Designing UALR Food Ordering Service App

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Case: UA Little Rock students have requested a food app for the campus that allows the various restaurants on campus to deliver to them directly, saving them time from walking all across campus.

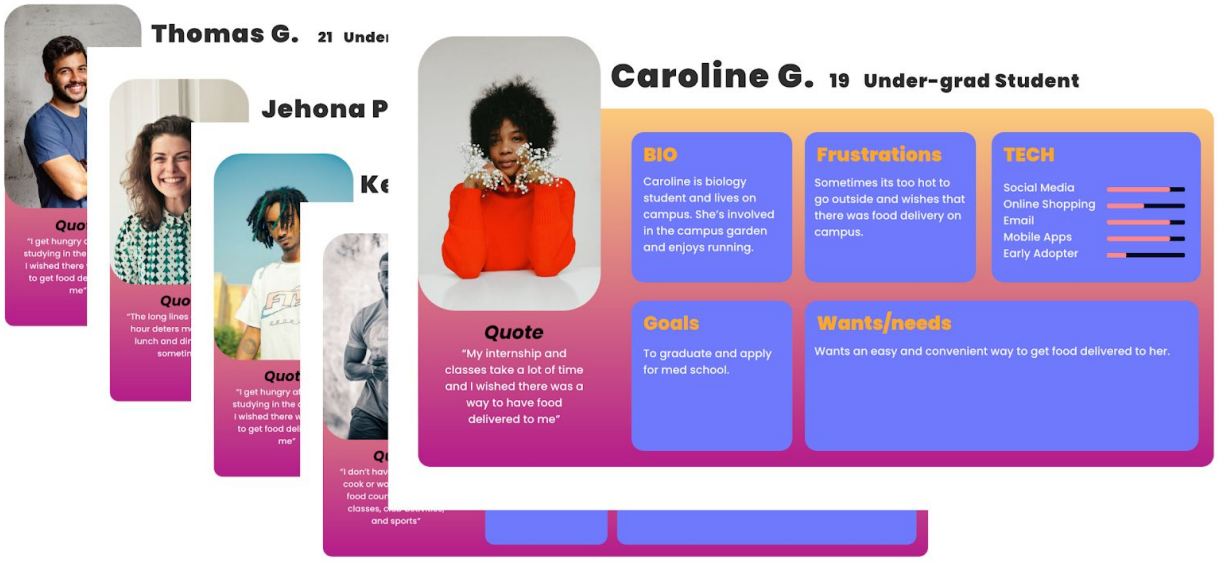
Section 1 - Research

Before I started to design the application. Research had to be done. I first used a couple of delivery apps and then started to come up with a name for the app, how it could function, and who the target users were.

- Name: EDUEats
    - The name was crafted to be able to integrate into any college/university campus and this app could also be used by a company like Uber, who could integrate something like EDUEats with the mainstream food delivery app “UberEats”.
- Description:
    - EDUEats is an application designed for students and staff to order food for delivery. Users can order from any of the on-campus restaurant options and have it delivered to them anywhere on campus.
- Target Users:
    - Primary Target Users: College students and college staff aged 18-60
- Summary
    - EDUEats has been created to make ordering food more convenient for college students and staff. The user can place an order on the application for select available food options available on college premises. The students can order and then have the food delivered to them anywhere on campus. EDUEats is designed to be applicable to any college with their own restaurant ecosystem.
- Research
    - Common food delivery/ordering apps such as UberEats, Taco Bell, and Dominos were tested to understand the common themes/patterns along these apps. This gave me a good understanding of what typical ordering patterns look like. Since these companies do their own user testing and usability tests, this research gave me a good idea of how a user flow is supposed to look like for food ordering.

Personas

5 personas were designed to fit our target users. There are 3 students and 2 staff members included in the personas. Caroline is the main persona that the user flow and the design flow was based off of. Caroline is the main perona because undergrad students are expected to make up the biggest majority of the user base for this application. I created these personas in Adobe XD and the images that were used are royalty free from pexels.com.



Click here to view full personas in via Adobe XD viewing link.

Flow Journey (based off of Caroline's persona)

User flow journeys are created so that we can have a better understanding of the steps that are required for the user to complete a task. This will help later when wireframing/prototyping.

