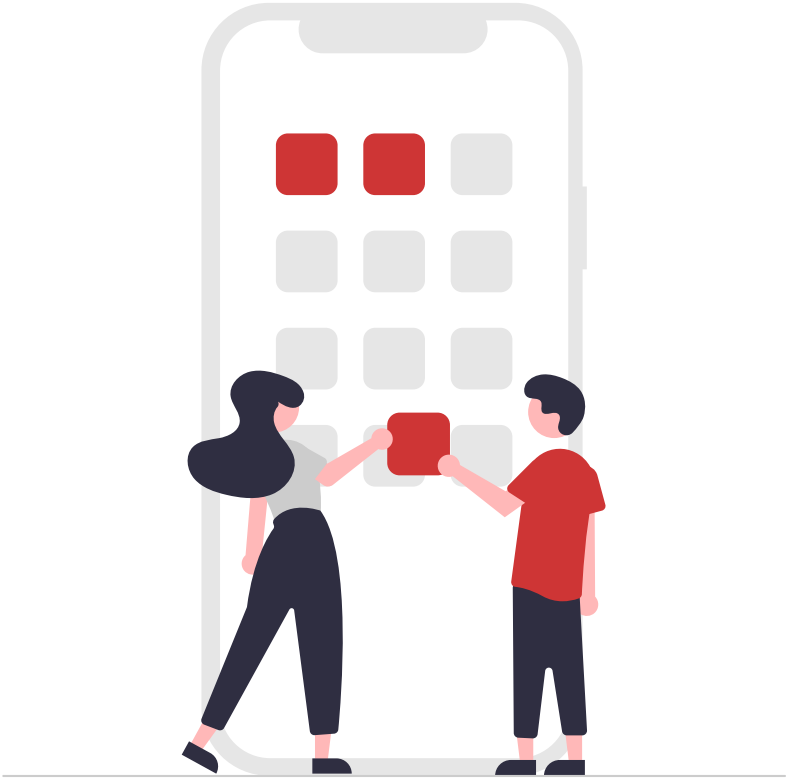
ordine



Stage Five

CPSC 481 Team J

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Executive Summary

This report providers provides an analysis and evaluation of the creation of our project named Ordine. Ordine is a food ordering and reserving mobile application, created to fix problems users have when they want to dine out. There are no mobile apps that we know of that allow for reserving and pre-ordering food. The methods we used to create this project are in this report. First, we brainstormed the problem and solution. After we conducted user research, we were able to get ideas from other delivery apps and how users interact with them. Using this research and the applied methods and findings we could create a low fidelity-protype. For the high-fidelity prototype we would also conduct heuristic evaluations to see if changes would need to be made and can still improve. Ordine was the result of our research and designing process.

Introduction

These days mobile devices are becoming more and more reliable to access a service. With almost every service having an application or a website, we believe that there should be a system that connects these websites, especially in the food industry. Skip-the-dishes or DoorDash are very convenient applications for individuals that don't want to dine-out or pick-up food to dine-in. A similar system can be implemented for those individuals that love to dine-in at a restaurant or just happen to have the need to dine-in.

Description of design problem

Before Ordine's existence, we have found 2 main problems that consumers are facing when they want to dine out. We found the issue in booking a table when consumers need to call a restaurant and ask if a particular time was available for their party number. If they are not able to make the desired reservation or want to make changes, they would need to repeat the same process, probably many times. In addition, online ordering and payment has been used more frequently since the Covid-19 pandemic has made people reconsider how they can order & pay for their food safely. Customers are looking for a safer way to order and pay for their meal without touching devices, menus or interacting with people to reduce the risk of Covid-19.

Description of our design solution

Ordine promises to change the way customers secured restaurants reservations, ordered and paid all-in-one platform. The value Ordine brings to our users and customers is convenience. Ordine also eliminates the hassle of phone reservations and creates an easy, seamless online reservation and ordering system for customers with no extra charge. Customers can pursue multiple reservations at a time and also be able to edit, cancel reservation anytime without the need of make many phone calls. Customers won't need to worry about the phone being busy or not being answered. Customers can look at menu before making reservations. Moreover, Ordine allows customer to order and pay their food with all menu options available to reduce interaction with restaurants staff, or touching menu booklet.

