

# **DigiCloset**

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## **Problem and solution overview:**

Planning outfits for upcoming days can be time-consuming and inconvenient. The process requires finding clothes in your closet, trying them on to create or test potential outfits, and then putting them back, which often leads to disorganization and frustration. Our goal is to tackle this problem by creating an application that will allow users to upload all their clothing items as well as accessories to create outfits. It will allow them to categorize outfits. You can test many outfits pairing much quicker, as you have a quick and centralized location to easily pair outfits. You can also pair outfits anywhere, including stores to see if an item you want to purchase matches your current clothes.

## **Design Research Goals, Stakeholders, and Participants:**

For our design research, Kanishka and Saad will focus on the User Interviews, as this will allow us to directly gain what users want in the space. This method provides the opportunity to ask open-ended questions that can uncover pain points, desires, and expectations that might not be immediately obvious through other research methods. By conducting both online and in-person interviews, Kanishka and Saad can ensure flexibility in participation, accommodating a wide range of users and schedules. Each method may capture new opinions as well.

### **Goals:**

For our clothing closet app, the primary users will be fashion-conscious individuals, aged 14-40, who are interested in organizing their wardrobe and building stylish outfits. These users are likely to be from tech-savvy and regularly engage with fashion trends through social media or shopping apps that want to diversify their outfits. They will be using this app when they want to create a new outfit, or out shopping to see if a new item would fit nicely into their wardrobe.

The application should have a font which is appealing to the appropriate age range. It should consist of colors and buttons which can be understood by users of those types.

Kanishka and Saad aim to make our prototypes consist of monochromatic colors which will suit all sorts of wardrobe styles. Users should be able to take photos of their clothing items and upload them on the application to build their outfits. They should also be able to change the colors of their application to give them a better form of personalization.

#### Stakeholders:

Some secondary stakeholders include Saad and Kanishka (me), who will be the only developers creating and marketing the app. Many of my friends as well as Saads are those who are 18-40 who care about being able to keep up with fashion trends while still having a diverse number of outfits. The steps for gaining access to the users are to 1. Reach out to our friends/family to inquire about a potential survey (*through SurveyMonkey/Google Forms or in person*) they would like to fill with some of the following questions:

- How do you currently organize your wardrobe? Do you prefer to sort by type, color, season, or something else?
- How do you decide what to wear on a typical day?
- How long does it typically take you to create an outfit from your wardrobe?
- Have you ever experienced difficulties in putting together outfits? If so, what kind of challenges do you face?
- How do you feel about using a digital tool to help you organize or style your clothes?
- Have you ever had trouble figuring out what to wear for specific events or occasions? Can you describe a recent example?
- Do you often forget about certain pieces of clothing in your closet?
- Do you organize your outfits depending on the weather?
- How do you organize your clothing?
- Have you ever been shopping and unsure if a potential new clothing item would match your clothes? If so, what made you decide to buy/not buy the item?
- Would you rather have quick use to make changes with less information, or have more information but longer time to use?

Saad interviewed a friend named Marissa Lovegren. She is a 17-year-old student at St. Cloud State University. Saad had an interview at the coffee shop and asked her various questions regarding our product. Styling is her hobby. She loves to spend a big chunk of her

time trying to figure out what to wear for her day. She is interested in knowing more about this product and wants to give feedback on our design ideas. She suggested that the application itself should have a monochromatic look to make it universal. Many users have different style types and interests. Monochromatic application design will give representation a bigger opportunity. She added that if the design could have an option to personalize the app or wardrobe colors, it will be favourable. This will give her, and other users appreciate and enjoy the application more.

