

Final Project

# The Development of Dust Buddies

DME.211.0001

4/28/2025

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01

Study Details

## BACKGROUND

Dust Buddies is an app dedicated to encouraging users to clean their space through a task based, game-like design. This app is designed to tackle "dirty home shame" and help those who may feel unmotivated to clean by guiding them through a few short minutes of simple cleaning tasks.

## TARGET AUDIENCE

The main audience for this project are a younger audience between children and young adults who may suffer with ADHD, Autism, Depression, or those who are simply struggling with finding motivation to clean their room.

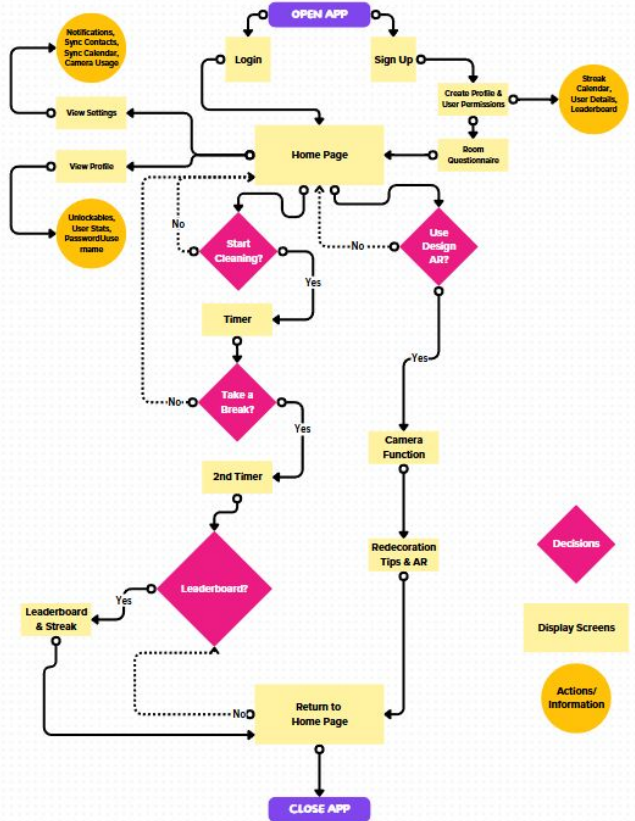
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## RESEARCH GOALS

To determine weak points in the user flow and the best placement for the second user flow to be based on feedback on the needs and preferences of the user for natural app growth and development.