End-Users & Stakeholders

Our target customer segments are diners who want to book reservations, order, and pay all-in-one app. Customers will no longer need to make phone calls, wait in line, wait for menus or payment, which means more flexibility for customers in booking as well as avoid interaction with staff members and public devices (such as menus, credit/debit machine). Ordine is also a great tool to help restaurants manage their tables, reservations, and repeat customers.

User research methods and process

- Activity Analysis

We wanted to see how the app OpenTable work, which is a similar concept to our app. Activity analysis allows us to know what users will focus and interact with in the app. We had some family and friends download the app and we checked how they interact with it. We learned that there are certain aspects of the OpenTable that users spent more time on than others. This method allows us to find pros and cons of OpenTable and what we could do to make ours better. What went wrong with this method is that we had to sit next to the user and time how long they were on certain sections of the app. This could have affected the results since the user is being watched. Things that went well was this method was easy to use since almost everyone has a phone and I could write notes about their activity on the app. Things, we could have done differently is we would not have told users why they had to download the app and just let them use it.

- Questionnaire & Survey

We chose to do the questionnaire method to understand people's views and experiences when going to a restaurant. These views and opinions can help us determine which features we should focus more and must implement, and which features we could add if we have the time. What went well is that with the gathered data, we noticed that the things that this app is planning to solve such as phone menu viewing and table reservation, most people want it. We also noticed that people would enjoy the side features of this app if they existed such as selecting where to sit in a restaurant and having the food instantly served. What went poorly is that due to the amount of time we had for this stage, we were only able to gather data from 14 people. Furthermore, some questions kind of overlapped, so two questions were practically asking the same thing.

- Paper Prototyping

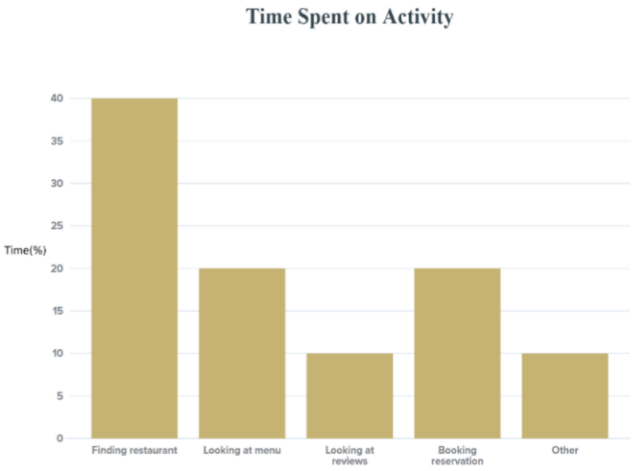
To start our quick sketch, we firstly discussed what functionality our system has and designed each page accordingly. Within each page, icons and representative texts are used to emphasize the functionalities. Arrows are used to represent the sequential relationships between pages. What went well for us is we were able to visualize our design and interaction process. What went poorly is we had some difficulties to show relationship of screens and some screens are too abstract. We could have improved this by drawing all screens on one side of separate papers so that we can show relationship easier. Also, the sketches should contain more representative elements to make it clearer for everyone.

User research findings

Throughout our user research process, we have a better understanding of our customer segment, their behaviors, product functionalities. From each method, we built up our apps with user-centered design concepts.

- Activity Analysis

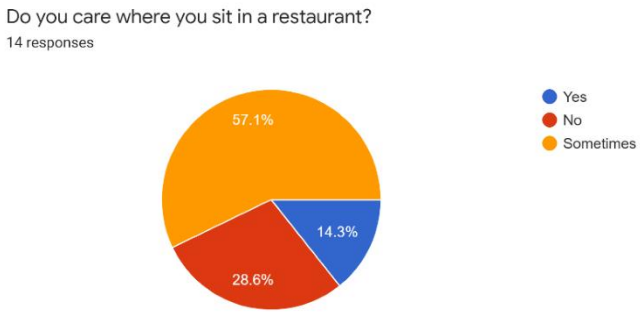
The activity analysis method helps us identify what customers' expectation, behaviors, and focus during the interaction.

