# Creating A Better Concert

Jackson Hamm Project 2 Section 7376

# Research

## Observation

Concerts are a very popular event that is unique to the music industry. Thousands gather to listen to their favorite artists sing live, and watch the extravagant show that they put on for these events. Once concert that is put on every year at Indiana University is the Block Party. This concert marks the beginning of the year, and thousands of students gather for the performance.
When I was a Freshman, I attend the Block Party. Something I noticed very quickly was how crowded everyone was. You would get pushed and shoved in every direction, and it was extremely hard to make your way out of the crowd.
Concert typically last multiple hours. With all the dancing that goes on, what if someone needs water and can't get to it? Dehydration can set in very quickly. This happened to me, I was so far into the crowd there was no way I would be able to make it out and get water. This made the last 2 hours of the concert very unenjoyable. Could there be a way to make concerts safer and more enjoyable for everyone? That is what I wanted to find out.[1]

## To Recap

- There's lots of pushing in concerts
- It's hard to make your way out of the crowd
- Minimal access food and water
- Minimal Access to restrooms

## What current concerts look like

Currently, concerts look a lot like *figure 1*. I had the opportunity to attend a concert at the Ruoff Music Center in Noblesville, IN. Performing live was Wiz Khalifa, and Rae Sremmurd. Here, I saw the same things I saw at the block party. Lots of pushing and shoving, and an extremely difficult time getting out of the crowd. It had also rained recently, which made...

**Figure 1**
**An artist performing for a large crowd at a concert in Quebec City, Canada.**[3]

## What current concerts look like continued

...the ground slick and muddy. This caused many people to slip and fall, especially when being pushed by the rest of the crowd. This is an unsafe environment.[2]

## Interviews

To confirm if this was a problem exclusive to me, I conducted two different interviews to collect more information on the topic.
The first person I interviewed was my good friend from high school. He is a regular attendee at different concerts across the country. Huge concerts like Lollapalooza, Rolling Loud, and Coachella. I don't know many people who love concerts as much as he does. He will be referred to as participant 1. When asked what concerts he enjoys the most, he responded with rap because the crowds are huge and that is his favorite type of music. I then asked does he ever encounter problems at concerts. In response, he cited that it gets very hot in the crowds, you can't leave once you are in, and he gets shoved around a lot at the bigger concerts. To my surprise, he had almost the same concerns that I had encountered.[4] (Continue on next page.)

# Research

**Interviews continued**

When asked if he would want the current concert setup to change, he stated that he wouldn't because that is what makes the concert fun, it's part of the experience. Taking away the large crowds that form a sea of people would take away from what concerts are meant to be. To this, I asked what concerts are meant to be? He responded by stating that concerts are a lawless land where everyone can dance and celebrate together.

This interview was very interesting to me. On one hand, I confirmed the problems associated with concerts aren't exclusive to me. On the other, there are many who enjoy this aspect of concerts. Taking that away would be a disjustic to the large portion of concert goers that long for that type of environment. Is there a way that we could compromise? A way to keep that type of environment, but also provide an alternative solution to those that don't? This lead me to take a different approach to my second interview. [4]

**Possible Solutions**

How would I be able to keep a concert the concert environment described by participant 1 while also providing a solution for other concert goers? We know that we need an area for many people can congregate together. It also needs to be near the stage, because this is part of the experience. What if there was a large section at the front near the stage where people could gather together, and behind have a strip where people could still attend, but have easier access to things like restrooms and water. There would still be sections for people to gather, but they would be separated with fenced off sections that contain porta-potties, water stations, and maybe even a vending machine.

Another idea is to have small sections inside the crowd that would be considered a safe zone. Here, there would be a little kiosk where you could select different drink and snack options. There would be a pneumatic tube where capsules would carry the selected item underground in tubes. These little fenced in kiosks would be areas to take a break and replenish. They could be scattered across the entire crowd.

## Interview 2

In my second interview, I seeked to find feedback on my ideas. Participant 2, when asked if they are a regular concert goer, responded that they rarely attend concerts. When asked if fenced off sections with water stations and vending machines would be a good idea, he responded stating that if they were large enough to have a water station and vending machine, it would take away from the sightlines for people in the back. This was a good point I hadn't considered. Next, I asked him if the kiosks were a good idea. He preferred this idea, but stated that it would be expensive to implement at different venues across america. He also added that as long as they weren't too tall, they wouldn't be as distracting. This was valuable information that will help me when designing the concept. [5]

# Miro

## Affinity Diagram

To better understand the research I had done, I created an affinity diagram as seen in *Figure 6*. I laid out everything from the interviews I conducted and discovered some themes. The ‘concert experience’ category contains information about the concert setting and the things concert goers see. ‘Why they like concerts’ contains information about specific things that make concerts enjoyable. The ‘number of concerts they’ve attended’ category is made up of responses by the participants about how many concerts they go to. The ‘Difficulties’ category was very large and contained concerns about concerts. The ‘personal experiences’ category includes personal experiences that happened at concerts. ‘Social’ only had one response, that the person being interviewed likes to go to concerts by themselves. The last category is ‘Music Genre’ which includes what type of music the participants liked.