Normal Flow - Happy Path

Step	User Actions	System Actions
1	User opens the app to order food	Display the system login page
2	User logs in with credentials	Display email and password field
3	User selects the restaurant from which they want to order food from	Display a list of restaurants - Reviews - Small description
4	User selects the quantity of the food items that they want	Display a list of all the options with a quantity ticker
5	User clicks order now	System displays order submitted and estimated time of arrival

Alternative Flows journeys

Alternative Flow - #1

Step	User Actions	System Actions
1	User opens the app to register	Display the system login page
2	User clicks to sign up	Display different fields the user needs to fill out
3	User enters a name, phone, and address	Displays that the user has filled out the form
4	User accepts the terms and conditions	Display a tick mark next to the terms and conditions
5	User clicks sign up	System displays thanks for signing up

Alternative Flow - #2

Step	User Actions	System Actions
1	User opens the app to check on estimated delivery time	Display the home page
2	User clicks on the order button	Display current and past orders
3	User clicks on the most recent order	Displays the order and the estimated time of arrival
4	User acknowledges the time of arrival exists the app	Display the splash screen for a brief sec as the user exits the app

Alternative Flow - #3

Step	User Actions	System Actions
1	User opens the app to change address	Display the home page
2	User clicks on the account button	Display different fields the user can edit
3	User clicks the address edit button	Displays all the different fields that the user can edit
4	User adds a new address	The system acknowledges and saves the new address
5	User exits the app	Display the splash screen for a brief sec as the user exits the app

Alternative Flow - #4

Step	User Actions	System Actions
1	User opens the app to change credit card info	Display the system login page
2	User clicks on the account button	Display different fields the user can edit
3	User clicks credit card edit button	Displays all the different fields that the user can edit
4	User adds new credit card info	The system acknowledges and saves the new credit card info
5	User exits the app	Display the splash screen for a brief sec as the user exits the app

Section 2 Design Flow

- Description:
    - The main goal for the user is to order food from the restaurant of their choice and get it delivered to them anywhere on the college campus.
- The Process:
    - I chose to do a storyboard scenario to explain the steps a user will take to complete the main goal. Caroline is the main persona that this scenario is based on. It will take the user from when they are hungry to when they receive their food via delivery.

- Storyboard Scenario

1 Caroline is coming back to her university dormitory from the gym, and she is hungry for some food.

2 She relaxes in her room and pulls out her phone. Jenny then logs into the EDU Eats app to order some food.

3 Caroline finishes ordering from one of the restaurants on campus. Then she continues to start studying for her exams.

4 The restaurant receives the order and starts to prepare it asap.

5 The restaurant sends a delivery person to the Caroline's address.

6 Caroline sees that her order has arrived and outside. She goes and picks up her order and thanks and tips the delivery person.

7 Caroline then eats her dinner and continues to study with her friends.

USER STORYBOARD

CAROLINE G.

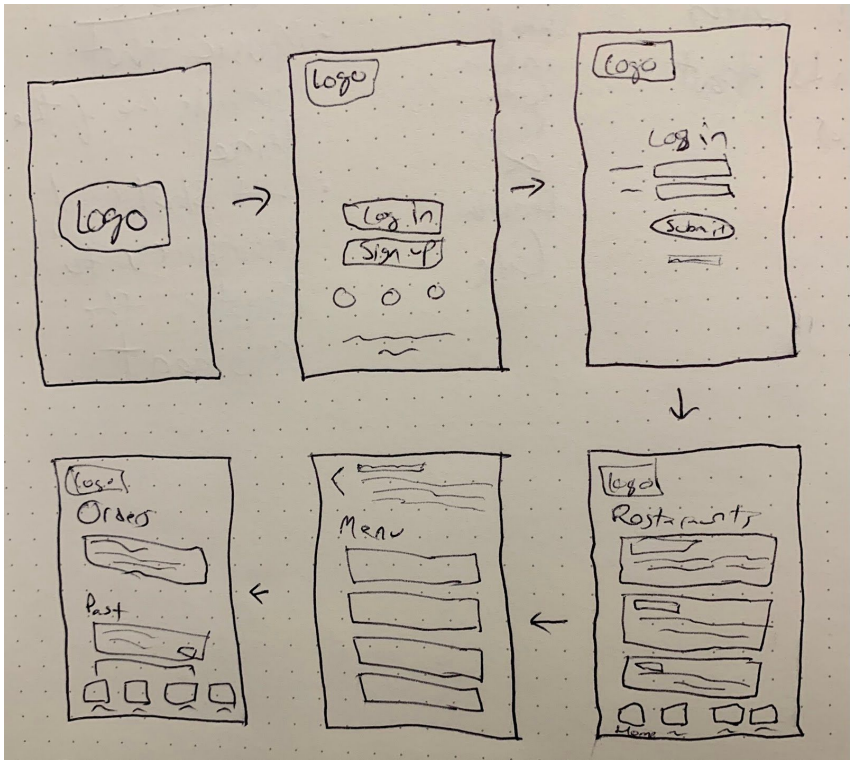
- Reflective Thinking:
    - During the storyboarding scenario process, I realized that there needs to be another ui/ux for the person who is delivering the food. This also puts the business model into question. Who will run the application? Is it a middle-man software that acts as a bridge between the customer and the delivery driver(ex. UBEREats) or will it depend on other models? I also then started to think about how this app could work in different countries and if this could be implemented in their higher education systems. Then I had decided that another ui/ux and developing business models would take too much time. So, I proceed to go with just the development of the customer facing app and assume that the rest of the process after the user orders is already in place. So, for this study, we will only focus on the customer facing designs and user experience.