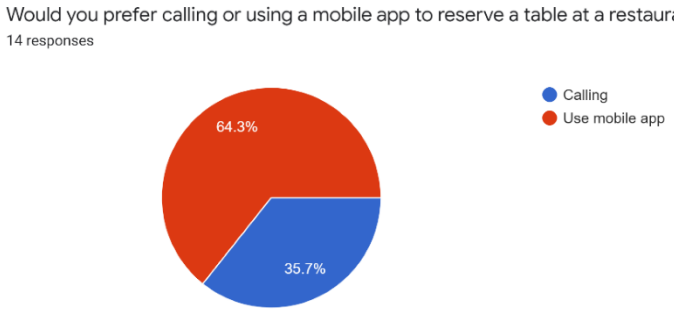


This graph shows the percentage of a user's time on the different sections of the app. With this we can see what needs to have a well-designed UI and UX experience

- Questionnaire & Survey

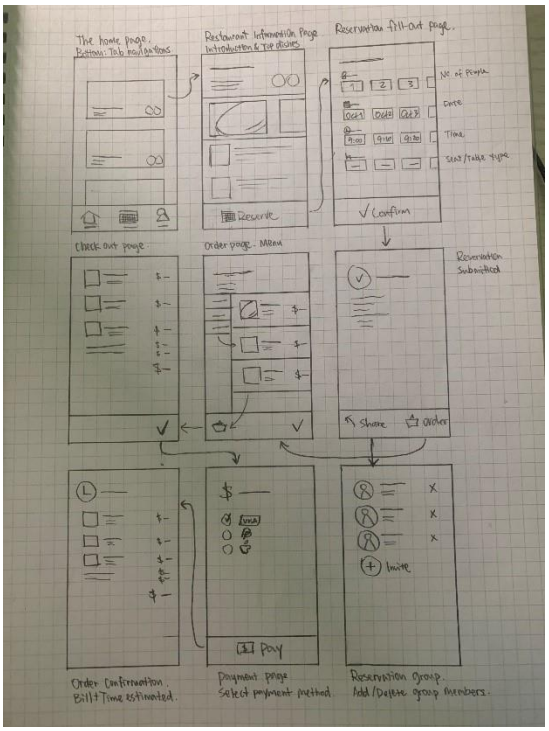
Then this leads us to form a Questionnaire and Survey (Ask) method to interview users, identify customers' preferences, and behaviors to understand better current users' experiences. We learned about the pros and cons of the existing app and how we can improve ours. Below are some responses to our survey questions:

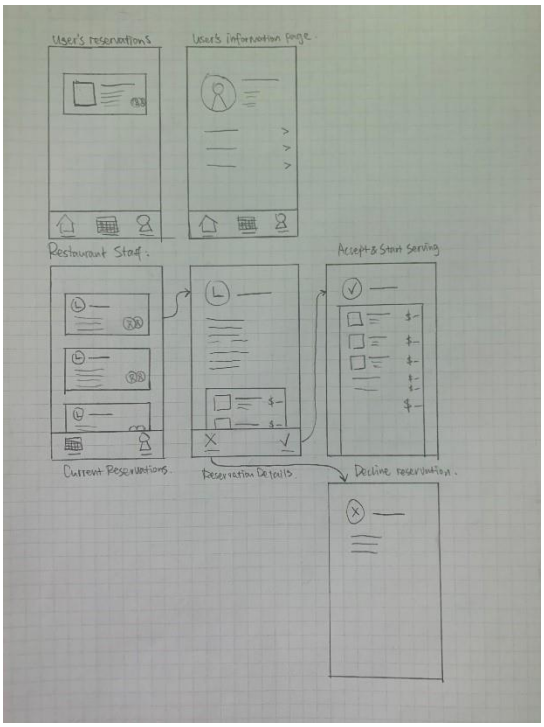




- Paper Prototyping

Lastly, using use Paper Prototyping helps us sketch our interaction chains and evaluate our UI, which provides us visual representations of UI and impracticality of some functionalities.





