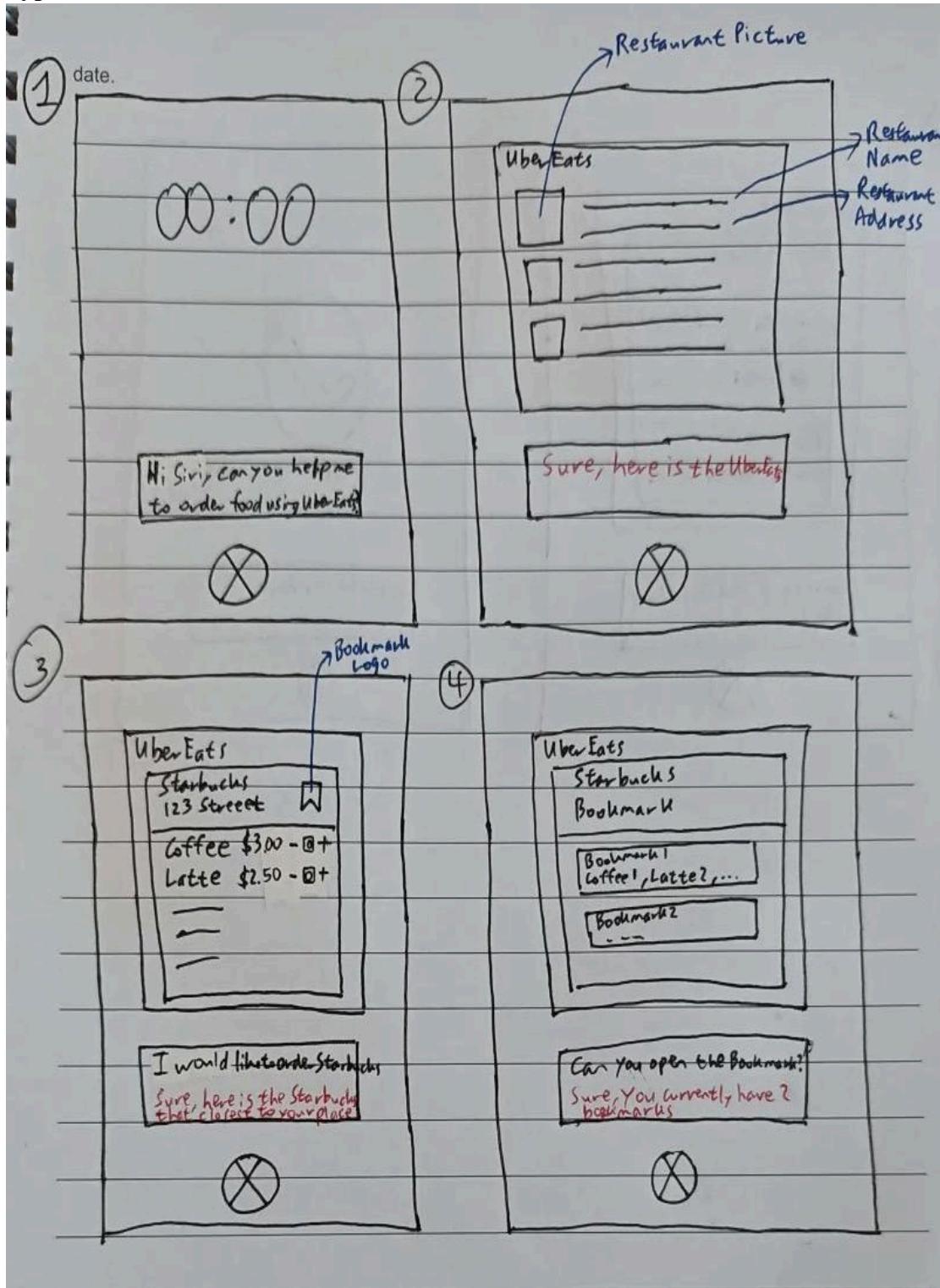
By excluding face verification from the feature set, the system maintains a focus on simplicity and efficiency, prioritizing user convenience without compromising on security. This decision aligns with the principle of minimizing unnecessary complexity and streamlining the user journey, ensuring that the platform remains intuitive and accessible to a wide range of users. While security is paramount, it is essential to strike a balance between robust authentication measures and user-friendly design, ultimately optimizing the overall user experience. Therefore, in this context, face verification is deemed non-essential and excluded from the system's feature set to uphold a seamless and user-centric approach to food ordering.