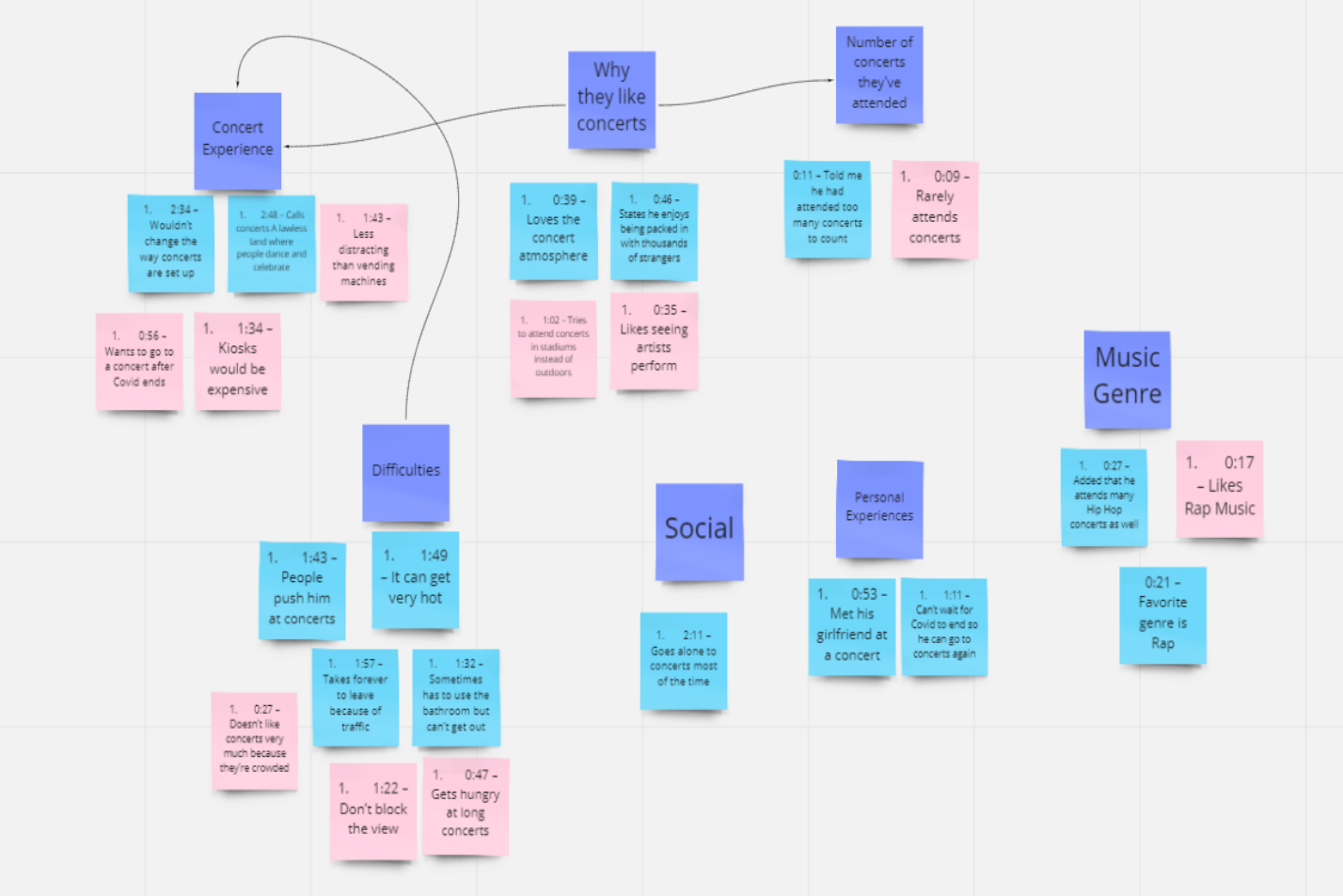



**Figure 6 – Miro Board**

## Summary of Findings

These interviews were very helpful. I learned that the participants share the same concerns I do about concerts. It was helpful to see some reasons why people like concerts because I don’t want to change the experience for those that currently like it. My goal is to enhance the concert experience, not create an entirely different one. It was a bit surprising to see how long the list of difficulties was with concerts, and there are some great reasons provided as to what is wrong with concerts in their current form. Pushing, getting out of the crowd, and it gets very hot are common concerns at concerts. What was probably the most useful advice was to not block the view. Blocking the view at a concert would defeat the whole purpose of going. Both participants enjoy rap music, which is the specific audience I am targeting with these changes. To my surprise, one of the participants likes going to concerts alone. I have never gone to a concert by myself before. I wouldn’t feel comfortable without someone close to me there with me. The personal experiences I didn’t care for much, they didn’t really help me with the goal of the project. Overall, both of these interviews were very useful for me in finding out more about the concerts. Putting them in an affinity diagram really helped me identify some key themes within the interviews, and how those are related to each other. It helped me conclude that at the end of the day, the concert experience is the most important aspect of a concert. It will be very important to not change the concert experience in a way that will subtract from what the current experience is at outdoor rap concerts. Part of that experience is being crammed in with a ton of people you don’t know, all there to see and experience the same thing. Enhancing that should be the goal, not changing it to something entirely different.

# Idea

## Kiosk

This is my design for the kiosk. It will very clearly be labeled, and it will be similar to a vending machine. It is only four feet tall, to ensure it doesn't block anyone's view. In the kiosk, there is a touch-screen where you can select what you want, and it will be dispensed below the screen. There will also be a small spot to insert a credit/debit card for payments. The kiosk also has 4 sides, so multiple people can use the same kiosk at the same time. It is pictured in figure 7.

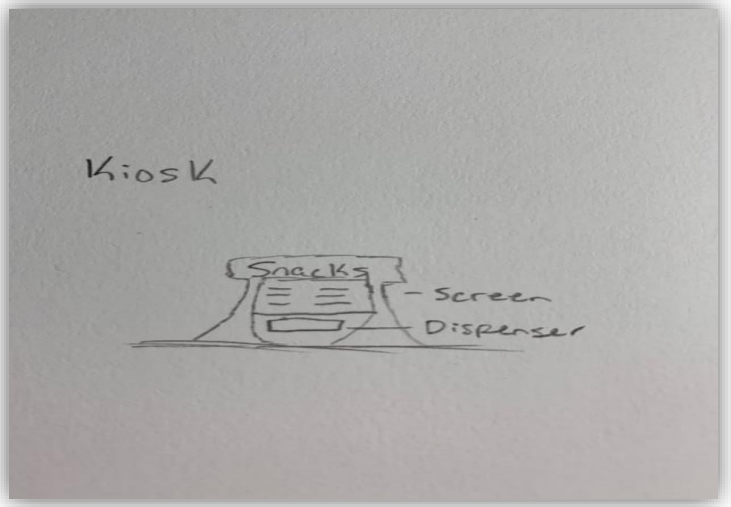



**Figure 7 – Kiosk Drawing**

## Implementation

Figure 8 shows how the kiosks would be implemented. There would be small fenced off squares within the crowd. This would contain a kiosk for attendees to use. They are spaced out within the crowd and try to cover as much area as possible per kiosk. The diagram shows the stage, where security is, where the crowd is, and where the kiosks would be located.

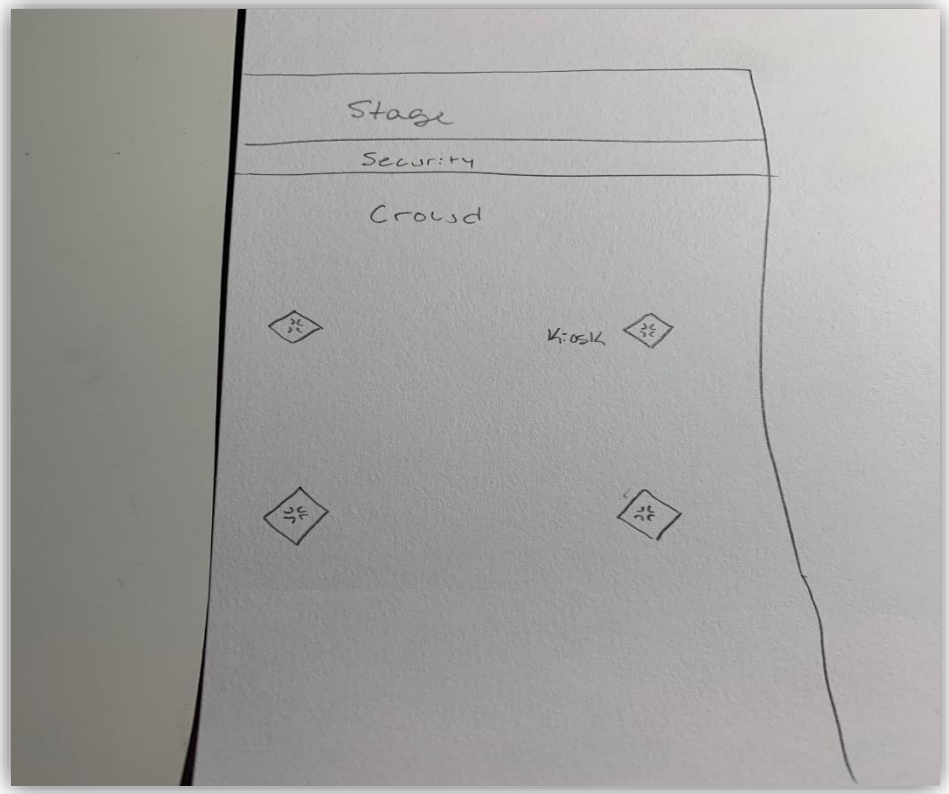



**Figure 8 – Implementation Drawing**

# Idea

## Drinks

In figure 9, guests will be able to select the drink that they want. It shows what drinks are available and the price for the drink. There is also a menu at the top, and the total in the bottom right. You can also check your cart by clicking in the bottom left.