These methods formed a sequential research process: about experiences, identify users' perspectives, and create a prototype that meets their needs. Our findings help us have better understandings of the customer & interaction process, which contributes towards designing a complete solution and first step for a low-fidelity prototype. Our target customer segments are diners who want to book reservations, order, and pay all-in-one app. Customers will no longer need to make phone calls, wait in line, wait for menus or payment, which means more flexibility for customers in booking as well as avoid interaction with staff members and public devices (such as menus, credit/debit machine). Ordine is also a great tool to help restaurants manage their tables, reservations, and repeat customers.

Important design choices and justification

In this stage, we have updated our components and typography in the UI, and as a result, the UI looks more featured in aesthetic, the information displayed to the users are more organized, and pages are more consistent.

First, the title bar of each page is redesigned. We want the UI to be more minimalistic, so we removed the text for return button and only left the icon, with adjustment on the size. By referencing the trending design which has appeared on iOS, Starbucks, Instagram and many other mobile apps, a bigger title bar with left aligned bigger title is used for top level pages, such as Search or Reservations page. This design gives the app freshness to the user and motivate them to explore the app.

Second, the components are updated to rounded corners. Since the bottom red rounded button is the highlight of our design, we decided to expand this highlight. To do so, we redesigned our text fields, checkboxes, popups, images with rounded corners and grey background to emphasis the highlight and reinforce the consistency of elements.

Third, we have increased the tapping area for buttons without visual borders. Instead of having on icons tappable, the certain blank area around would be included as well. For example, the size of an icon is 15x15 and it is tappable. However, the tappable area might be too small for fingers on mobile screen. After changed, 10px around this icon will be counted as this button as well instead of only the icon, therefore, the tappable area would become 25x25. As a result, users have bigger interactable area with buttons.

Low-Fidelity prototype design & lessons learned

When we created our low-fidelity prototype we learned many things they would help us create a high-fidelity prototype and what user tasks we would focus on. We decided to use Balsamiq and learned the many feature that come with it. Creating the low fidelity allowed us to visualize our idea and see that certain ideas were not realistic. We were able to learn many things about UI design, keeping layout schemes consistent, ways to display information to the user and others. We applied as many UI design strategies as we could. Some design ideas that we thought were good but did not fit the prototype such as, popups but while creating the prototype we stared to have too many and some of them should just be a new page because of the information provided to the user were bloated. During the creation of our low fidelity prototype when we referenced our affinity diagram, we would discard certain ideas and implement others. An important task removed was, restaurant host page where a waiter can confirm when people arrive but, after making our prototype we felt it would not fit in because it would require a unique new design. We were able to narrow down our important user tasks to Reserving, Account, Ordering, Payment and Reviewing. Creating this low fidelity prototype was the reference we used to create our high-fidelity prototype.

High-Fidelity prototype design & lessons learned

What went well with this stage is that we learned how to create a high-fidelity prototype using Figma and using it together to bring our low fidelity prototype to life. We also learned how to do heuristic evaluation. The heuristic evaluation process allowed us to identify many problems with our app. After ranking the problems, we could find the problems that needed to be solved most. Also, by looking at current designs such as Skip the Dishes or DoorDash we could get ideas of how we should design ours. What went wrong with the stage is that we tried to implement certain functionalities that could not be implemented in Figma. Such as when browsing a restaurant's menu, the user can scroll horizontally to view and select a food category. When a category is clicked then the user would be instantly scrolled down to that category but in Figma we could not implement that.

Heuristic Evaluation and Findings

- Consistency and standards

The first thing we found was that originally, we had a few of our buttons are different color to the rest of our program, to emphasize it to the user. However, after doing the evaluation we thought it affected the consistency and standards negatively ruining the aesthetic of the app. So, we changed the buttons to what every other button in an app looks like.

- Help and documentation

Even though are app should be self-explanatory to use we do not have a help section in case a user does not know how to access parts of the app or needs to contact us for help. So, in the account page of the user, we added a help section in the settings. This will help with the help and documentation of our app.

- Error Prevention

Since being able to make reservations is one of our app's main functions, then if the user is at the reservations page and happens to accidentally click the delete button which is the delete reservation button then the reservation is will be deleted. So, we added a popup message that reassures the user if they really want to remove the reservation.

Design changes that made based on the heuristic evaluation in Stage 4

First, we made change to the scale of our UI. In the preview of our previous prototype on the phone, everything looked bigger than a usual app, for both the size of elements and typography. This stage we have created a new standard of typography and we made components for whole project to keep the size normal and style consistent.