Kanishka observed a 19-year-old female college student do their laundry and pick their outfit for the day. They are very into fashion as well as wanting to not repeat outfits all that often. They like to wear accessories as well (jewellery, bags, hats, etc). Kanishka observed them in their room in the morning when choosing clothing. They sorted their clothing by weather, and by type. They used a dresser for most of their clothes and they had issues with missing items that they own because they are layers below other items. This led to items being forgotten. They also would leave clothes on the floor which would also get forgotten. There was a constant theme of wanting to wear different outfits but picking from a small selection of clothes that would lead to repeat outfits. Creating a feature/task that shows all items, and potentially ones in less outfits could help the user create these new outfits and use all their clothing. There was also a constant theme of making sure their accessories matched their clothing. An option to add these would be to allow them to decide what to wear.

Kanishka had a conversation with a 20-year-old male college student who keeps up with fashion trends and has a passion for collecting vintage clothing. Kanishka and the interviewee were at a local skatepark, which Kanishka found to be a good place for him to open to me about his clothing, as it is an important choice when doing physical activities in variable weather conditions. He told me that he organizes his clothing by weather and tries to get rid of clothing that he does not wear for a year. He also said that because skateboarding can wear clothes fast, he wears certain clothes just for skateboarding. This is an occurring theme of clothing items being categorized past what it is. He said that he had a tendency of forgetting clothing items or grabbing the wrong item for the weather (too cold or too hot). He said this would happen a lot when he had a messier room. He likes to wear “statement” pieces, or items that need more conservative clothing to support it. He hopes to add more clothing to his collection, but he said he always wants to make sure he has supporting clothes if he gets a

“statement” piece. He said he has not bought items because he was not sure if he had clothes that match.

### **Design Research Results and Themes:**

Through our online forum and in person interviews Kanishka and Saad found a few common themes. Our most common theme was that people forget about an item they had. 100% of our online participants had this issue. Kanishka and Saad believe that it is that the items are hidden under other ones. Kanishka and Saad also found a common theme of people deciding what to wear based on the weather. We thought this would be common, but it was a ubiquitous trend. We initially thought that this was an obvious feature to add, and the responses we had confirmed it. We also knew that people would want to categorize their clothes. We had an in-person interview that described how they sort their clothes based on if they skateboard in the clothes or not because they get worn out quicker. This is somewhat of an edge case, but there will be many different ways users would want to categorize their clothing. There were multiple online responses that wanted to categorize their clothing by its formality. A feature to custom categorizes clothing would be a key feature many users would like. Some responses we found to be insightful were ones of those who have tried other online closet apps. Many found the initial setup to be lengthy and the reason they did not use the app. This is something that we need to consider in our prototypes as that can be a barrier of entry. When doing competitor research, ACloset had multiple reviews complaining about the initial setup being tedious or longer than expected.

Many users, especially those invested in fashion, prefer to avoid repeating outfits frequently. They expressed interest in an app that could help them diversify their choices and suggest combinations they may not have considered. Additionally, personalization options, such as customizable themes and wardrobe colors, were suggested to enhance user engagement. Users frequently experience uncertainty when shopping, unsure if a potential new item will match their existing wardrobe. The ability to be able to see your outfits on a mobile device in the store would help in picking a potentially new item. We found this through our online survey, as well as in person interviews/questions.

### **Answers to Task Analysis Questions:**

#### **1. Who is going to use the design?**

The design will be used by a younger audience, as our primary audience is of ages 14-40 who are enthusiastic about clothing/fashion with a need to organize their clothes in a new manner.

**2. What tasks do they now perform?**

- a) They must create parameters for their outfit in their head (Ex: is it cold or hot? formal or not? comfortable or not? Do colors matter?)
- b) Ensure the clothes they want to wear are clean.
- c) Go through their closet/wardrobe to find the item/s they might potentially like
- d) Pair the items together to see if they like it or find added items to pair with the one item they liked.

**3. What tasks are desired?**

Ability to quickly upload clothing items to their DigiCloset. Sort clothing/outfits by weather, as well as being able to add accessories like jewellery, bags, etc. The ability to suggest clothing is also a task that is desired.

**4. How are the tasks learned?**

The tasks will be learned by home screen, showing the most basic abilities of the program like adding new clothes or creating a new outfit. It will be in a standard design, allowing the user to quickly notice what the tasks allowed are, and how they are done.

