

SMAD 317

Final Report

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## Executive Summary

For our semester-long project, we worked on an app called TradeWear. TradeWear is a clothing exchange app targeting college students with interests of sustainability and finding cheaper options around their college campus. To professionalize TradeWear, we conducted user research, interviews, and built prototypes. As mentioned above, our target audience consists of college students within an age range from 18-21+. According to our research, the app will be used regularly by college students and small businesses. Our target audience seem to be more susceptible to purchasing and reselling items and are more likely to be satisfied with purchasing second-hand clothing due to the increase of sustainable shopping among college students. Furthermore, TradeWear will give platforms to small businesses in college as well. Our interviewees stated that they rarely see advertisements or Instagram posts of small businesses unless the students themselves look for them first. Therefore, providing a platform to small businesses will increase their sales and recognition. In this final report, there will be prototypes that we have worked on, as well as a final prototype that is revised after feedback from potential users.

## Problem Statement

College students need a platform where they can buy, sell, and trade clothes with individuals within their communities because they have a surplus of clothes that they do not wear and would like the option of exchanging their clothing with other students.

The **problem** is that students seem to not have any platforms where they can interact, sell or purchase products concentrated within their local community. Those who want to sell their clothes or have a small business, have a hard time getting the word out there, or do not know of any platforms to use to reach their community. If students need to get something fast, it is most likely that they will purchase from websites that they are familiar with. However, for many, being in college leads to a shortage of money, part-time jobs, and classes. A platform where students can sell used items and buy products they need for cheap would potentially lead to cheaper prices, and fast free shipping.

## **Related Work**

### **1. Rehash**

<https://www.rehashclothes.com/>

Rehash identifies the problem of people having a difficult time finding a website or app to exchange clothes. The system identifies the problem by designing a website that helps users easily trade clothes, and help users connect with others who trade their clothes on the site. The website is very visual, has big images of each object that can be traded. Has the option for a quick view of what you might want, showing the condition size, description, and the option to add comments, these are very good design principles. Some poor design principles are the layout of the website, the toolbar is on the left side not at the top, leading to a lot of room being used up. This system is trying to identify with the optimizing design problem, by having an easy way to communicate with others and trade clothes easily. As a group, we will attempt to have our system to look clean, easy to look at layouts. We will also attempt to utilize this system's way to communicate with others using the app.

### **2. Poshmark**

<https://poshmark.com/>

Poshmark is a website and app that allows its users to connect with hundreds of people who have the same style as well as sell your clothes and connect with friends and family to trade or exchange clothes. Poshmark is trying to solve the design problem of connecting, connecting users who use Poshmark to sell, trade, or contemplate new styles. This website is very organized, some good design principles include, a search bar at the top where if you are looking for a specific object you can easily find it. The website also has a whole list to help you narrow down what you want if you are overwhelmed. There are some poor design points as well, The most searched this week suggestions are a little confusing, they could be more precise. An example is one of the suggested searches just says NFL, with this you have no idea what you will be getting. Another poor design is that they sell more than clothes, but the website only really shows/advertises that it's for trading, selling clothes. As a group, we will try to have a system that is easy to trade, sell, and buy only clothes.

### **3. Vinted**

<https://www.vinted.com/>

Vinted addresses the problem of not having a lot of websites or apps that people can exchange or sell clothes, and also communicate with the people who are also using a specific app or website. This system is trying to identify two different design problems, connecting and optimizing. They are optimizing the selling and exchanging of clothes, and trying to connect their users during the selling process. The good points of this system are that it is organized, not cluttered with a lot of things on one page, very clean looking. You can press on the person who is selling an item you like and see their whole profile, all the clothes they are selling, and a blurb about how they use Vinted. You can communicate with who you are buying from your who you are selling to, however, that is it. You cannot seem to make groups of people or communicate with people who live around you. As a group, we are going to try to have an area where users can search the area around them and be able to communicate with other users.

#### **4. Tradesy**

<https://www.tradesy.com/>

This system addresses the problem of selling and buying stylish, high-end clothes in an easy and fast way. This system interface is very clean-cut, using neutral colors, stylish photographs of the products, and classy typography. The downside to this website is that there are a lot of pop-up ads. The downside of this system isn't necessarily a principle of design, but this is only for high-end shopping, it is very expensive. This system also has the downside of not people able to connect with other users. This system is trying to identify the design problem of optimization. Trying to help people sell and buy clothes in an easy way, without leaving the house. Our group will try to utilize what this app is trying to do with its clean-cut, very neutral interface. We will also try to have the opportunity for users to communicate with each other and have them exchange, sell, and buy things in any price range.

#### **5. Depop**

<https://www.depop.com/>

This system is trying to address the problem of selling and buying clothes online without leaving the inside of your home. This system is trying to identify the design problem of optimizing everyday things to be easier and more efficient. This system is trying to

optimize the everyday shopping experience. This system has a lot of good design elements, it is clean-cut, very informational about what they do on each page, telling who users their interface what they do in an understandable way. The photographs of each clothing subject look very professional. The poor design principles that this app has is that the navigation bar is at the bottom of the website, there is also no “sell” page on the navigation bar you have to scroll halfway down the “home” page to see it. There is also no way to connect with the users on the website unless it's from your email. As a group, we will try to optimize exchanging clothes and communicating with others who use the app. We will try to incorporate a way where people can search their community to have an easier way to exchange, sell, and buy clothes.

## **Design Process**

### **User Research**

For this project, the groups of users will include JMU or college students, small businesses, and the Harrisonburg community. The app itself will be mainly used by college students and small businesses, and the system will allow every single user to have a platform on the app. The Harrisonburg community may not be entirely using this system, but because the app itself concentrates its algorithm locally, there is a good chance the Harrisonburg community will be engaging with the app.

JMU or college students are in the age group of 18-21+. They seem to be more susceptible to purchasing and reselling products and are most likely to be more satisfied with purchasing second-hand products. College students are more conscious when it comes to sustainable shopping, and most of them are willing to support small businesses and fellow students.

Small businesses in Harrisonburg are mostly family-oriented, and lack platforms to promote their products. College students rarely come across their advertisements or Instagram posts unless we search for them. Therefore, providing platforms where a lot of college students are active will increase their sales and recognition. Harrisonburg community using the app will most likely consist of highschool students who are also interested in enjoying the app.