Second, we added more popups for error preventions. For some important operations, we have added popups to ask user if they want to perform a certain action again to ensure the action is done by intention instead of accident.

Third, as mentioned, the components and typographies are updated. This is an important decision which is based on our heuristic evaluation. We are making this change not only for aesthetic purpose, but also to give users consistently continuous experience for users.

The changes that we made on final Hi-Fi in Stage 5, and other changes that should be and could be done in the future

As mentioned previously, the major change of our prototype is the components and typographies. We also updated the layout of certain pages with complex information, such as Reservation Information and Restaurant Information page. From our perspective, these changes certainly improved the visual aesthetic and the consistency of UI, and hopefully they also increase the user experience to some extent even though the content is the same as previously.

Our weakness is on organizing complex information in a single page, so we think we should do some research on other apps or go to design websites for some inspirations, to make the information displayed even more efficiently to users.

Though we have tried out best to make our final prototype to be as realistic as possible to be looked like a real app, Figma is a static prototype tool which is only for static prototypes, we are not able to have the form components such as checkboxes or text fields actually interactable. In the future, we think we could implement our prototype to be more realistic, we could import our static prototype in Figma into Framer and implement the form components in Framer to be interactable.

Conclusion

This report shows our journey and the steps taken to create our project. Each step allowed us to go on to the next step while making the project more realistic. This process unfortunately stops at the high fidelity protype and the actual creation of an app is not done. However, with the steps we have done if we wanted to, we could create an actual mobile app. The design process taught our group how to make an idea become a reality. If this project were to be created, it would help solve our proposed problem with people reserving during COVID-19.

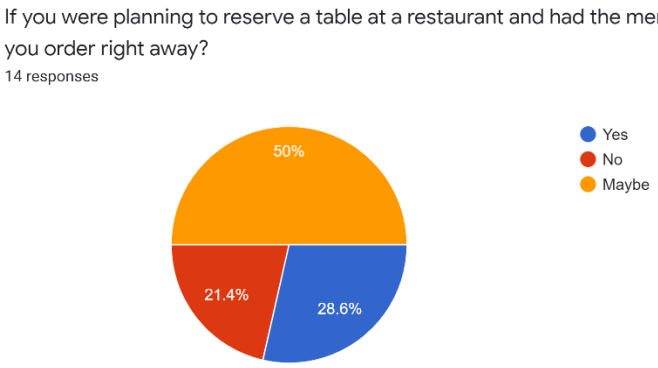
Appendix

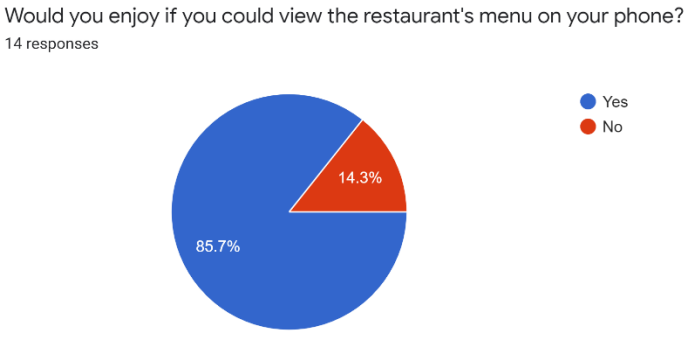
Portfolio: Home | Ordine (cloudyyoung.github.io)

GitHub: CloudyYoung/cpsc-481-team-j: Human-Computer Interaction I - Fall 2020 (github.com)

1. Survey questions and some sample answers:

- How often do you dine-in at a restaurant during the week?
- Do you care where you sit in a restaurant?
- Do you know what you're going to order when you dine-in at a restaurant?
- Would you enjoy if you could view the restaurant's menu on your phone?
- Do you mind waiting for your food at a restaurant?
- Would you enjoy if the food was instantly served as soon as you sat down in a restaurant?
- If you were planning to reserve a table at a restaurant and had the menu available to you, would you order right away?





2. Activity Analysis

User can select reservation or takeout/delivery.