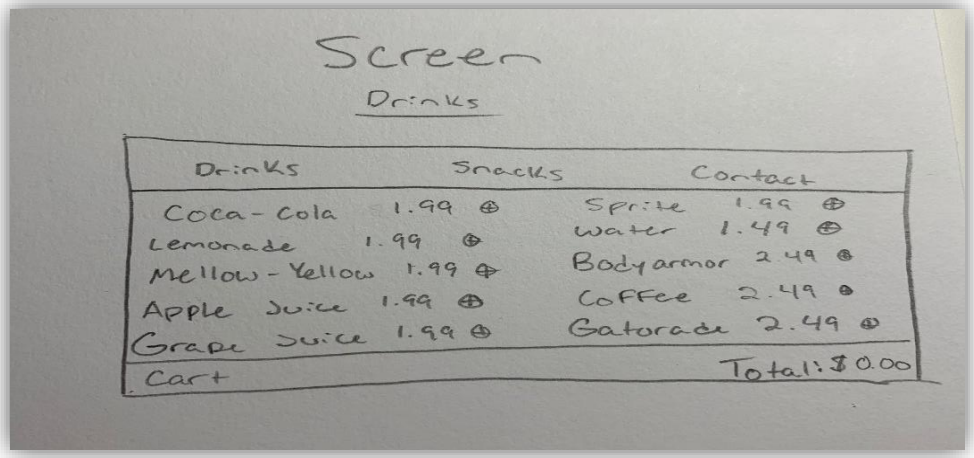



**Figure 9**

## Snacks

In figure 10, guests will be able to select the snacks that they want. It shows what snacks are available and the price for each snack. To select the snack you want, just tap on the same and it will be added to your cart.

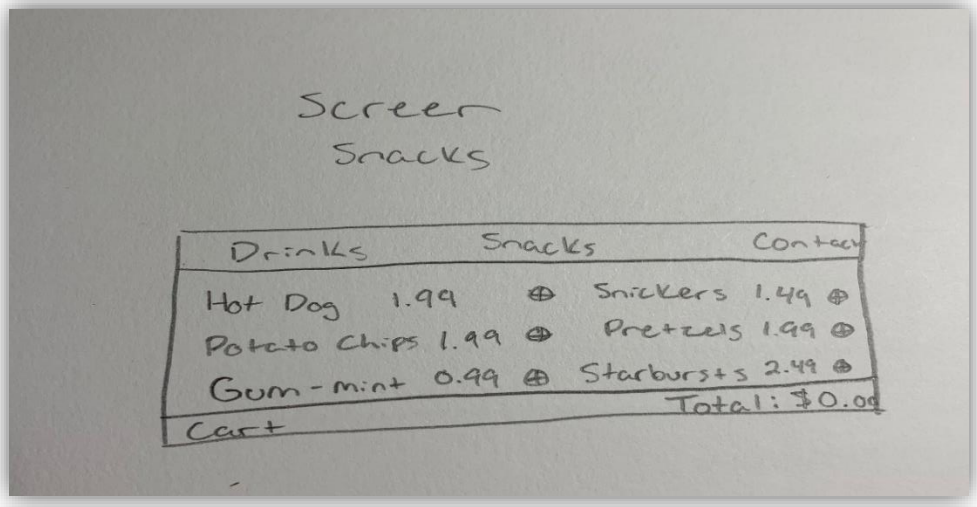



**Figure 10**

## Contact

In figure 11, guests will be able to contact an attendant if they need help with something. They can call an attendant, chat with one through the kiosk, or rate the kiosk and make suggestions.

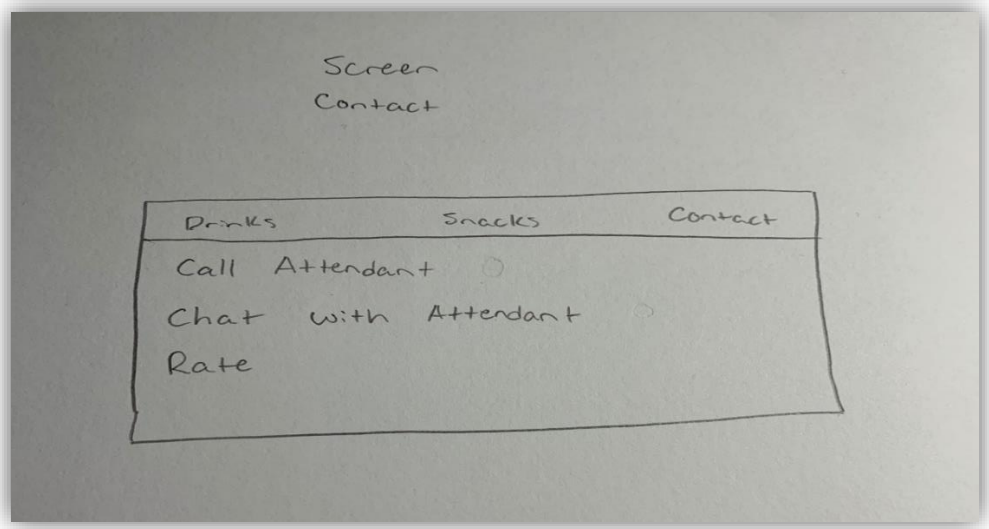



**Figure 11**

# Inspection

## Low Fidelity XD Prototypes

To ensure that I was getting a complete sense of what I envision the screen to look like, I created a very low fidelity prototype in XD, as seen in Figure 12, 13, and 14.

### Task

You want to add one food item and one drink item to your cart. Read the total, then check out.

### Document Task Steps

1. Read the options under the 'Food' or 'Drinks' page.
2. The user taps on the image of the item they want to add to their cart.
3. The user taps on the word 'Cart' at the bottom left of the screen to see what items are in their cart.
4. The user reads the total of their items in the bottom right of the page.
5. The user taps on the 'Check Out' button on the bottom left of the page.

## Inspection Method

For my Inspection Method, I chose a Cognitive Walkthrough. This will help me the most because I can identify what basic tasks are a challenge due to the interface and identify points that slow the user down. By identifying these problems, I can make an app that is functional, usable, and intuitive. The typical user using this app would be 20 to 50 years old and like to go to concerts.