We interviewed our roommates for this user research because JMU students are one of the main user groups that we are targeting as our audience. Our method of these interviews was in person, as we used notes to write down their answers to our questions.

## Persona



### PROFILE

Sharee has taken interest in thrifting and purchasing second-hand clothing recently.

She is a full-time student (senior) at James Madison University, and is graduating this school year as a health science and SMAD major.

She loves finding vintage clothing at thrift stores and selling her clothes that she no longer wears.

### TECHNICAL INFORMATION

- Internet use: Yes
- Computer user: Yes
- Cable TV: No
- Home Landline: No
- Have used Depop and Mercari (online thrifting/reselling apps)

# SHAREE FORBES

Primary Motivation to acquire the app:

I want to be able to sell clothing that I no longer wear and also purchase items from other sellers in the area.

### PERSONAL INFORMATION

**Age: 21.5 years**

**School year: 2021**

**Lives: In Harrisonburg, VA**

**Schooling: Health Sciences and SMAD major at James Madison University**

**She shops online a decent amount**

### EDUCATION

**James Madison University**

May 2021

### SHAREE'S GOALS WITH THE APP

- Would use the app to purchase second-hand clothing
- Would like to sell her clothing that she no longer wears
- Is very interested in supporting small businesses in the area
- Wants to practice sustainable shopping and avoiding fast fashion
- Looking for a great experience with the app
- Wants to see small businesses to support on the app
- Wants to see the review feature on the app as well as notification feature that lets you know when your favorite sellers post an item

Primary persona: represents 40% of survey respondents who are interested in the app



## PROFILE

As a college student, Sophie wants to be able to find cheap and clean clothing on the app.

She does not shop a lot but would love to explore what the JMU community has to offer.

Usually does not like messy layouts of websites.

Overall looks for cheaper options and would love to shop more environmental-friendly.

## TECHNICAL INFORMATION

- Internet use: Yes
- Computer user: Yes
- Cable TV: No
- Home Landline: No
- Usually shops in-person, but would love to start shopping online more

# SOPHIE WILLIS

Primary Motivation to acquire the app:

I want to be able to see if there are any cheaper options with the clothing I am looking for.

Skills:

- Organized
- Family-oriented
- Time management
- Critical thinking
- Planning and coordination
- Ability to work under pressure

## PERSONAL INFORMATION

**Age:** 20 years

**School year:** 2022

**Lives:** In Harrisonburg, VA

**Schooling:** Health Sciences major at James Madison University

**She usually shops once every six months, and in stores.**

**She is ultimately looking for affordable options if she were to shop online.**

## EDUCATION

**James Madison University**

May 2022

## SOPHIE'S GOALS WITH THE APP

- Would use the app to buy cheaper clothing
- Wants to feel comfortable with purchasing second-hand clothing.
- She wants to start shopping more environment-friendly and hopes for our community to come together and help the environment.

Secondary persona: represents 40% of survey respondents who are interested in the app





## PROFILE

Since Mallory is not really into fashion, she would use the app to sell clothing rather than to buy.

As a plus size person, it is pretty difficult to find clothing that is her size.

She is interested in buying clothes in a more sustainable way.

## TECHNICAL INFORMATION

- Internet use: Yes
- Computer user: Yes
- Cable TV: No
- Home Landline: No
- Never used exchange clothing apps
- She is worried about the app taking up storage on her phone

# MALLORY KUNKLER

Primary Motivation to acquire the app:  
I want to sell clothes that I don't wear anymore rather than to shop.

Skills:

- Time management
- Attention to detail
- Communication skills
- Doesn't procrastinate

## PERSONAL INFORMATION

**Age: 20 years**

**School year: 2022**

**Lives: In Harrisonburg, VA**

**Schooling: Physiology major at James Madison University**

**She usually shops once every six months, and in stores.**

**She is ultimately looking for affordable options if she were to shop online.**

## EDUCATION

**James Madison University**

May 2022

## SOPHIE'S GOALS WITH THE APP

- Would use the app to buy cheaper clothing, and more selections with sizes.
- She wants to buy clothing in a sustainable way, but the app would have to have a good amount of selection of larger sizes.
- Wants to see small businesses in the area on the app, since she does not know of any right now.

Tertiary persona: represents 20% of survey respondents who are interested in the app

## Scenarios

Sharee Forbes is a 22 year old senior at James Madison University and would like an easy way to buy and sell clothes with the people in her community. Sharee is great at managing her budget, it is easy for her to make friends, and has recently been interested in second-hand shopping.

However, throughout the uncertainties of the global pandemic, Sharee is unsure of the best way to purchase clothes, that one is her style and two know the clothes are in good condition. She understands that the pandemic probably won't be over anytime soon and would like to have as little contact with heavily populated areas until it is safer. Sharee would like to focus more on second-hand shopping for a more sustainable experience. Sharee is looking for an app or website that is user friendly, and easy layout, not too crowded, notifications giving her information about her favorite items, and has a buyer protection feature.

Sharee wants an app that when you open it up you can set up the styles you want/like and then would like to be able to go to a search engine where she can find different communities she can join, she would ideally join a JMU community one as well as one for back home. After everything is set up, Sharee would like to see everything that has been posted in the last 30 days based on her community and style choices. She would like to have an easy way to sell her clothes as well, ones that she doesn't wear. As she uses the app she would like to have contentment with what she is buying and selling, she would like to feel like she can use this app whenever she needs to without any problems.