Part 4: Low-fidelity design prototypes

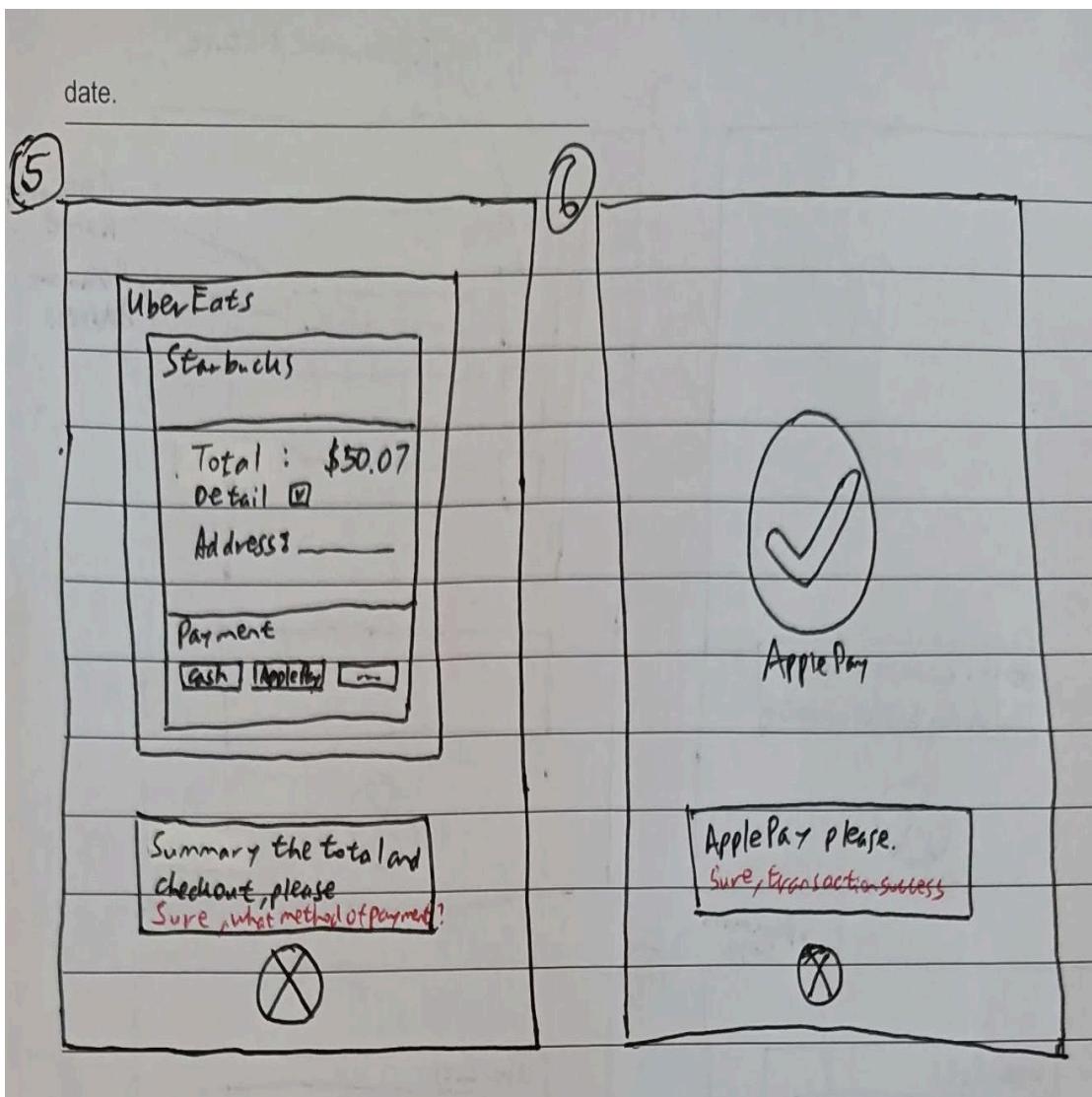
Prototype 1



Prototype 2



date.