**5. Where are the tasks performed?**

The tasks will be performed on the application. The initial uploads will be in the user's room, which additional uploads of new items may happen at their home, as well as the store when they buy the item or receive it. This will be on a mobile device with a touch screen.

**6. What is the relationship between the person and data?**

The data is the person's personal clothing. The person is uploading the data, as well as creating metadata about the item's categorization (outfit use, weather use, formality use, etc).

**7. What other tools does the person have?**

They have their physical wardrobe/closet to use. They will have a camera on their mobile device/external to take pictures of their clothing items. They will also have social media for fashion sources.

**8. How do people communicate with each other?**

Users would discuss the app in person, social media, texting, calling, etc with their friends and family.

**9. How often are the tasks performed?**

The initial upload would happen once, while every additional upload of clothing would happen based on when the user gains new items. The ability to create new outfits, categorize items, would happen at the user's discretion(maybe 1 time a week or everyday)

depending on if they want to create all their outfits at once and not worry about it, or create a new one everyday similar to how they previously picked them.

#### 10. What are the time constraints on the tasks?

The first initial upload of clothing must be quick, so the user is retained on the app (under 45 minutes). Additional clothing after that must be also very quick to upload (under 2 minutes). Finding a piece of clothing must also be quick (under 30 seconds). The ability to save an outfit but be one click away (sub 10 seconds).

#### 11. What happens when things go wrong?

- a. **User accidentally deletes an item or outfit** - Add an undo button or a "recently deleted" folder for recovery.
- b. **Clothing item doesn't upload correctly** - Provide an option to re-upload or edit item details manually.
- c. **App crashes or slows down** - Provide an error screen as well as being able to exit the app at any moment.
- d. For all errors, telling the user how to resolve the error/issue will be needed.

#### Proposed Design Sketches:

Design 1 covers the mobile app version. Design 1 shows the user outfit suggestions on the main screen. The application detects the weather for the day and gives suggestions of outfits from the user's wardrobe. Upon pressing the burger icon, the user sees different options that the application offers. In my Closet screen, the user can filter and go through their clothing items stored in the digital closet. The user can also access the outfit builder screen where they can create new outfits by giving them a name and uploading photos of the items. They can also build outfits out of existing clothing items in their wardrobe. Design 1 can be found in the Figure Below:

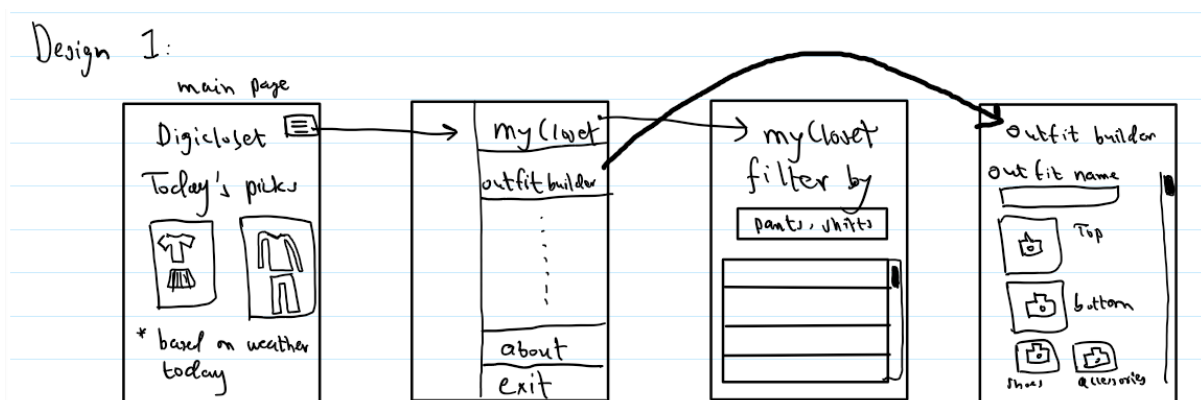


Figure 1 Design 1 Sketch of Mobile Application

Design 2 covers the desktop version: The user upon entering the website is welcomed with the logo and interesting imagery showcasing the app. Upon logging in, the user can see today's pick based on the weather. They have a button on the screen which will take them to the closet management screen where the user can edit their outfits by adding and removing items from the saved outfits. The user can also go to settings to change the appearance of the app based on the colors they like. They can select font size and change the colors. They can also opt to sync the appearance across their devices. You can view Design 2 in the figure below:

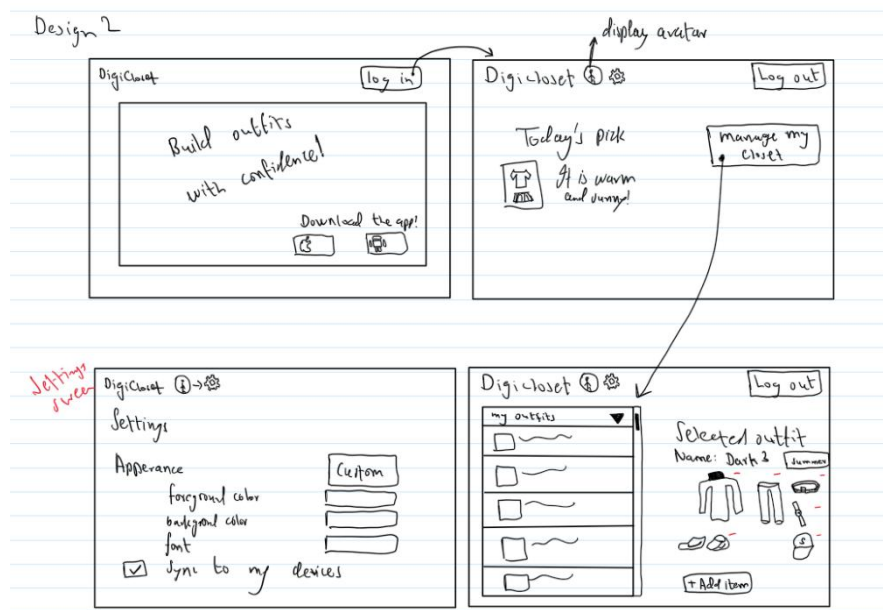


Figure 2 Design 2 Sketch of Desktop design.

Design 3 covers another Mobile version of the application. The design allows the user to add new clothing items by uploading a picture of the item, with optional items like name, color, weather, description. The user can also create outfits with all their items. They can choose the name of the outfit as well as the category. It has a similar add button as the add item does. The user can see all their items and add some to the outfit. The user can also click the hamburger button to see the app's appearance. After clicking on the button, they can change the primary and secondary colors using a color wheel and hitting the save button. You can view design 3 in the figure below:

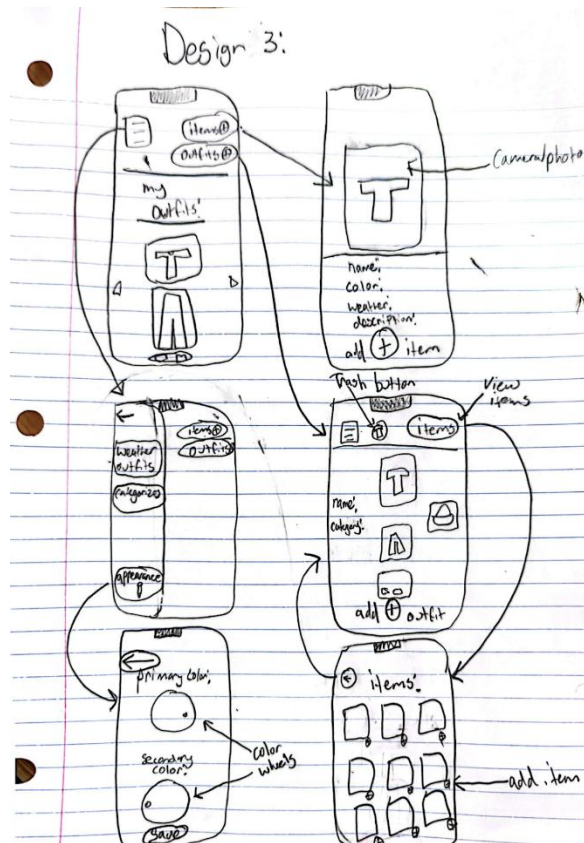


Figure 3 Design 3 Sketch mobile application design.