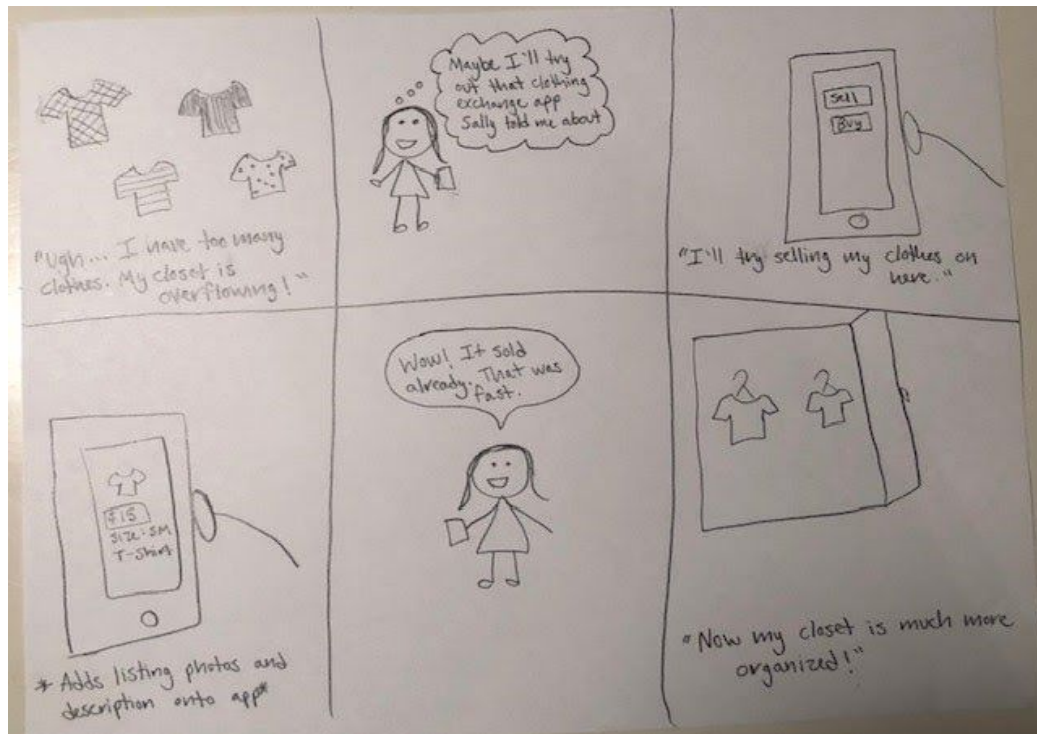
Sophie Willis is a health science major at James Madison University, She is looking for an affordable place to buy her clothes within her community. Sophie is very organized, great at planning, and is very coordinated. She is trying to become more environmentally safe with the things she does and thinks buying used clothes is a good place to start. However, she is uncertain about buying clothes second hand and doesn't know where to start. She is very budget conscious and doesn't love to shop an excessive amount. She is looking for something very easy, doesn't take that long, and something that she won't have to leave the house. Sophie would love an app that can track her orders, have a review cart function, and the ability to know exactly where the clothes are coming from. She has used apps that don't have a "place in cart" button and would love that feature as well.

Sophie would love to open the app, to be able to put her style choices and then find her communities, She would like to have more than one option for her style type because she likes to combine different aspects of styles. She would then like to see the clothing that has been posted for the last 30 days, so it isn't overwhelming. She would love to also have a way to check if each clothing piece she purchases is coming from a clean and safe environment. Sophie hopes to be able to see who she is buying from, somehow have profiles set up for each seller. She wants to use this app whenever she likes and have it be an easy, not overwhelming process. She would feel safe if she knew that each clothing piece she purchased was cleaned properly.

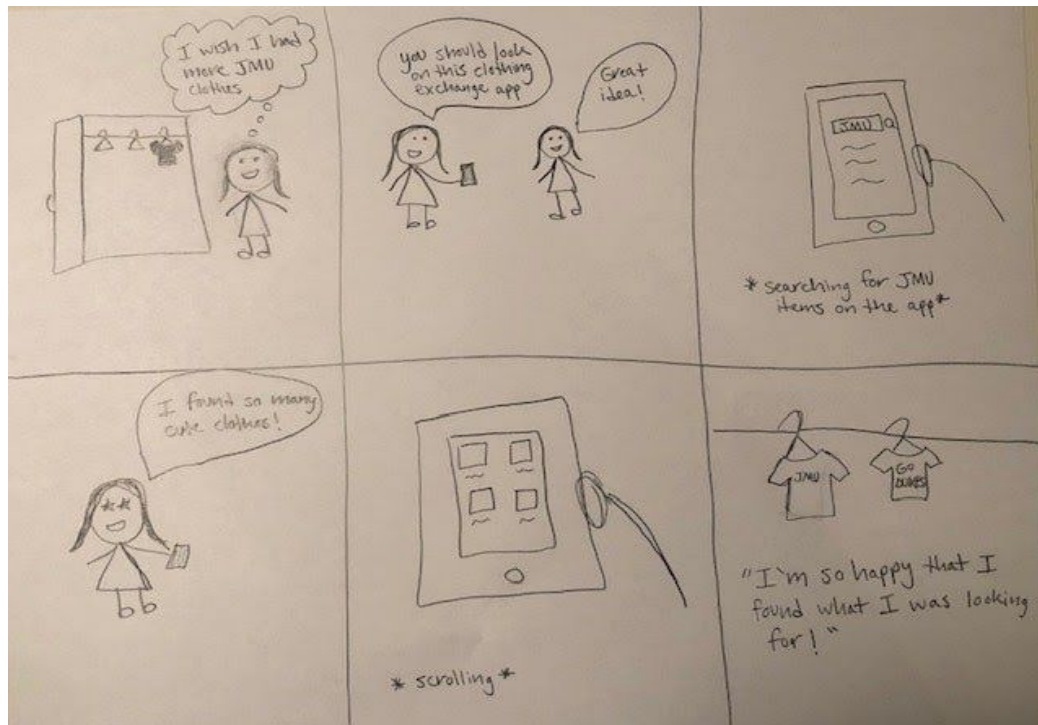
## Storyboards



Storyboard #1



Storyboard #2



Storyboard #3

## **Design Requirements**

2 out of 5 of the interviewees expressed that they would use the app to buy second-hand clothing for sustainability purposes. 1 interviewee stated they would mainly use the app for selling purposes because they are not that into fashion and purchasing clothing but they would like the option of getting rid of things they no longer wear. 1 interviewee said that they would like to use the app to discover new items and businesses that they did not know about before. 1 interviewee stated that they would utilize the app to find relatively cheaper clothes than what retail offers.

3 out of the 5 interviewees stated that they are open to buying second-hand clothes and have done it in the past. 1 interviewee expressed that they liked the idea of buying used clothes and thrifting but it makes them a little uneasy that others wore the clothing before them. 1 interviewee stated that they would never buy second-hand clothing because they find it difficult to find clothing in good condition and in the size they need. The consensus expressed that the clothing would need to be washed and clean before wearing.

2 out of 5 interviewees stated that they only shop a few times out of the year. 2 interviewees said that they shop very frequently because they are interested in fashion and like to stay up to date with new trends. 1 interviewee expressed that they shopped seasonally 3-4 times per year.