# DUST BUDDIES USER FLOW

Jessica Perlin  
Spring DME.211.0001

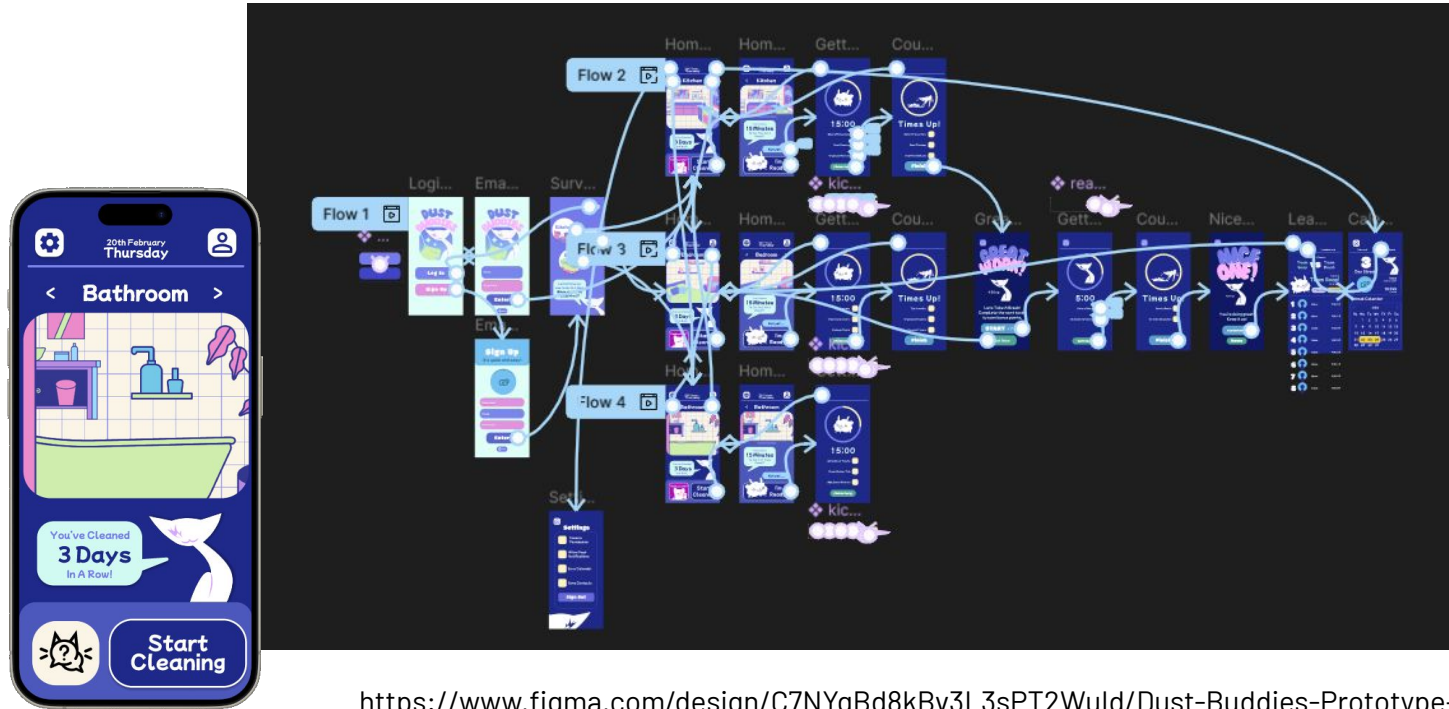


## Finalized User Flow

The user flow has now been finalized into a more cohesive, organized layout. Four types of user testing have been performed to hone the user flow based on the natural needs of the user, so Dust Buddies can sit comfortably within their daily routine.

# PROTOTYPE TESTED

This is the prototype that was used during testing and is not the finalized prototype. The final prototype completed after all 4 rounds of user testing is located on page 28.



<https://www.figma.com/design/C7NYgBd8kBV3L3sPT2Wuld/Dust-Buddies-Prototype--Revised-Ver.-2?t=eiy51UWoiFx1gi9C-1>

02

Surveys Created

# SURVEY DETAILS

Details on how the Google Forms survey was created, and what it asked of the users.

## SAMPLE OF SURVEY QUESTIONS

1. What sort of roadblock would prevent you from cleaning your Living Space?
2. What are you currently doing in your cleaning routine that makes the job feel easier?
3. How Frequently Do You Clean Your Living Space?
4. How familiar are you with the term Feng Shui?
5. Do you often feel ashamed or embarrassed of your living space when other people visit?

## PARTICIPANTS

- 11 total participants
- Demographic of participants were college kids at an average of 20 years old.
- Study was accessible for use with a screen reader and TTS (Text To Speech) options thanks to Google Forms' accessibility options.

## METHODOLOGY

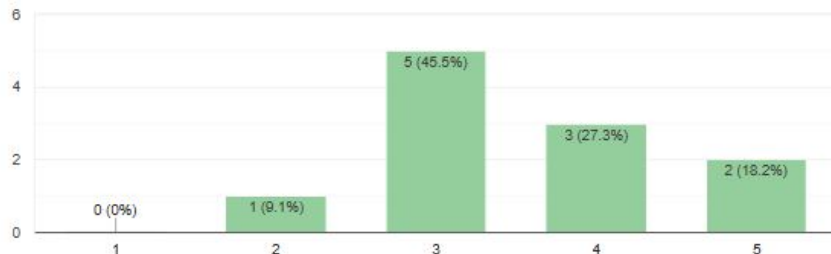
- 5-10 Minutes
- Remote Survey created through Google Forms
- Users completed scale ratings, multiple choice, and fill in the blank questions in order to determine if a possible AR feature of the app could be explored.

# Samples Of Survey Data

How Frequently Do You Clean Your Living Space?