A few just scrolled through the lists others filtered by cuisine. The cost symbol on the side of each restaurant was also a deciding factor. This means that this portion of the UI and UX needs to be accessible and understandable. Some users already knew what restaurant to pick and used to search section to find it. However, there was no list of search options when they type a few words so that had to manually type the whole name to see if it is on the app.

If it is a restaurant the users did not know they would look at the review section of the restaurant if it had bad reviews they would go back to searching. Users could not write reviews on the app since. Otherwise they would continue to the menu section.

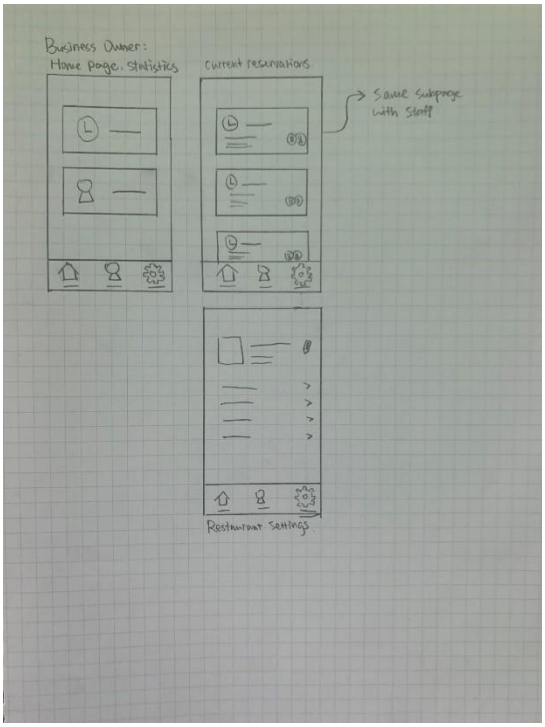
Users would look at the menu options. Some restaurants would require you to go to their website to find the menu others had the menu in the app. The users tried to press on the menu item they like but this app does not allow for ordering, so they were disappointed in that. This occurred in the reservation section but not the order section.

Users also realized that there was a reserve section on the app. They were able to scroll though the times available that day for the restaurant and select the number of people, however if it was a reservation for 2 weeks ahead of time, they would have a calendar view to look at.

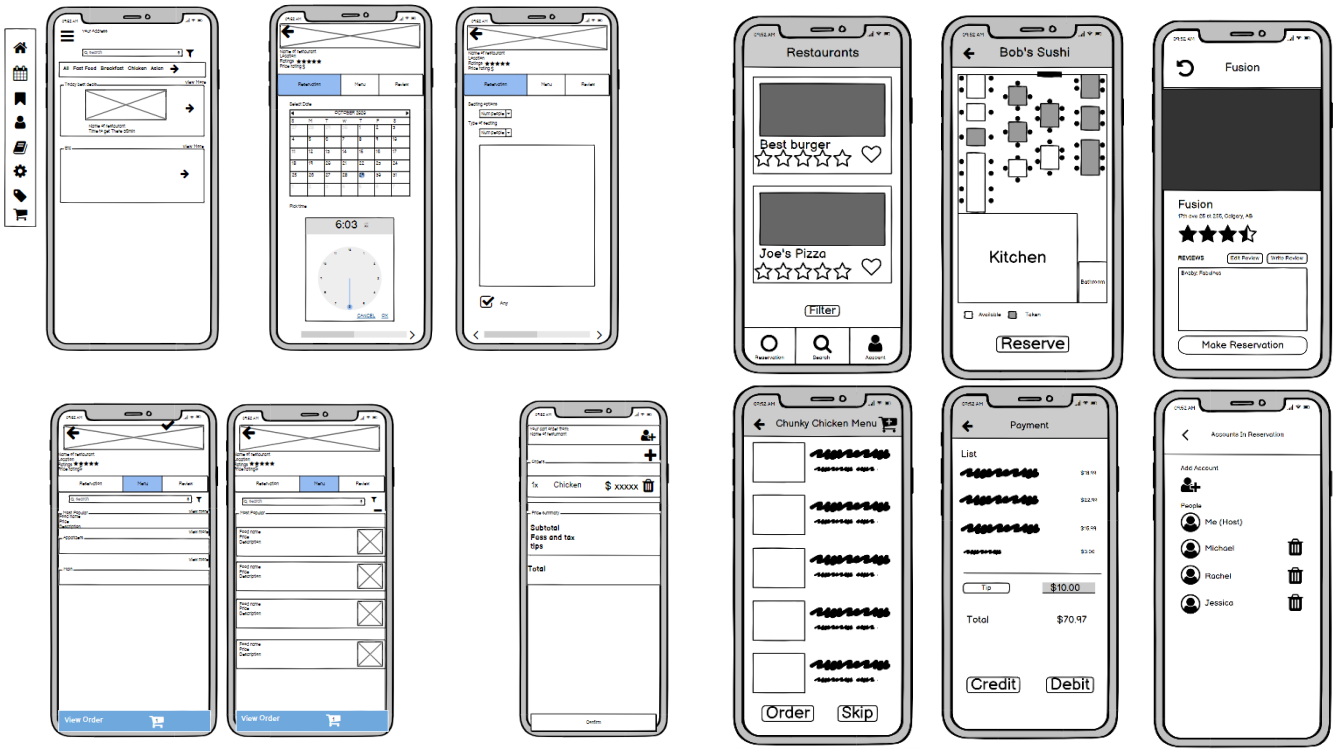
When they wanted to make the reservation, they had to go to a sign-up section. Users were confused when they selected the date and number of seats using the small tab of the top left. However, that was for filtering what restaurants could do that time. Users had to go to the restaurant section and select the time on the date. Some restaurants gave seating options to the user.