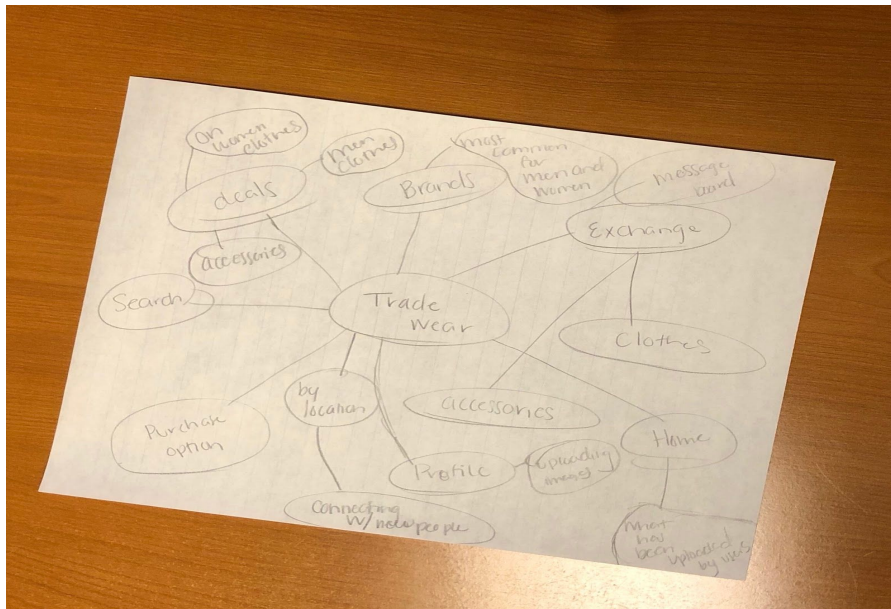
2 out of 5 interviewees expressed that they would like an “add to cart” button and an option to review their cart before purchasing. 2 out of 5 interviewees stated that it is important to have a simple and easy to follow app interface. Other features that were mentioned include a review feature on the seller’s page, order tracking, buyer protection/insurance, and notifications of new items listed from sellers the user follows.

4 out of 5 interviewees expressed that they have struggled to find communities of interest to connect with other buyers and sellers. 1 interviewee stated that they do not have difficulty finding communities because they have a diverse style that makes it easy to find clothes. 2 interviewees stated that an organized group would help find clothing.

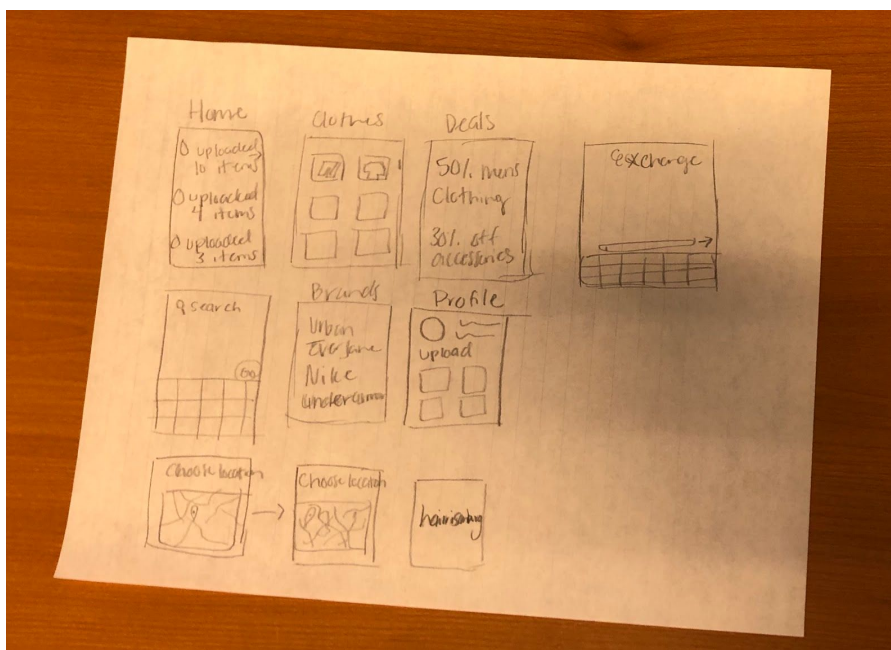


## Design Solutions

### Brainstorming



### Sketches



Our participants:

Sophie Willis

Age: 20

Gender: Female

Education: Bachelor of Science

Current occupation: Student at James Madison University

Technology usage experience: well-experienced user

Relevant characteristics: wants to start shopping online more

Sharee Forbes

Age: 21

Gender: Female

Education: Bachelor of Science

Current occupation: Student at James Madison University

Technology usage experience: well-experienced user

Relevant characteristics: wants to practice sustainable shopping

Mallory Kunkler

Age: 20

Gender: Female

Education: Bachelor of Science

Current occupation: Student at James Madison University

Technology usage experience: well-experienced user

Relevant characteristics: prefers cheaper options

Questions for potential Users:

1. How would you use our app in your everyday activities?
2. What are your thoughts about buying used clothes?
3. How would you describe your shopping behavior?



4. Do you know of any small businesses in the area, and if so how often do you see their products/ads?
5. Do you currently use apps to buy or resell clothing? If so, which apps?
6. If you have previously used one of these apps, what did you like most about it? What issues did you run into?
7. What are the most important features you look for in clothing resale apps?
8. Do you have an interest in buying clothing more sustainably?
9. Have you ever struggled with finding communities to buy/sell clothing with? (Ex. JMU clothing exchange exclusive to students)
10. Would you use our app?

## **The 3 best concepts**

### **Personalizing in settings**

One of the concepts we tackled was adding more options on the **settings page** so that users can personalize the app themselves. Through this feature, users will be able to personalize their feed and to choose what kind of items they want to see on our app. For example, this feature will include options to choose genders, so we will have the options of Men, Women, and Both. That way, it is easier for the users to find the kind of clothing that they are looking for. We also want to give our users the option to choose the sizes that they want to see. They will be able to choose multiple sizes when personalizing their feed so that they can see a variety of items that they may be interested in as well.