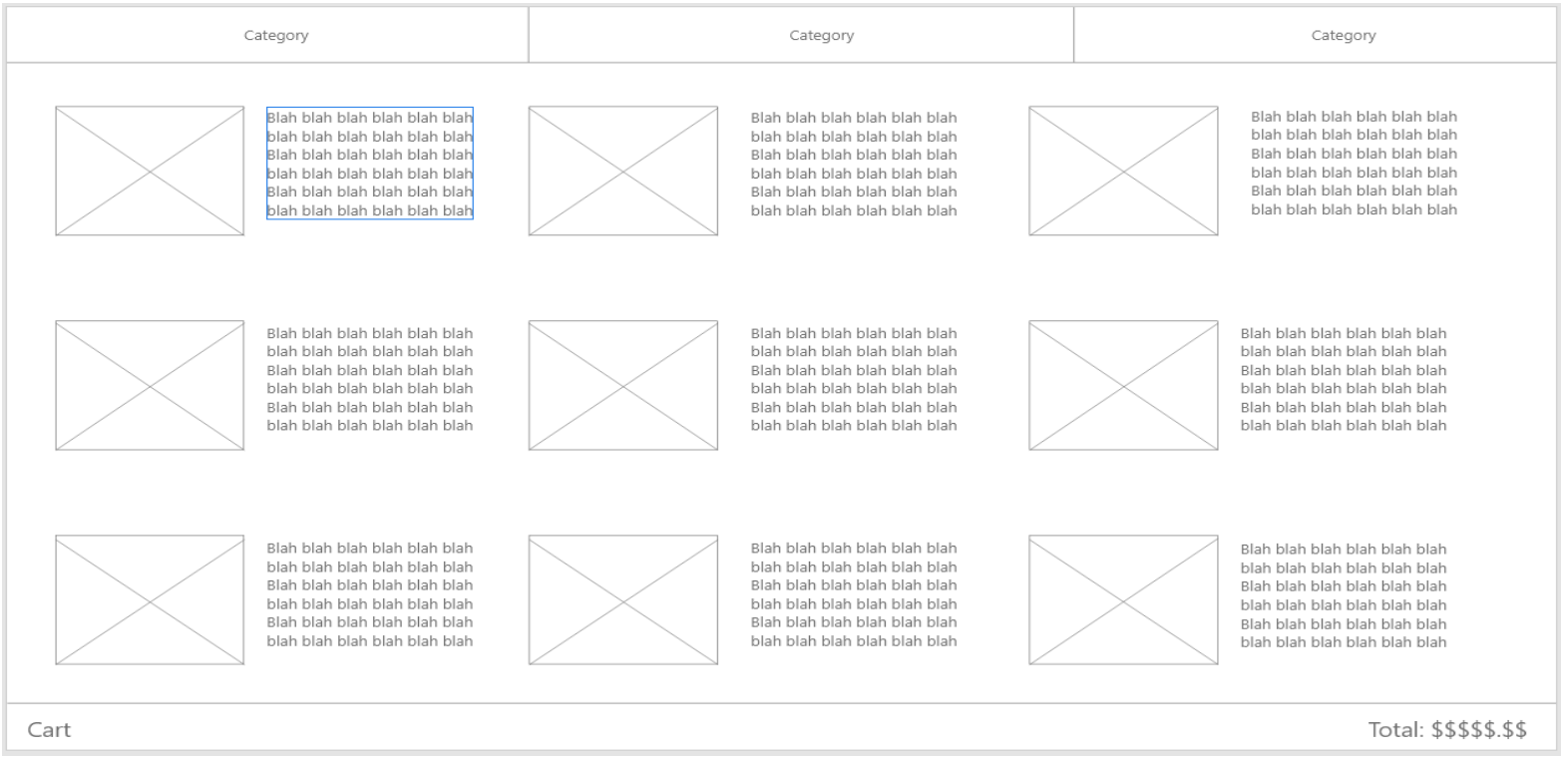



**Figure 12 – Low Fidelity Screen #1**

## Figure 12

Figure 12 has some categories at the top, pictures with text next to it, and the total at the bottom. This helps me see more than what I was able to draw by hand on paper. It also makes it look a bit neater. This page would represent what you would see when selecting the food or drink that you want.

# Inspection

## Figure 13

Figure 13 has the same categories at the top to switch pages. This page is for contact. You can call an attendant to come to the kiosk, chat with an attendant through a messaging system, or rate the kiosk and provide feedback. You wouldn't need to come to this page to complete the task for the cognitive walkthrough. It does raise the same concern as figure 12 though. Tapping on the image isn't the best method, there should be a button somewhere that is easy to read and very visible. There is also a lot of wasted space on this page.

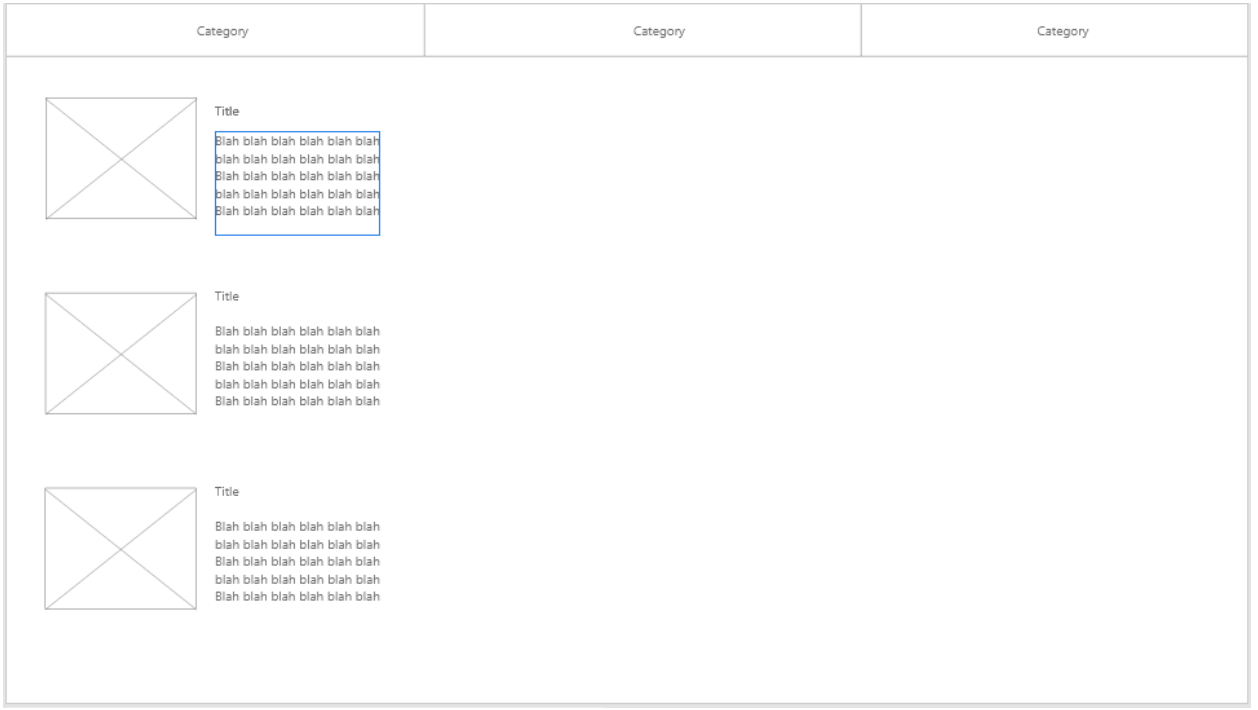



**Figure 13 – Low Fidelity Screen #2**

## Figure 14

Figure 14 again has the same categories at the top to switch pages. This is the page to see your cart. There is the title which would be 'Cart' and 'Price' to tell the user these are the prices for each item. There is a picture of the item, the title of the item, and a description. At the bottom, there is a check out button and text to tell you your total.