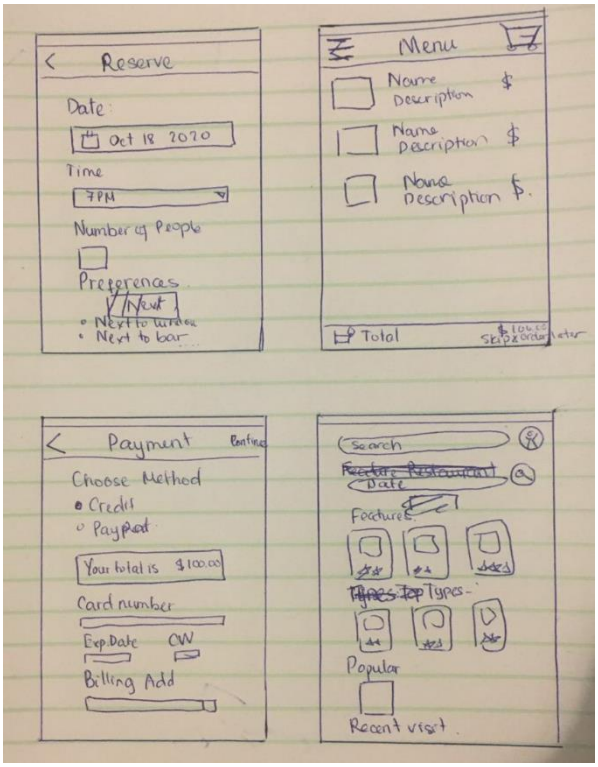
Users can edit the reservation easily. They go to the history section and can select the reservation, giving options to cancel or accept. Also, notifications are given when the time of the reservation is coming close.

3. More Paper Prototyping Sketches



4. Low-Fidelity Prototype Sketches





5. Heuristic Evaluation

Evaluator 1

Rule of Thumb	Is this rule being applied? How so?	Is this rule violated? How so?	How can this rule further improve usability, utility and desirability?
1. Visibility of system status	Yes. Such as when a payment is made and when the systems asks if u want to delete a reservation	When trying to order there without making a reservation first users are unable to know that they have to make a reservation first	When users know the current system status, they learn the outcome of their prior interactions and determine next steps. Predictable interactions create trust in the product as well as the brand.
2. Match between system and the real world	The navigation bar. Has the symbols that users should be familiar with	The icon of date has a calendar for calendar view in reservation but it is also the same icon for the reserve section in the nav bar	It's easier for users to learn and remember how the interface works. This helps to build an experience that feels intuitive.
3. User control and freedom	Almost every page has a clear back button	Users who may accidentally press a icon on the navigation bar Have no clear back button to go back instead they have to click the nav bar again	Exits allow users to remain in control of the system and avoid getting stuck and feeling frustrated.
4. Consistency and standards	Has the typical login page along with login in with third party services. Consistent color design most of the time	Some buttons such as the buttons Payment are different color to the rest of the system or not corresponding with what they usually are	Users do not have to wonder whether different words, situations, or actions mean the same thing.
5. Error prevention		A undo button when an item is added to cart would be helpful instead of having to go to cart to remove. There are no popups in case someone wants to delete something.	eliminate error-prone conditions
6. Recognition rather than recall	By adding the food item image in the cart as well users do not have to remember what the name of the food is. The recent searches also helps		Interfaces that promote recognition reduce the amount of cognitive effort required from users.