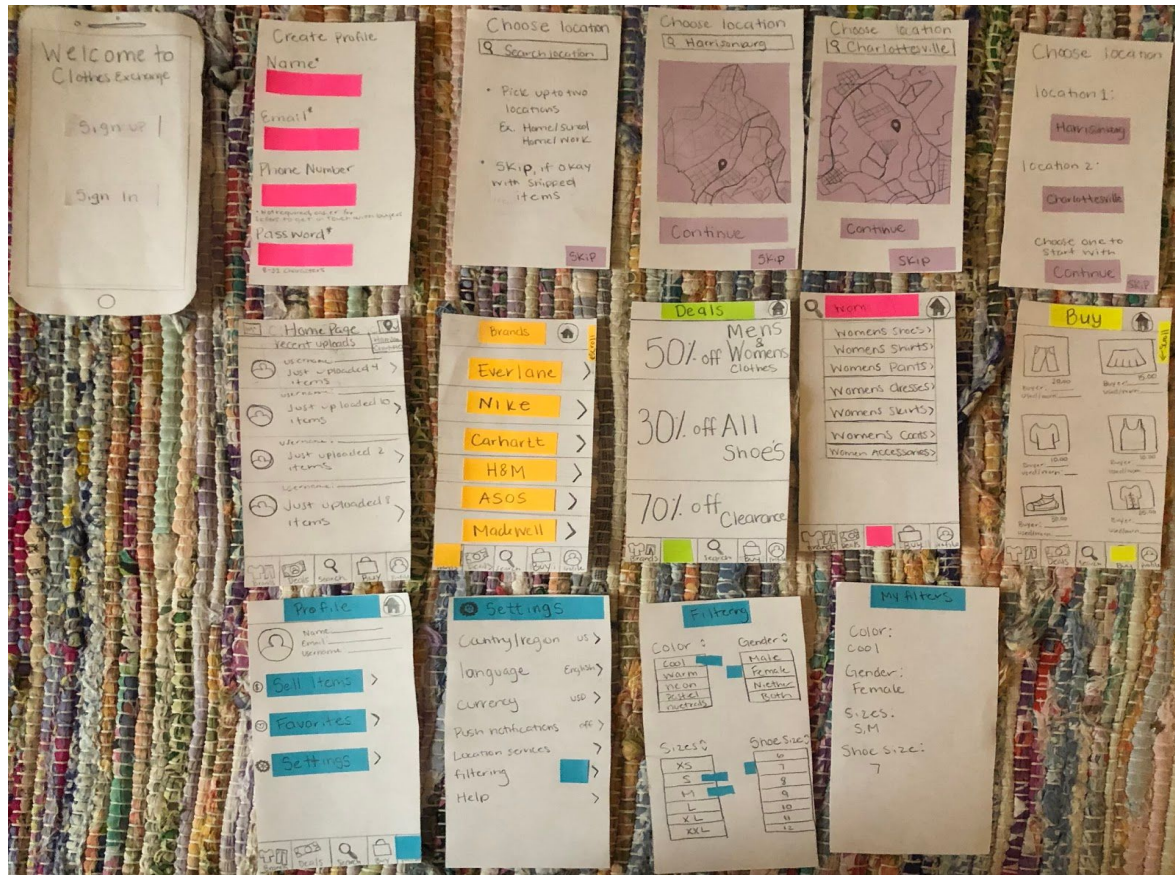
### **Location feature**

We also implemented a feature on the **main page** where users can select their location. College students tend to move locations once in a while to go home or to stay on campus. Since one of the main attractions of our app is community-based users, we want them to be able to filter their location whether it be their home/school or home/work. That way, they can see which sellers are nearby wherever the users would be. This feature will also include a Skip feature for those users who would not mind where the sellers are, and those who would be open to getting their purchased items shipped.

### **Trade or Purchase**

Lastly, we implemented options to either trade items or purchase. Since many apps have similar features and purposes, we decided it would distinguish our app from others by implementing a “Ready to Trade” option and encourage users to trade, and give users more options in our app. This feature will also encourage a user-friendly atmosphere and users will be able to know who they are trading with, or purchasing from.