**Figure 14 – Low Fidelity Screen #3**

# Inspection

## Low Fidelity Prototype Reflection

Creating these low fidelity prototypes and using a cognitive walkthrough helped me see some flaws in my original design and how to fix them. If I had jumped straight to a high fidelity prototype, I would have wasted a lot of time and even possibly glanced over the issues that I found through this process. I also hadn't considered the entire target audience for this project. Thinking about people the same age as me and only focusing on them is not a good way to create something. You need to evaluate everything, that includes everyone who would use your product. Designing a user interface with this in mind, it needs to be easy to use and self-explanatory. It is always the design's fault, not the users. Finding these problem areas early in the design process can save a lot of time and money.

## Iterating on Wireframe

### Figure 15

Figure 15 is an iteration of Figure 12. It includes a bit more detail and color, as well as some new features. There are now more categories at the top of the page, and the one you are currently on is bolded. It also now displays the price, a description of the item, and the item name along with the picture. Below the picture, there is a button to add that item to your cart. Test was also added to let the user know they can scroll down to see more options.

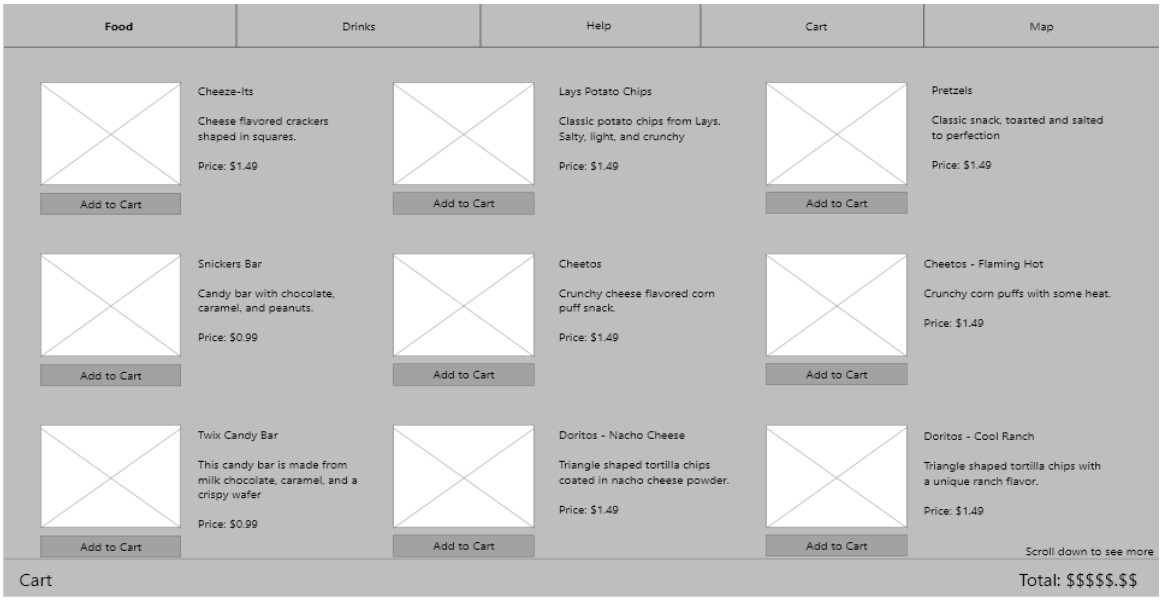



**Figure 15 – Low Fidelity Screen Iteration #1**

### Figure 16

Figure 16 is an iteration of Figure 13. It keeps the same general formatting seen in Figure 15. One of the most glaring problems is the large amount of unused space on the right of the screen. To fix this issue, there will now be a Live Chat box that will appear on this side of the screen if the user clicks on the 'Open Live Chat' button. A keyboard will also appear allowing the user to type in real time with an attendant.

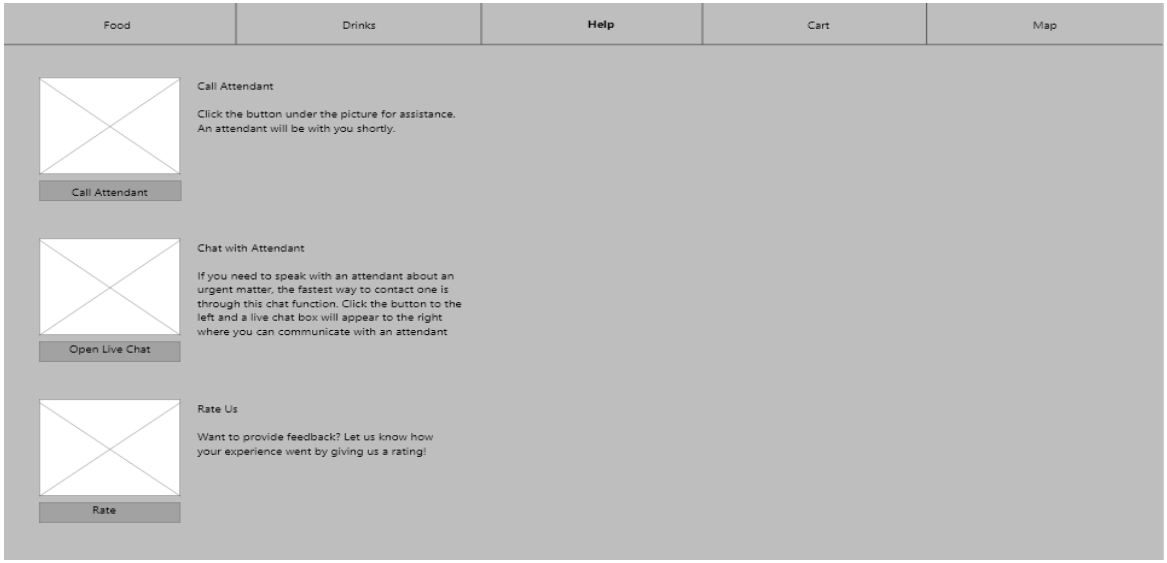



**Figure 16 – Low Fidelity Screen Iteration #2**

# Inspection

## Iterating on Wireframe

### Figure 17

Figure 17 is an iteration of Figure 14. It has some similarities, but there were a couple new features added. Some color was added to make it more visually appealing, as well as to help distinguish the titles ‘Cart’ and ‘Price’ from the menu at the top of the screen. There was also a ‘Remove From Cart’ button added that will remove the item from your cart.