Section 3 Prototype Process

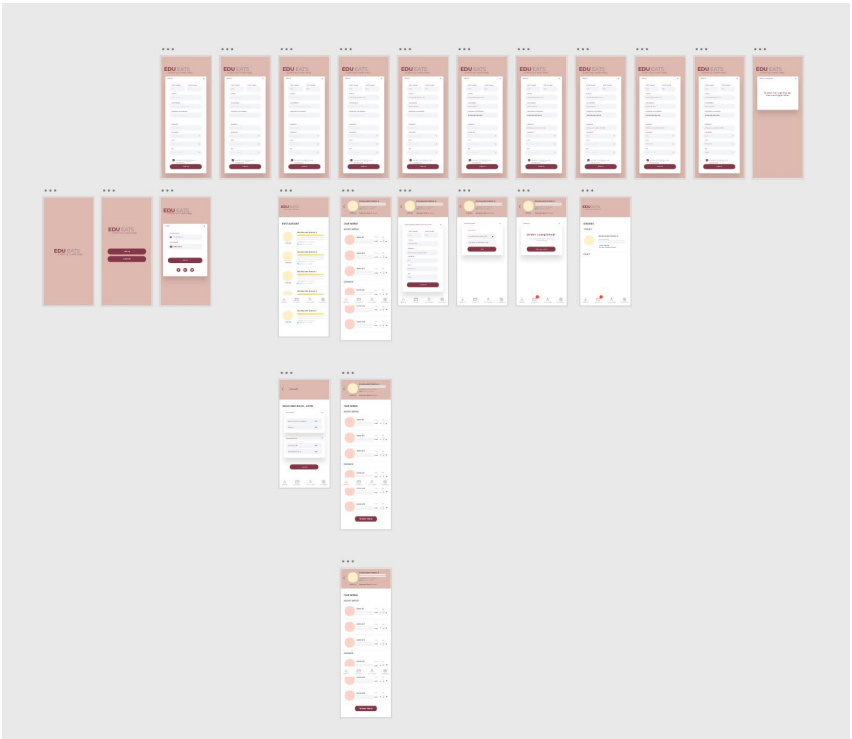
- Description of Prototype:
    - Paper prototype
    - Low fidelity digital prototype

- Application of Design Principles:
    - In the paper prototype, I sketched out a general user flow and alignments of different elements. This was a good basis for the low fidelity digital prototype. The low fidelity digital prototype was created with Adobe XD. The prototype was also set up to be interactive so that we can conduct usability testing.
    - Jakob's law: Users are likely to follow your design if it works the same way as other apps that they already know. I took this into consideration when designing. The ui/ux research of similar apps helped me craft a ui that wasn't out of the ordinary, so that the user can follow the design with ease. I used the typical menu bar at the bottom that is used in most food ordering apps. This gives the user a familiarity that helps the user follow the design with ease.
    - Law of similarity and proximity: Using cards to display the menu is a common theme across ordering apps. Cards utilize both similarity and proximity to help the user understand the different groups and how you can interact with them. The menu also uses these laws to be seen as a seperate group, apart from the menu and the header.
    - Miller's law: The average person can only keep 7 (plus or minus 2) items in their working memory. To comply, I made sure that the menu wasn't overwhelming and wasn't competing with the header or menu for attention.
    - Consistency: The design uses consistent colors and user flows to make sure that the user does not get confused or lost during a user flow.
    - Accessibility: To increase accessibility, I chose not to go with hamburger menus. I decided to have a dedicated menu at the bottom with clear labels telling the user what the button does. This helps simplify the user interface and decrease cognitive load.