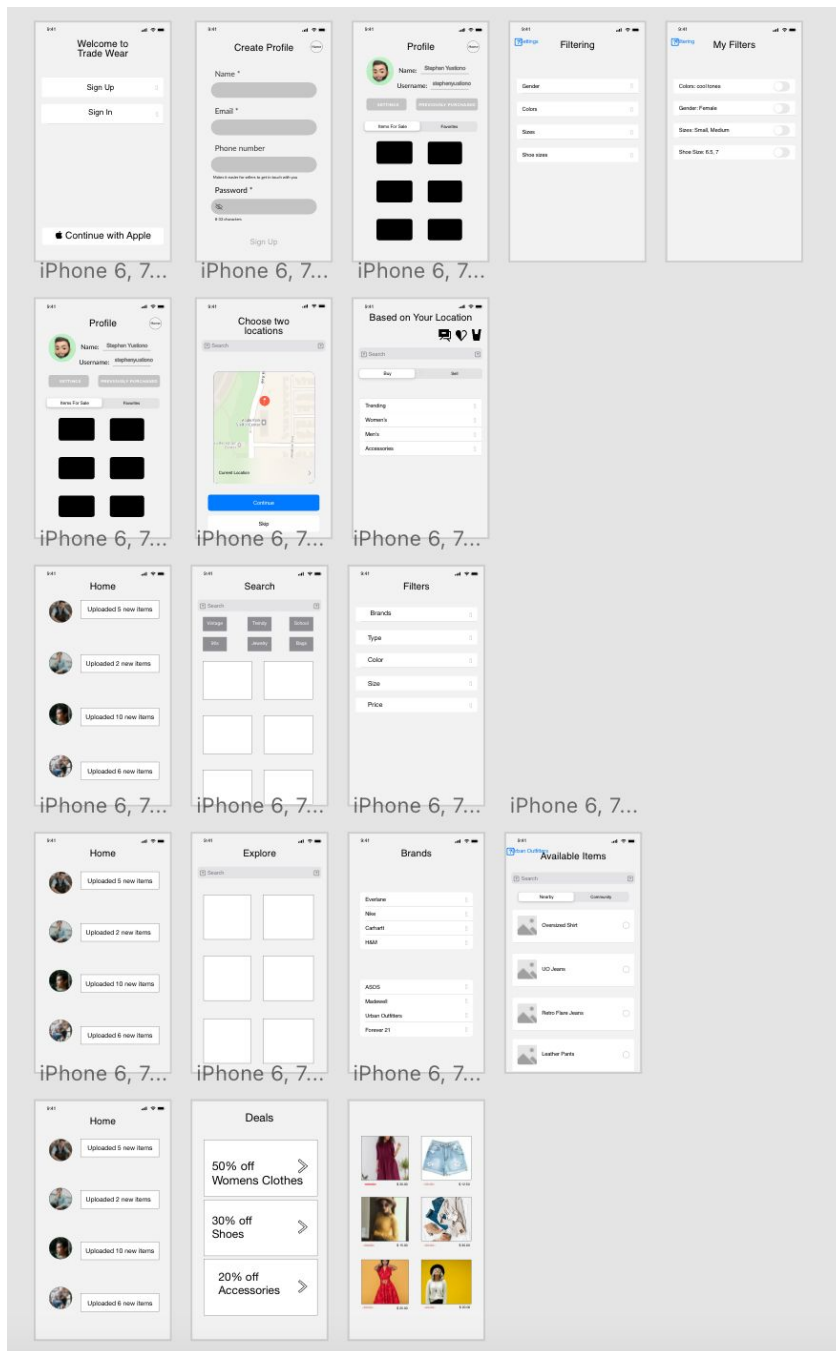
## Paper Prototype and Testing



## Testing Methods

The prototype testing took place in a quiet living room so that the users can focus on completing the tasks with the paper prototype. We asked the users to go through the paper type and complete selecting two locations, as well as filtering on the settings page. The users were also able to get an idea of the overall functionality of the app by going through the menu, sales, and feed prototype. After the testing, we gathered feedback from the users that the paper prototype shown above was self-explanatory and every single one of the users was able to complete the tasks pretty fast.