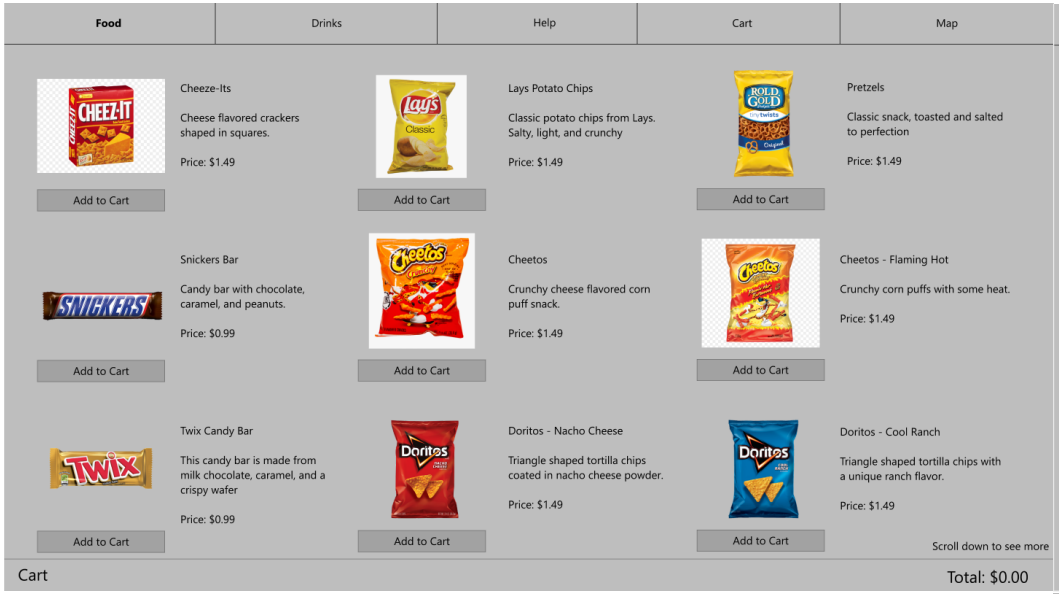
**Figure 17 – Low Fidelity Screen Iteration #3**

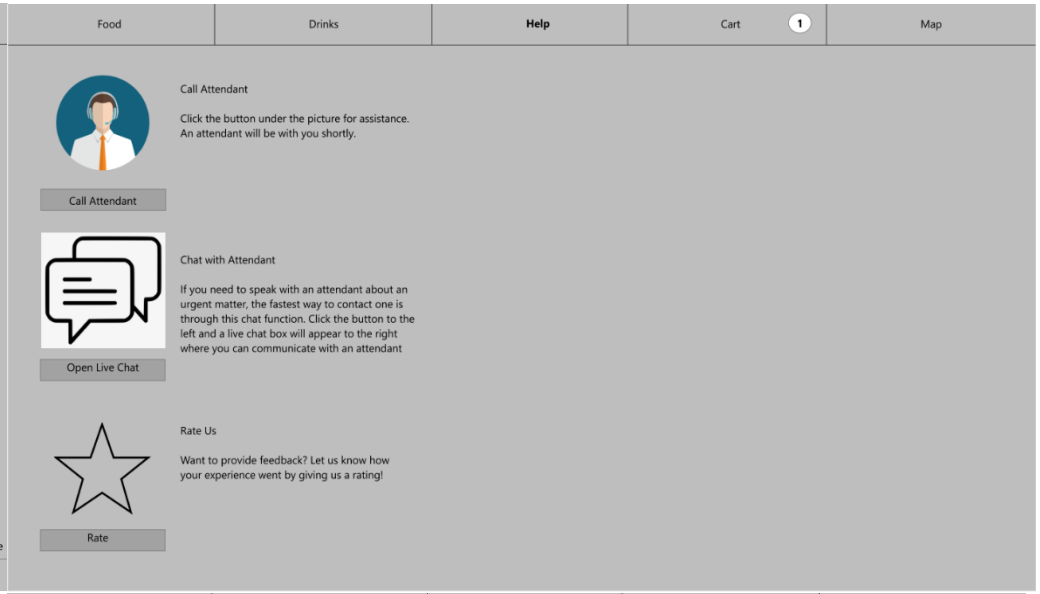
# High-Fidelity Prototype

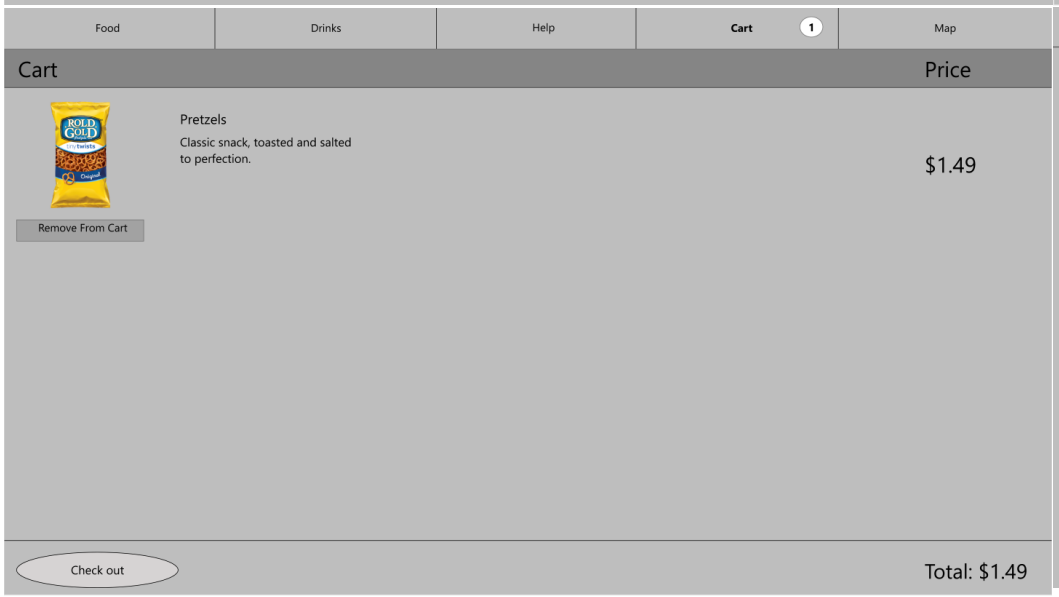
## Link to Prototype

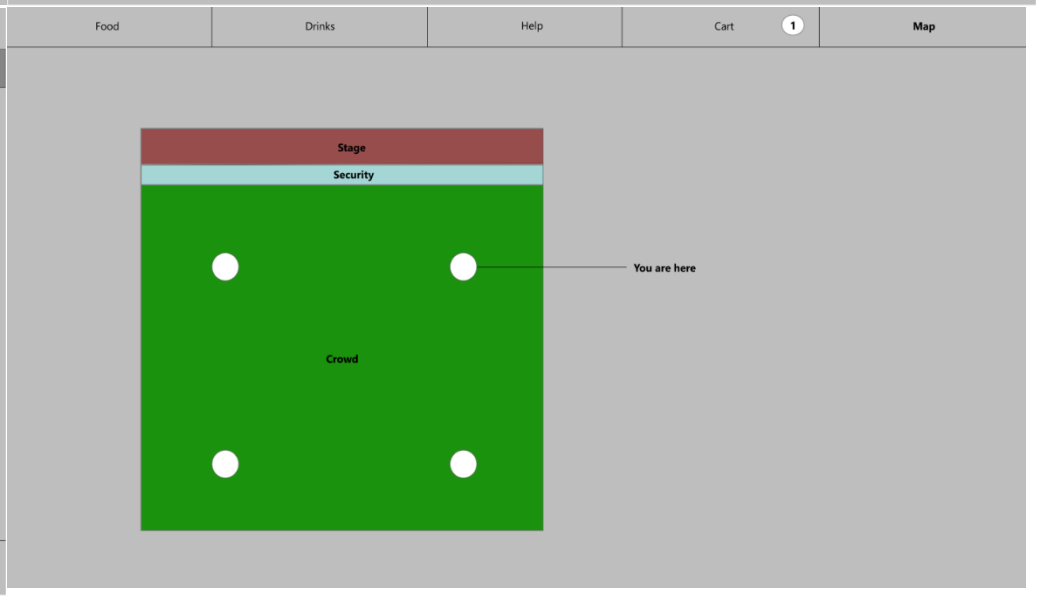
A link to my high-fidelity prototype can be found here: https://xd.adobe.com/view/4794c846-b650-4d1c-94a2-3f95696e7327-12c7/