Prototype 3

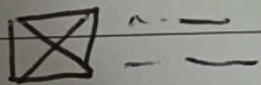
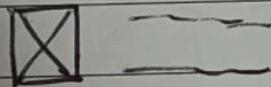
Hi Siri, can you recommend me some food?

Sure, do you have any specific cuisine or dietary preferences?

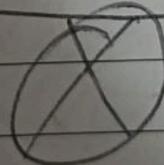
I like Asian food that have some broth

How about trying ramen or pho?

Here are some restaurant recommended near you.



Can I look at the menu for
XX Restaurant?



Here are the menu for XX Restaurant

Ramen A \$15.00

Ramen B \$17.00

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~~~~~

I would like to order Ramen A, please!

Sure, the total is \$15.00 and

What is your address?

My address is at 123 Street.

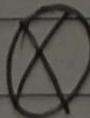
Based on your location, the
delivery fee will be \$5.03.

The total for your order is \$18.03.

How do you like to pay?

I'm using Apple Pay.

Sure, your purchase is successful and
order is placed.



Prototype 4

Hey Siri, I want to order food

Here are nearby restaurants

- A ...
- B ...
- C ...
- D ...

Show me C restaurant's menu

Here are favorite menus

- A ...
- B ...
- C ...

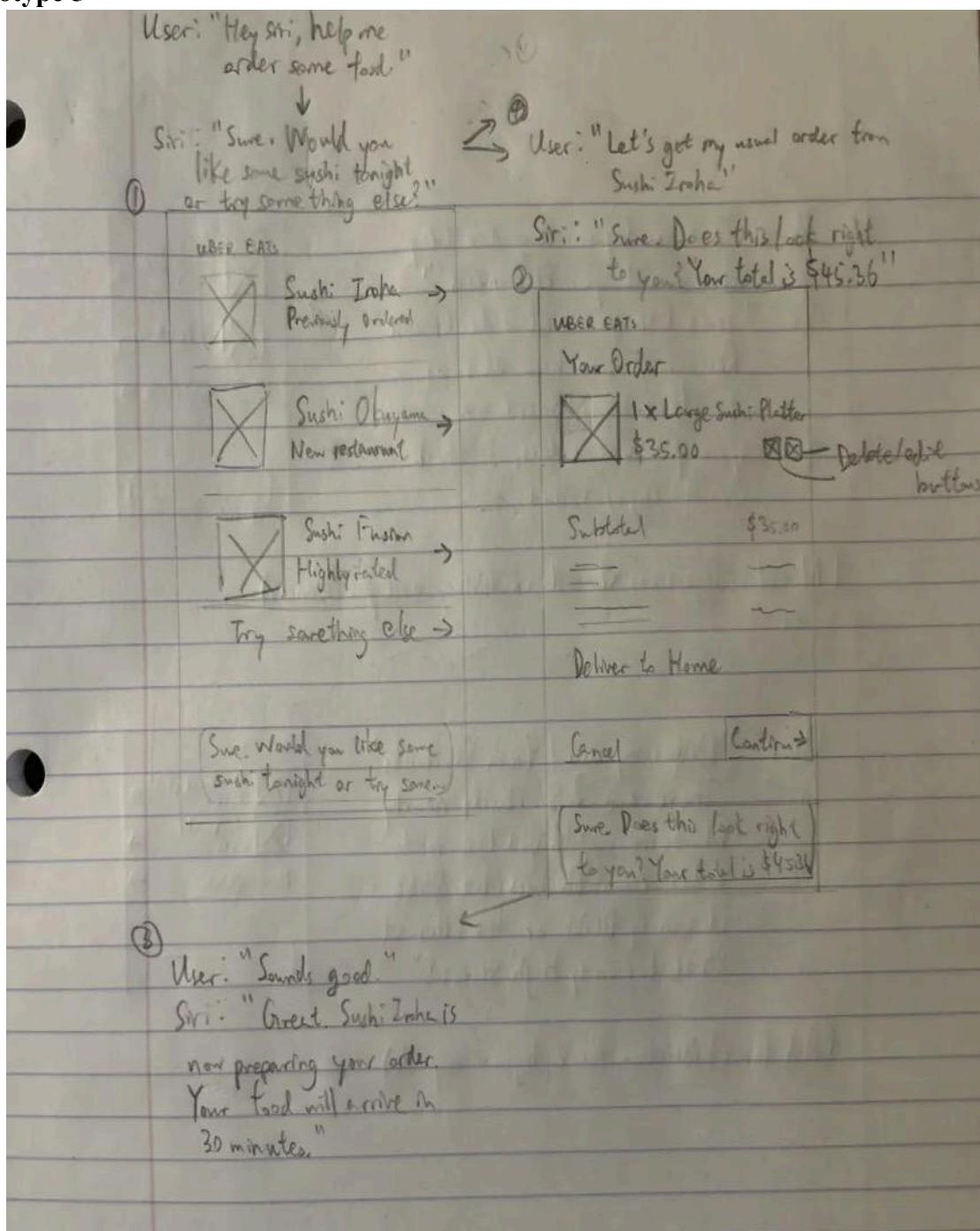
I want A food

Confirming payment by
using hey siri confirm

TRANSACTION SUCCESS

The food will be delivered
at 5.30pm

Prototype 5



④ User: "I wanna try something new today."

What would you recommend?"

Siri: "Sam's Ethiopian and Jade Chinese Restaurant are now additions to UberEats. Based on your previous orders, I think you'll enjoy either."

UberEats

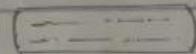


Sam's Ethiopian



Jade Chinese

More suggestions →



(Novel suggestions based on history and preferences)

User: "Order my usual from Starbucks"

Siri: "There are 2 Starbucks nearby. Which one would you like me to order from? The one at 8888 University Drive or the other at 8906 University High Street?"

UberEats



Starbucks 8888



Starbucks 8906



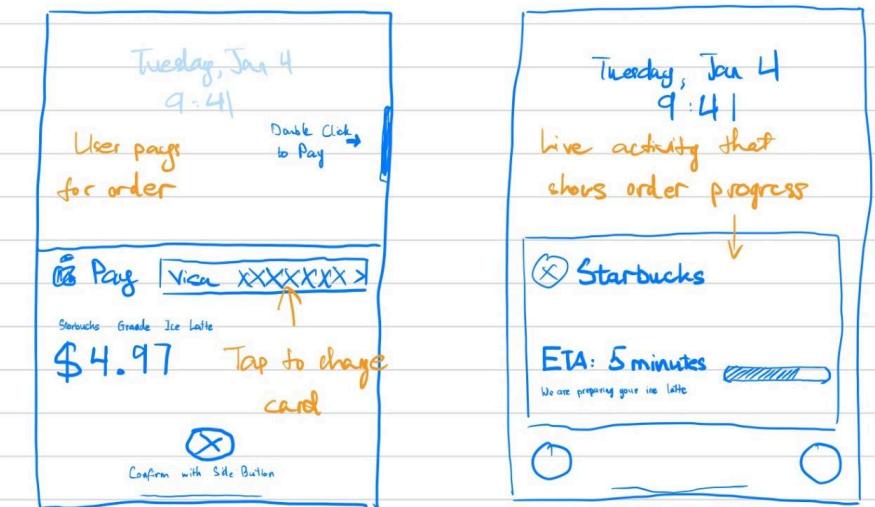
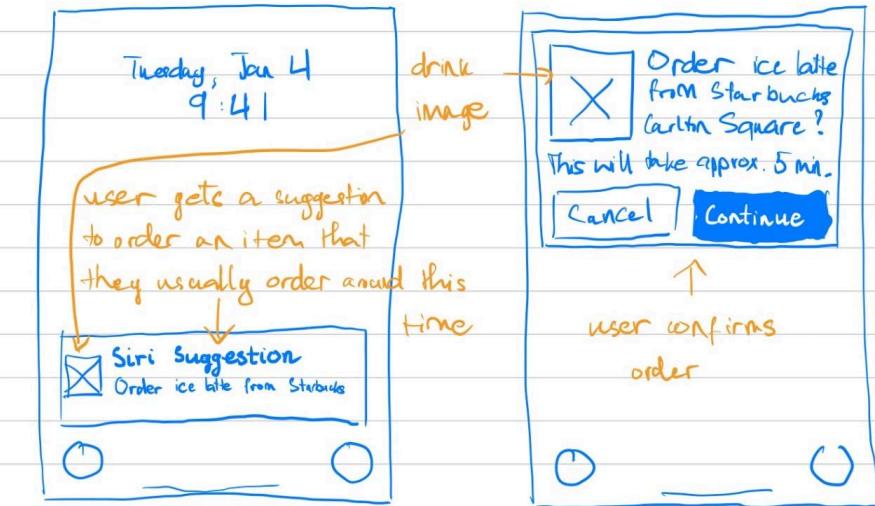
More options →