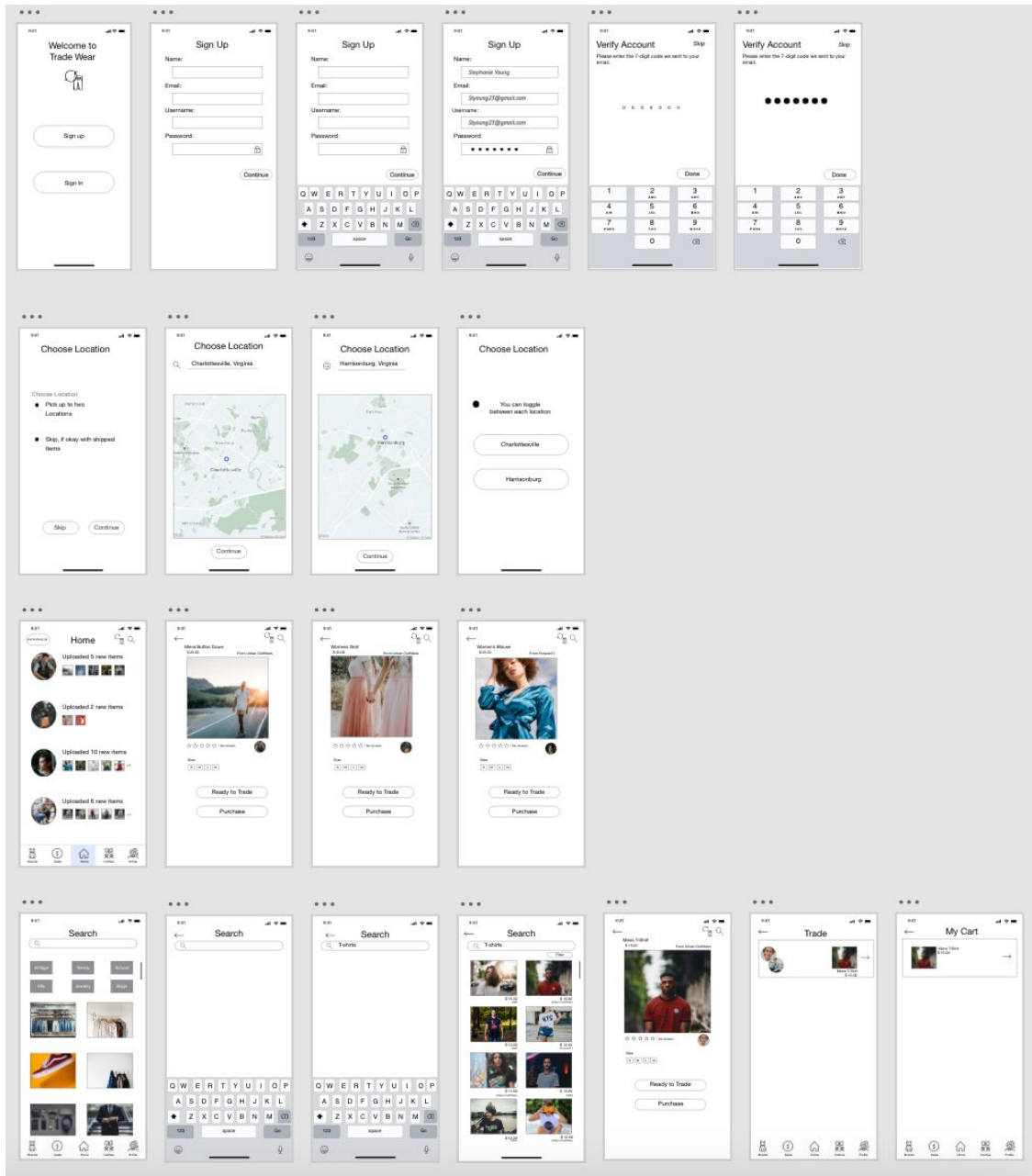
## Low-fidelity prototype and feedback

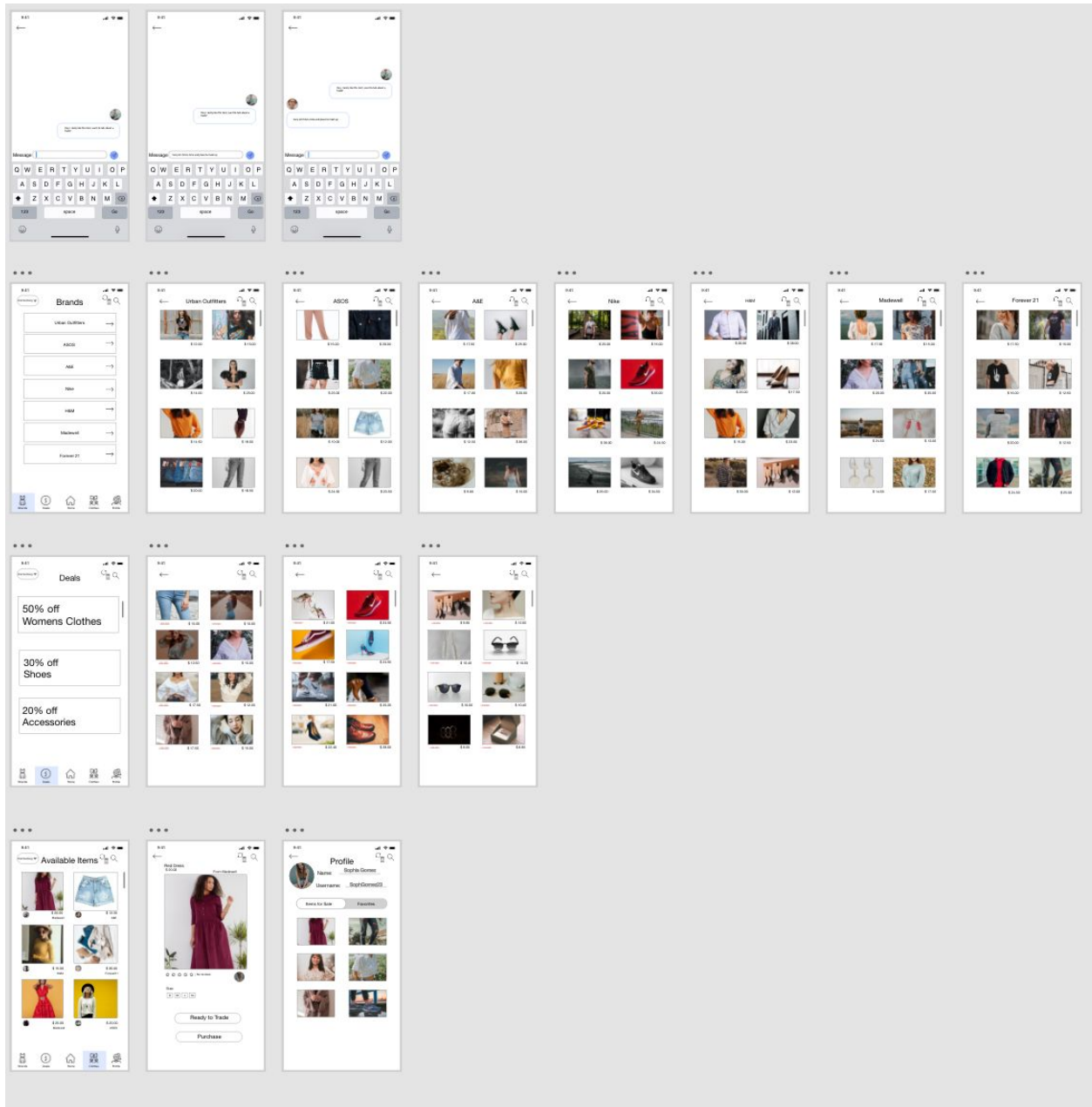


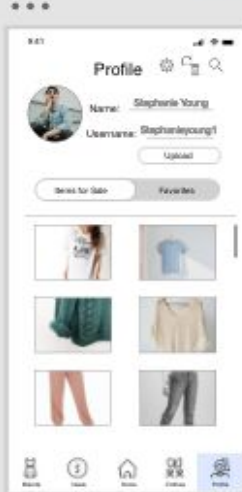
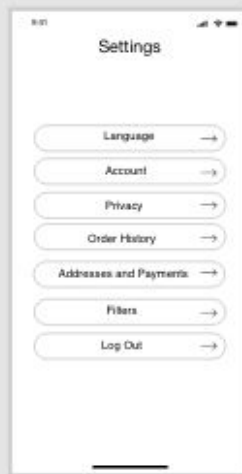
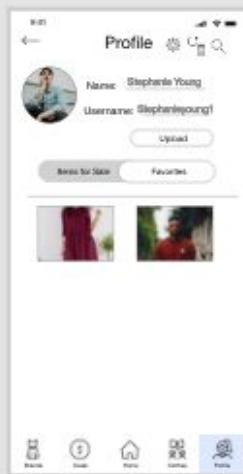
## **Feedback**

Each person in the group interviewed someone after they went through the low fidelity prototype. One person wanted the layout to be clearer, that the home screen was shown a lot, and thought that the brand's page should be before the explore page in the fourth row. Another person suggested adding more navigation to get to the filtering page, and that the homepage would be clearer if it had pictures of the clothes each person uploaded. The last person interviewed gave us feedback on the difficult navigation getting from page to page, suggesting a bar at the bottom would be helpful, and that it would be nice to have a search button on the deals page for specific brands.

# High-fidelity prototype and evaluation









## **Evaluation**

The first key task our group prototyped is a location feature with the option to pick two locations and have the option to shop listings near those two areas. This option will allow users to toggle between each location and view the listings in that area. After receiving feedback from the low-fidelity prototype, we implemented another option to “Skip” setting up locations for users who do not wish to use this feature. The next key task we tackled was the filtering feature located in Settings. This feature allows users to choose their size, desired fit, and price range. We made changes from the low-fidelity prototype and displayed revised functionality and showed how the users would get to this feature more clearly. We also implemented options to either trade items or purchase. Since many apps have similar features and purposes, we decided it would distinguish our app from others by implementing a “Ready to Trade” option and encourage users to trade. The last two tasks we worked on involved a search feature and uploading photos on the profile page. Since the low-fidelity prototype, we implemented a search bar with keywords users can choose from underneath. We also designed our prototype to better explain how to upload postings on the profile page, so there will be an “Upload” button on the profile page and the users can upload from their camera roll. Overall, we worked on the prototype to be more responsive and had everything clickable. The layout is also changed to explain the user experience more accurately. The navigation was improved as well, this aligned with our layout so we made sure that everything works together.

## **Usability testing and design recommendation**

### **Participants**

Ju Kim

Age: 18

Gender: Female

Education: Bachelor of Science

Current occupation: Student at the University of California at Santa Barbara

Technology usage experience: well-experienced technology user

Relevant characteristics: prefers sustainable shopping

Name: Sophie Willis

Age: 20

Gender: Female

Education: Bachelor of Nursing at JMU

Current occupation: Student Assistant for PA office

Technology usage experience: Well-Experienced with technology

Relevant characteristics: prefers to shop online

Name: Bella McCoy

Age: 19

Gender: Female

Education: Bachelor of Science in progress for Biology

Current occupation: Student at West Chester University

Technology usage experience: Well-experienced

Relevant characteristics: Online shopper, college student budget (cheaper clothes)

## **Testing methods**

### **Overview**

We tested the prototype with three people, we told each participant about what they were about to do, and what our app was about. In our pre-session questionnaire, we asked about their previous use in online shopping and apps they have used in the past. We then asked them to go through the prototype, including signing up, searching for a t-shirt, going through trading a shirt, going through filtering out certain items and uploading pictures to their profile.