## Usability Test



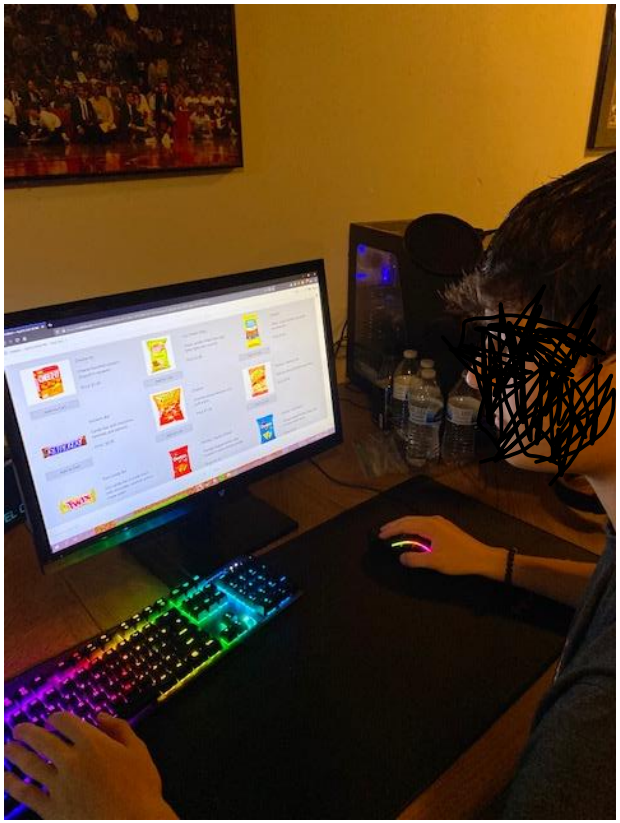

These are some pictures from my High-Fidelity Prototype. This will be the prototype I am testing.

# High-Fidelity Prototype

## Usability Test

### Process

The aim of this study was to collect more information on how my prototype performs and what problems need addressed. I sent out some texts to people I know asking them if they'd be willing to be a participant in a study I was conducting. Once I got three people to agree, I had them take the test. Each test took about 5 minutes to complete. I did not help the participants in any way to ensure that the work they were doing would help me improve the product.



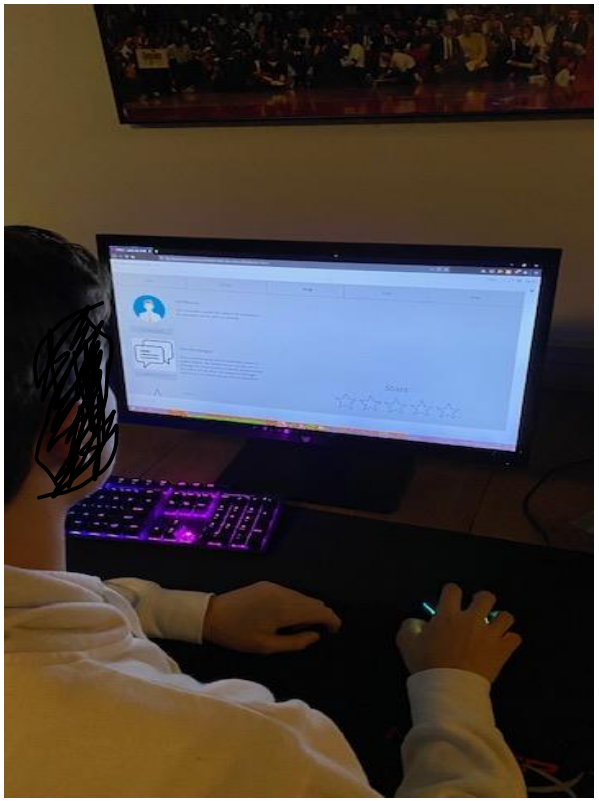


**Figure 19 – Test 2**

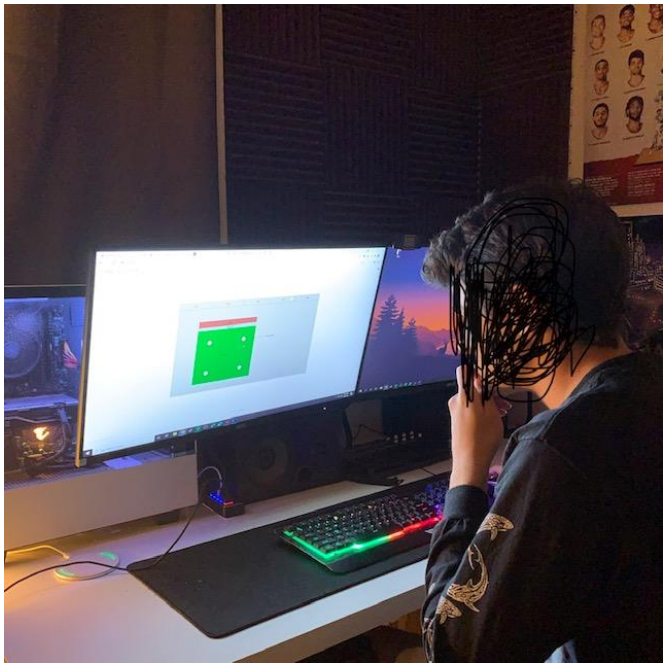


**Figure 20 – Test 3**

### What I Learned

These usability tests didn't help me make many changes, but it did help me ensure that my prototype is easy to use and functional. The one suggestion for a change that I received from these tests was to add a column showing the quantity for each item at checkout. This way, someone could order two bags of pretzels instead of one. I also learned that the menu I created at the top of the page is effective for navigating through the different pages.

### Envision Cards

For my envision activity, I chose the Reappropriation card. After working through the exercise, there are a couple ways this system could be reappropriated for a different community. This system could be used at sporting events, where fans wouldn't have to go all the way to concession stands and instead get their snacks closer with less wait. The system could also be used at public parks. There typically aren't many options for food at parks, and if you need help there's no way to call anyone. This system would solve that problem.