Paper Prototype



Low fidelity digital prototype



[Click here](#) to view the prototype app via Adobe XD viewing link.

Section 4 Usability Tests

- Description:
    - There were 3 usability tests conducted on university students. One of them was from Wisconsin, another from Taiwan, and the last one from Little Rock. The average age was 21. The low fidelity prototype was made available to the participants via a link that they had to open from their mobile device. The participants then video called me and shared their mobile phone screen with me so that I could observe their interactions with the prototype.
    - Participants were given two tasks and they were timed to see how long it takes them to complete the task.
        - Task 1: Login to the app and get to the menu
        - Task 2: Order from Restaurant Name A, Item #1 once and complete the order.

- Results:

User	Age	Task #1 Time (sec)	Task #2 Time (sec)	Experience	Comments
1	21	4.89	21.56	User has an issue with the order button at the bottom of the screen. Overall, completed the task successfully.	“Smooth” “Consistent flow” “nice navigation”
2	22	9.54	28.00	User had issues with the quantity plus button. Had to click a couple of times until it worked. Said that the button should be bigger.	“Straight forward” “Qty button needs to be bigger”
3	20	4.49	20.11	User was concerned about the quantity plus and minus buttons. Overall, completed the task successfully.	“Qty box too small” “Qty plus minus button needs to be bigger”
Avg	21	6.31	23.22		

- Overall Assessment:
    - The participants were able to navigate the application with ease due to Jakob’s law. The only main issue was the size of the quantity box. The users had trouble adding or subtracting the quantity of an item because it was too small. They all recommended that I increase the size so that it's easier to hit with their thumbs. I also noticed how the users would instinctually scroll on the cards because of priming from other apps that they might’ve used. After the testing process, I wondered if the experience would be different and how different it would be if the language used was different (ex. Japanese).

- Results Report:
    - The biggest takeaway from the test was the fact that the app is easy to navigate and people seem to naturally navigate the app since it's similar to other delivery apps in the market. The quantity box in the menu will need to be updated with increased size of plus and minus buttons.
    - With the basic functionality of the application completed, now we can go on add more features and make it higher fidelity.
    - We need to do more usability tests on the updated app. More testing will let us know which features we need and which we don’t. Also a big goal will be to reduce the time it takes to complete the tasks.

Section 5 Visual Design

In this section describe your visual choices, corrections to your design based off of the previous step, changes you made off feedback and any testing you conducted with the cleaner more high fidelity look. Write up your reflective thoughts on the whole process for user experience and user interface design, what problems you had to solve and any constraints. Write about any improvement in skills or key takeaways.

- Description:
    - For visual design, I wanted to use elements that were commonplace in food ordering apps. During my research, I found that the card style format was the most common way to display categories of information effectively. I used that as a basis for my design. Also the menu almost always appeared on bottom. This is because we use phones with our thumbs and the easiest place for our thumbs to reach is the bottom of the screen. That is why I decided to follow through with the menu on the bottom instead of a hamburger menu on the top left as is seen in a lot of mobile web applications.
    - Typeface
        - A Sans-serif typeface was selected due to its high readability on mobile devices. I used Poppins font family for the digital prototype.
        - The typeface was used to highlight the hierarchy of different elements on the screen.
    - Colors
        - The colors would differ from university to university. The main color theme that I decided to use is monochromatic as this would work best with different universities and their brand colors. The primary color would be the main monochromatic color. In this case, I used the UALR maroon as my primary monochromatic color. There are also highlight colors used to identify hyperlinks (ex. Review count is highlighted in blue), and green/red circles to identify if a store is open. The menu also has its own highlighted color to indicate which icon is selected.

    - For the sake of simplicity for this low fidelity digital prototype, I didn't use images and just used placeholder shapes to signify that there's content there. An example of this would be the yellow rounded squares that I use in conjunction with the restaurant name.
    - During usability testing, the first user had issues with the order button, because it was being cut off due to spacing issues. I added more padding to the bottom and the order button looked normal afterwards.

- Reflective Thinking of Overall Process and Skills:
    - I learned to use animations in AdobeXD and how they could be used to create a better user experience. I first used the animation on the splash screen that the user sees when they open the app. The same auto animate function was applied to the rest of interactions on the app so that the transition between the screens was smooth. I also got more experience with the repeat feature, this made replicating the cards much more easy. If I were to do the design again, I would utilize the component and the repeat feature more because it significantly helps speed up the design process. Overall, this project helped with gaining more experience in the UI/UX design process and also get experience with Adobe XD.