- How often do you go online shopping?
- Do you usually use apps or websites?
- Are you open to trading clothes with people around you?

#### 5 tasks for the users

1. Signing up for the app
2. Searching for a T-shirt
3. Going through trading a shirt
4. Going through filtering out certain items
5. Uploading pictures to your profile

Would you use our app?

Is there anything about it that you would change?

What pieces of the app did you like?

What pieces of the app did you not like?

### **Test environment**

The environment used to test was a room with minimal distractions, the test subjects sat on a table, with a computer on it, that they used to go through the prototype.

## **Evaluation measures**

For the evaluation Methods, we used both quantitative and qualitative measures. For quantitative measures, we were focusing on how long it took for each participant to complete each of the 5 tasks, we also counted how many times they made any errors, to help us decide if we needed to fix a certain task. For qualitative measures, we would study the faces of our users to see if at any point they reacted to what they were doing. As well as any comments the users had throughout the testing period.

## **Test procedure**

The test was conducted, with each user at the computer, the facilitator sitting next to the user if needed for any help. The user would go through the whole prototype but focusing on the five tasks listed above. Signing up to the app, being able to get through each page without any questions. Searching for a T-shirt, being able to get through each page, and being able to realize that there were back buttons to go back to (ideally) search for a different item. Going through trading a shirt, being able to text another profile about said item. Going through filtering out certain items, being able to go into settings and filter their specific settings. Uploading pictures to your profile, again being able to get through each page and seeing that the profile looks different from the new pictures uploaded.

Findings and recommendations

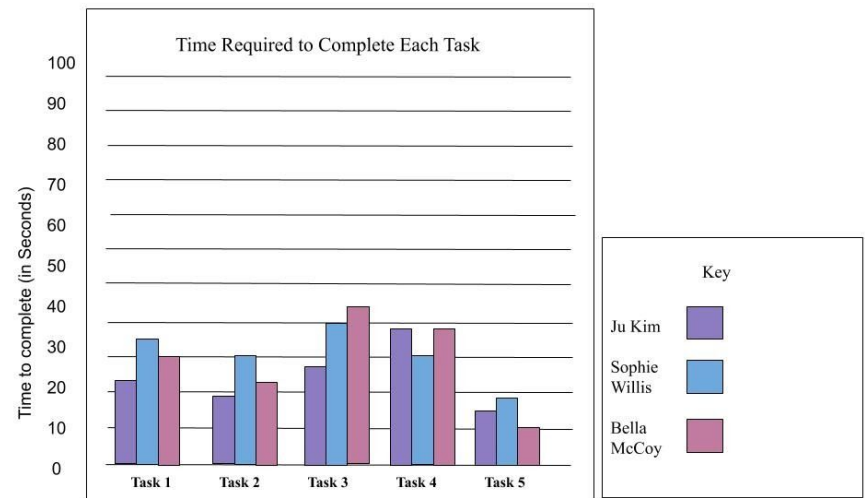


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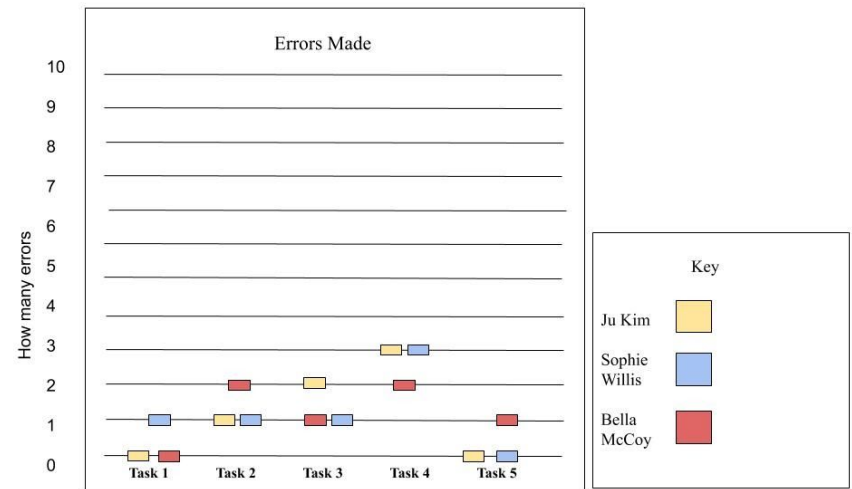


Table #2

## **Usability issues & Design recommendations**

After we finished the testing, we went through and analyzed our data and found that our app is easy to use and user friendly. We found that each task was easy to complete, however, each participant completed each task with some errors made. Participant #1 found each task to be fairly easy, she did have difficulty with task 4, filtering out certain items. These occurred when she tried to go back to her profile from the setting page. Participant #2 took more time with each task, but she seemed to understand everything that was happening with each task. She took the shortest amount of time to complete task 4, not needing to go back from the settings page.

Participant #2 was also unsure why you were unable to toggle between items for sale and favorites at the end of task 5. Participant #3 understood every task and didn't take a lot of time for each task, since they were basic tasks. She did have trouble with task 3 because she was unsure if there was more to the task, but then understood what was going on and saw that she could go back to the beginning of the task.

With the tasks being finished, we went back to the app and looked at some usability issues, the only issue we found was the settings page, not being able to go back to their profile. With that issue, we added a back button on the filtering page and the settings page going back to their profile. After I rechecked that task and it runs more smoothly now. I also added a way to toggle between items for sale and favorites on the profile page for task 5. With those two tasks being fixed it improved design and usability for future users.

## **Conclusion**

TradeWear is a clothing exchange app that we created with thorough user research and revised prototypes after different feedback. We researched second-hand clothing apps and distinguished our app by implementing different features users would not see on apps like Depop or Poshmark. Our design solutions were created with raw ideas and narrowed them down to three best concepts. These three concepts were shown clearly on our prototype and the result of our final usability testing shows that there were minor usability issues and are now revised to increase positive user experience with TradeWear.

## **References**

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