7. Flexibility and efficiency of use	Having a favorites and recent searches for users. A filter system for the restaurant view	No save filter option for users if they want to filter the same way again	Flexible processes can be carried out in different ways, so that people can pick whichever method works for them.
8. Aesthetic and minimalist design	The restaurant browser menu is designed with only the important parts needed	When a restaurant is clicked the information presented is a lot.	Interfaces should not contain information which is irrelevant or rarely needed.
9. Help users recognize, diagnose an d recover from errors	No option to clear all current filters if needed.	Even with the error prevention popups if a user deletes there is no quick undo. Users must reserve again	These error messages should also be presented with visual treatments that will help users notice and recognize them.
10. Help and documentation	The system is self-explanatory	No help page	Help and documentation content should be easy to search and focused on the user's task to ensure usability

Evaluator 2

Rule of Thumb	Is this rule being applied? How so?	Is this rule violated? How so?	How can this rule further improve usability, utility and desirability?
1. Visibility of system status	Users get alert box and confirmation message for some actions	User can't see confirmation of booking table, processing order and transition between screens are not very smoothly	Adding notification alerts, messages box to inform the system is processing their requests
2. Match between system and the real world	The system uses the languages used by user, no special terminology. The navigation of workflow is clear and logical		
3. User control and freedom	There is return options on some screens.	There is no direct way to exit to browse directly during ordering process.	Adding button allows user to exit right away in the middle of process by going back to previous page.
4. Consistency and standards	Many actions, situations, instances of words in the application are consistent.	The font and size of the application are quite big.	Change sizes of text and color to make it consistent rhougout all pages
5. Error prevention	There are a few alert pop-ups to confirm users action	No errors were encountered. The workflow is very linear and following a same path everytime.	Adding error messages alert (unable to add item, unable to process payment, etc)

6. Recognition rather than recall	Using icon and button makes it clear for user what it means, whih helps reducing the amount of memorization the user has to do. User also do not need to remember details from precious page.	Some icons are not clear in what it indicates and some pages are not clear what user can click	Using different colors instead of only red and black, allowing user to recognize buttons and stay in the workflow
7. Flexibility and efficiency of use	There is some shortcut to remember payment methods and favourite restaurants.	There are no currently options for speeding up processes of ordering, logging in, payment	The system can add saved log in credentials, use last orders, use last method payments.
8. Aesthetic and minimalist design	Most pages achieve minimalist design and please aesthetic. Some pages display only relevant information which help to better focus on what task is supposed to be completed on some pages and make application less overbearing	Some pages do not achieve minimalist design and fairly busy. Some page is not consistent with general design	Filter our information that are most important, make font and size consistent to make page design minimalist.
9. Help users recognize, diagnose and recover from errors	There are a few alert box messages	There are not many error messages in the current application	FAQ section for questions and Help Page would be helpful. User should be able to send questions, concern, bugs for anything to the team.
10. Help and documentation	Buttons are quite clear and restrictly relavant to pages purposes	There is no help indicator thoughout the application to explain fuctionalities.	Adding help indicator to help user stay in the workflow and application and they dont need to navigate elsewhere.

Review 1 Rankings (Left is most important)

- Evaluator 1: 4 9 5 10 6 2 1 3 7 8
- Evaluator 2: 6 4 1 10 5 9 7 8 3 1

Review 2 Rankings (left is most important)

- Evaluator 1: 4 8 2 3 7 1 6 5 9 10
- Evaluator 2: 8 6 2 7 4 10 1 9 5 3