Kanishka and Saad chose Design Three for our DigiCloset mobile application. Since the app relies on uploading pictures of clothing, a mobile platform makes the most sense. Our primary audience is also accustomed to mobile experiences, making it the most intuitive choice. Additionally, using a mobile app is far more convenient than uploading files to a desktop or navigating a website. Kanishka and Saad specifically selected Design Three over Design One because our focus is on refining and improving two core tasks:

- Uploading items to the DigiCloset
- Creating outfits in the DigiCloset

These tasks are fundamental to the app's purpose—without them, DigiCloset cannot function as intended. Features like appearance customization or weather-based outfit suggestions, while nice to have, are not essential to the app's core functionality. For these reasons, Kanishka and Saad believe Design Three is the best choice.

### **Written Scenarios with Story Boards:**

Tina, a 24-year-old recent graduate, had just moved into her new apartment. She had bought several new clothes for her new job and wanted to organize everything in one place. She opened the DigiCloset app on her phone to add her new items. Tina went to the Items



section and clicked the plus icon, allowing her to upload pictures of her new clothes. She added details like the color, fabric type, and which seasons the items could be worn. After she finished uploading everything, she navigated to the Outfits section. Here, she could easily mix and match her new clothes with her existing wardrobe. She picked out a blouse, skirt, and jacket, then added them to her outfit list. Tina gave the outfit a name and tagged it as "Workwear" before saving it for future use, ready to look stylish for her first day at the office. The created storyboard can be found in the figure below labelled *Storyboard 1*:

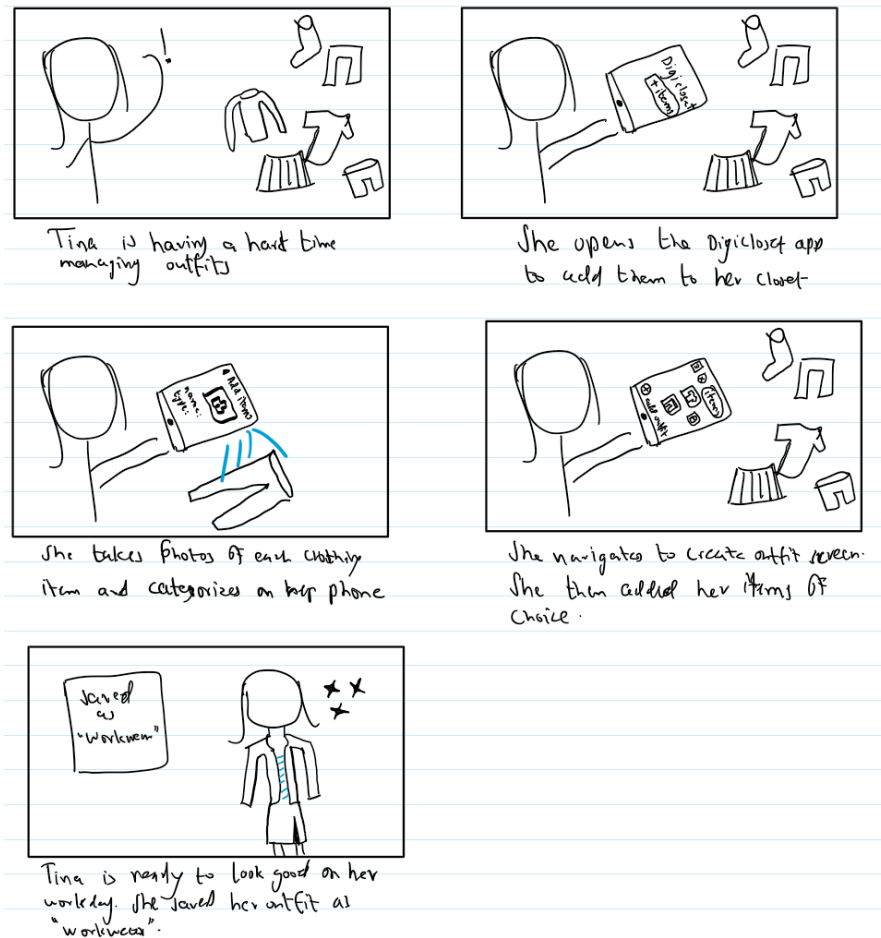


Figure 4 Storyboard 1 describing Tina's usage of the app.

Sally, a 19-year-old college student moving out. She got many new items of clothing when she moved out and needs to be able to create outfits with them and her existing clothing. Her existing clothing is in her DigiCloset. She opened DigiCloset on her phone. She navigates to the items button. She hits the plus icon on it. It brings her to a page that allows her to upload a picture of the new item, or an image of it. She can also add supporting information about the item like its name, color, description, and the weather it is used in. After she adds all her new items, she can finally create the outfits. She navigates back to the home page and to the outfits button plus icon. Now in the outfit page, she can just click on

the item button to see her items. She can then hit the plus button to add it to her outfit. She adds new and old items to the outfit. She then gives the outfit a name and if she wants it in a category. *Storyboard 2* displays a storyboard for this written scenario.

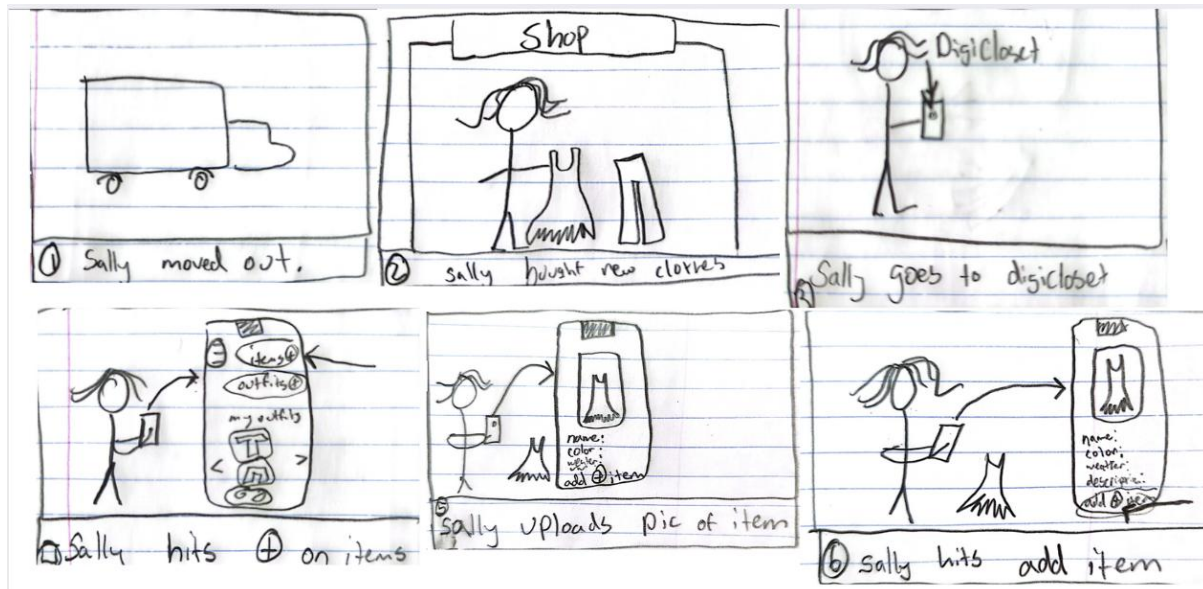


Figure 5 Storyboard 2 Second Written Scenario