[Copy chart](#)

11 responses

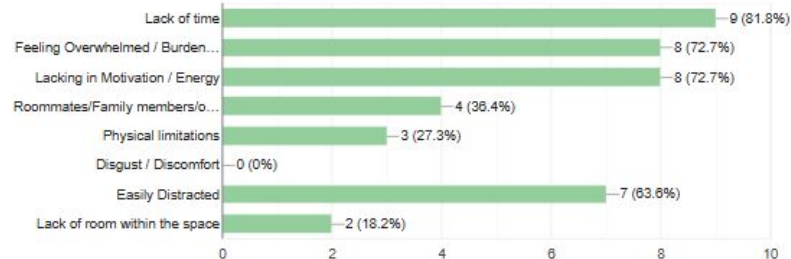


What sort of roadblock would prevent you from cleaning your Living Space?

[Copy chart](#)

Select All That Apply

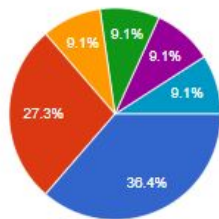
11 responses



Do you often feel ashamed or embarrassed of your living space when other people visit?

[Copy chart](#)

11 responses

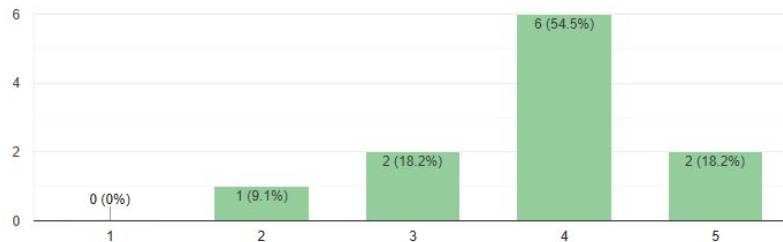


- Yes, not cleaning for a while makes me feel ashamed and not want to invite people
- Yes, however I do not mind if other people see my living space as it is.
- No, not cleaning for a while does not make me feel embarrassed or ashamed.
- no, because it's clean
- I do not feel ashamed because my space is clean, but if it was not I would...
- My living space is decently clean but not...

How familiar are you with the term Feng Shui?

[Copy chart](#)

11 responses



## Before

Based on Survey Feedback,  
Users Struggle With...

Finding Time and  
Purpose to Clean.

How can  
we make  
this easier  
for the  
user?



This previously updated page may contain some information on what may be going on, but there isn't enough information to help the user

Users find themselves lacking in not only motivation, but resources and tools as well. 63.7% of users feel the effects of “Dirty Home Shame” when outsiders perceive their living space, yet only 45.5% of those users state that they don't clean as regularly as they would prefer due to factors like time or emotional burdens.

## After

The previously iterated timer has been given more visual features, such as a pomodoro-like counter, the previously requested ability to choose the amount of time, and an option to pause the timer if needed. Users can also drag the slider back, if they need to rewind the counter, much like a real functional timer app.



## After Improvements

These small, yet impactful features add up to a more accessible user experience. By starting out small in our original prototype and removing distractions, the minimal layout allowed us to build more detail on top of the app's simple layout overtime. Thanks to given feedback, we are able to hone in on what features are distracting, and which are necessary.

03

Preference Testing

# PREFERENCE TESTING DETAILS

Details on how the Lyssna test was created, and what it asked of the users.

## RESEARCH QUESTIONS

1. For a timer app, which of these layouts do you prefer the most?
2. Each of these home screens have different text fonts. Which font do you prefer the most?
3. Overall, what mood do you think these visuals convey, and why did you choose them?

Each Question was paired with a set of prepared visuals for the user to compare to, using the tools provided in Lyssna, an A/B testing application.

## PARTICIPANTS

- 14 total recruited participants
- Participants were self-recruited, including outsiders who's age averages to about 20 years old.
- Study was accessible for use with a screen reader, along with both TTS (Text To Speech).