# Works Cited

## Primary Sources


| | |
|---|---|
| Source 1 | Personal Block Party Experience and Observation<br>Jackson Hamm on August 13th, 2019 |
| Source 2 | Personal Ruoff Music Center Experience and Observation<br>Jackson Hamm on August 26th, 2019 |
| Source 4 | Participant 1 Interview<br>Interviewed by Jackson Hamm on March 10th, 2021 |
| Source 5 | Participant 2 Interview<br>Interviewed by Jackson Hamm on March 10th, 2021 |
| Source 6 | Image of the Miro board I created<br>https://miro.com/app/board/o9J_lMi6Ijo=/ |
| Source 7 | Kiosk Drawing |
| Source 8 | Drawing of implementation at venue. |
| Source 9 | Screen on the Kiosk for the “Drinks” menu. |
| Source 10 | Screen on the Kiosk for the “Snacks” menu. |
| Source 11 | Screen on the Kiosk under the “Contact” tab. |
| Source 12 | Low Fidelity Prototype #1 to help with Inspection. |
| Source 13 | Low Fidelity Prototype #2 to help with Inspection. |
| Source 14 | Low Fidelity Prototype #3 to help with Inspection. |
| Source 15 | Low Fidelity Prototype Iteration #1 |
| Source 16 | Low Fidelity Prototype Iteration #2 |
| Source 17 | Low Fidelity Prototype Iteration #3 |
| Source 18 | Usability Test 1 |
| Source 19 | Usability Test 2 |
| Source 20 | Usability Test 3 |

# Works Cited

## Secondary Sources


Source 3 Image of concert which took place in Quebec City, Canada
https://nowtoronto.com/music/concert-reviews/festival-dete-quebec-feq-weeknd-neil-young

Source 21 Image of Star - https://en.wikipedia.org/wiki/File:Five-pointed_star.svg

Source 22 Image of Coca-Cola - https://pngimg.com/image/4189

Source 23 Image of Cherry Coca-Cola - https://coca-cola.fandom.com/wiki/Coca-Cola_Cherry

Source 24 Image of Sprite - https://pngimg.com/image/98774

Source 25 Image of Pepsi - https://pngimg.com/image/4202

Source 26 Image of Dr. Pepper - https://www.drpepper.com/en/products/drpepper?bvstate=pg:2/ct:r

Source 27 Image of Root Beer - https://www.ithacabeer.com/our-sodas

Source 28 Image of Fiji Water - https://www.fijiwater.com/products/fiji-water-330ml-case-of-36

Source 29 Image of Generic Water - https://www.nicepng.com/ourpic/u2a9o0o0r5u2y3q8_small-bottle-of-mineral-water-png-clipart-bottled/

Source 30 Image of Gatorade - https://www.pngjoy.com/preview/e7l2b8l9t3c7e2_gatorade-20-hd-png-download/

Source 31 Image of Attendant - https://www.clipartkey.com/view/TwxxhT_clip-art-techflourish-collections-jpg-black-customer-service/

Source 32 Image for Chat Box - https://www.pngkey.com/pngs/chat-box/

Source 33 Image for Cheeze-It box - https://www.pngfind.com/mpng/TRoRRow_cheez-it-cheez-it-original-baked-snack-crackers/

Source 34 Image for Lays Potato Chips - https://www.clipartkey.com/view/bmRbww_lays-potato-chips-lays-potato-chips-png/

Source 35 Image for Snickers Candy Bar - https://pngimg.com/image/13929

Source 36 Image for Cheetos - https://www.clipartkey.com/view/iRJxmoi_transparent-hot-cheetos-png-cheetos-crunchy-1-oz/

Source 37 Image for Flaming Hot Cheetos - https://www.vhv.rs/viewpic/homRRRJ_hd-hot-cheetos-png-flamin-hot-cheetos-transparent/

Source 38 Image for Nacho Cheese Doritos - http://pngimg.com/image/73187

Source 39 Image for Cool Ranch Doritos - https://www.stickpng.com/img/food/doritos/doritos-cool-ranch

Source 40 Image for Pretzels - https://www.fritolay.com/products/rold-gold-original-tiny-twists-pretzels

# Appendices

**Task Step 1:** Will the user know what to do? Yes, the user will clearly be able to see the description of the item, but there needs to be a title added. Will the user see how to do it? Yes, it is in the center of the screen and easy to read. Will users understand from feedback whether the action was correct or not? Yes, if they can read it then they've accomplished the first task.

**Task Step 2**: Will the user know what to do? In order for the user to add an item from the menu to their cart, they need to tap the picture of the item they want. This could be complicated to understand, so one change would be adding a button that says 'add to cart'. It would also be easier to add a category to the top of the screen to see your cart. Will the user see how to do it? Again, there isn't an 'add to cart' button, so the user may be confused. Will users understand from feedback whether the action was correct or not? Yes, but only if they click on the cart page to see what they've selected. It would be best to add a number next to the cart to tell the user how many items are in their cart.

**Task Step 3:** Will the user know what to do? Probably not, it needs to be clearer how to access your cart. Will the user see how to do it? Again, probably not, it is in a hidden spot. Will the users understand from feedback whether the action was correct or not? Yes, because it will take them to their cart.

**Task Step 4:** Will the user know what to do? Yes, the total is clearly labeled at the bottom right of the screen. Will the user see how to do it? Yes, it is labeled clearly and visible. Will users understand from feedback whether the action was correct or not? Yes, it will be the amount they pay for their items.

**Task Step 5:** Will the user know what to do? Yes, the 'Check Out' button is easy to understand. Will the user see how to do it? Yes, it is visible and large. Will users understand from feedback whether the action was correct or not? Yes, it will take them to the check out

**Protocol: "**Hello, today I will be interviewing you to find problems in this prototype and get a better understanding of how users interact with the interface. Today, you will be asked to accomplish a series of tasks that I give you. I cannot help you in any way during this test. Remember, we are testing the product, not you. If you get frustrated and can't figure a task out, it's the designs fault, not yours. If you feel uncomfortable at any time, you are free to leave and end the test. Please speak your thoughts as you go through this test. Say what you are doing and what you are thinking aloud. This may seem a little strange at first, but it is a huge help for me to understand what you are thinking. During this test, you will be kept anonymous. Do you have any questions before we start? Okay, the first task is to add Pretzels to your cart. Can you tell me what your current total is? Great, next I want you to remove the pretzels from the cart. Finally, can you open up a chat with an assistant? Great job, the test is over. If you have any questions or thoughts, please share them now. Thank you for participating.

| Participant 1 | Participant 2 | Participant 3 | Notes |
|---|---|---|---|
| 0:00 – Study Starts | 0:00 – Study Starts | 0:00 – Study Starts | Users had trouble at first finding where to get the chat box open. Would have been clearer if I told them to navigate to the Help page first. |
| 1:06 – First task given | 1:56 – First task given | 2:09 – First task given | |
| 1:16 – Task 1 Complete | 2:06 – Task 1 Complete | 2:21 – Task 1 Complete | |
| 1:18 – Second task given | 2:16 – Second task given | 2:26 – Second task given | Layout is generally easy to use |
| 1:23 – Task 2 Complete | 2:23 – Task 2 Complete | 2:40 – Task 2 Complete | |
| 1:27 – Task 3 given. | 2:29 – Task 3 given. | 2:45 – Task 3 given. | |
| 1:43 – Task 3 Complete | 2:53 – Task 3 Complete | 3:21 – Task 3 Complete | |
| 1:49 – Task 4 Given | 3:01 – Task 4 Given | 3:29 – Task 4 Given | |
| 2:17 – Task 4 Complete | 3:39 – Task 4 Complete | 4:05 – Task 4 Complete | |