(Ask for clarification for ambiguous requests)

Prototype 6

Order recommendation based on purchasing patterns.



Summary

We built 6 low-fidelity prototypes in total, each demonstrating various key features and interactions. Prototypes 1 and 2 are the earliest designs showing the essential interaction flow. Prototypes 3 and 4 expand on the flow and include recommendation capabilities. Based on these, Prototype 5 includes a full order flow with different interaction scenarios and how recommendations are handled, while prototype 6 explores a new modality for recommendations and live updates through iOS Live Activities.

Appendix

Interview questions

Food ordering

1. Do you use online food ordering, if yes, how often? If not, why not?
2. Can you describe your overall experience when you ordered food using an online food ordering? Are there any specific situations or occasions when you prefer to order food online?
3. What do you find most convenient or frustrating about the current methods of ordering food online? Have you encountered any challenges or difficulties when ordering food online, such as navigating through menus or making payments?

Siri

4. How often do you use Siri and what are you using it for?
5. Have you ever used Siri or a similar voice assistant to place an online order? If so, what was your experience like?
6. Can you recall any specific instances where Siri's performance hindered your ability to complete a task, not exclusive to ordering food online?

Consent forms



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Thank you for agreeing to help us assess our software. We are taking a course at Simon Fraser University that involves the design computer software, and would like you to help us evaluate our design. In this session, we will ask you to work with an existing application or a paper or interactive software mock-up of our design and to help us evaluate its clarity and simplicity. We are evaluating the software, not you. Any difficulties that you may encounter while using the software will help us locate problems with our interface design.

This usability study is completely voluntary. You may decline to answer any question or stop the study at any time and for any reason. Any data gathered up to the point of stopping the study will be destroyed. If you are a student at Simon Fraser University, this interview will have no effect on your grades in any courses. The only data we will gather will be written notes. These notes will only be seen by our team members, our instructor, and our teaching assistant and will be destroyed at the end of the course. Your name will not be attached to any gathered data, but rather a unique ID code such as "Participant A".

Concerns or Complaints

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, you may contact Dr. Jeffrey Toward, Director, Office of Research Ethics at toward@sfu.ca or 778-782-6593.

Do you agree to the following: I have read and understood the subject information and consent form and freely consent to participate.



Yes

No

Selecting yes indicates that you consent to participate in this study and that you are 19 years of age or older. Select no if you wish to decline or are under 19 years of age.

CMPT 363 Online Usability Testing Consent Form (v1.0 August 17, 2016)

Name: Van Tran

Signature: Van

CMPT 363 Usability Testing Consent Form (v1.0 August 18, 2014)