## METHODOLOGY

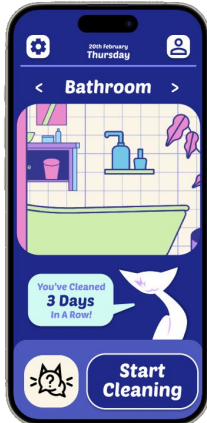
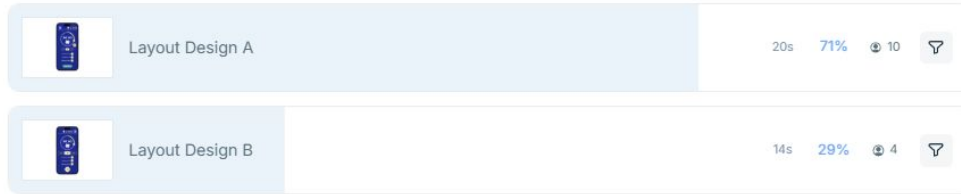
- 5-8 Minutes
- An A/B and Preference test study was done remotely and unmoderated through Lyssna.
- Users were asked to compare two finalized prototype images together, and pick which they preferred and why.

# Samples Of Preference Testing Data

☰ Instructions

For a timer app, which of these layouts do you prefer the most? *Designs are subject to change*

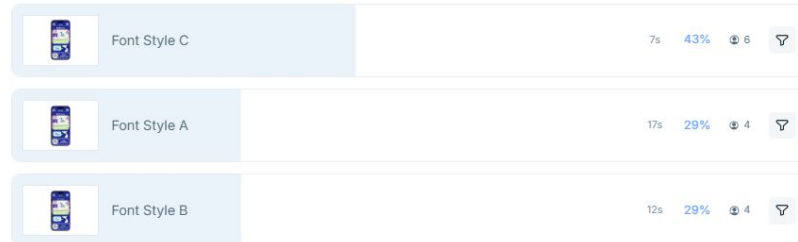
📊 Results



☰ Instructions

Each of these home screens have different text fonts. Which font do you prefer the most? *Designs are subject to change*

📊 Results

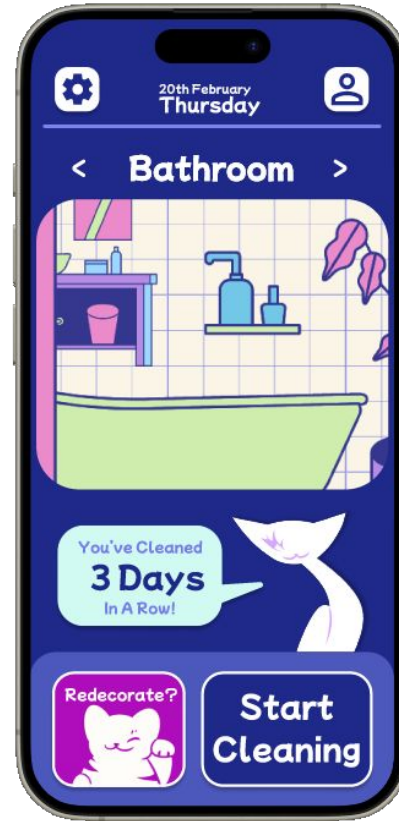


## Before

Based on Survey Feedback,  
Users Struggle With...

# Connecting With The App's Style.

While font isn't always difficult to read, it doesn't match with the brand's intended style. Some users requested a sans-serif font going forward to be easier to view from afar.



How can  
we make  
this easier  
for the  
user?

Users find themselves enjoying the overall style of the app and wishing for a layout that not only feels effective, but breaks the mold in typical UI design. This can be a difficult balance to strike, as creating a delightful experience for the user can also risk confusing them in unneeded details. Some users feel uncertain on what the intended target audience may be for this app.

After

Font had been cleaned up and can be more noticeable from farther away. Previously considered “feminine” pink elements are present in the design, but doesn’t show itself as the main focus in the app’s layout.



## After Improvements

The main font of the app has been tweaked to suit a wider audience, as well as match our logo branding. The previous curly font was determined to be more “feminine” or “youthful” to some users who may not match the demographic. While we don’t wish to drive away our existing users who do appreciate the design, striking a balance is key to retain our branding while also feeling inclusive to our originally broader target audience. From a business perspective, it is important to adapt our style based on the loyal demographic that chooses us, while still keeping our identity strong.

04

Unmoderated Maze

# MAZE STUDY DETAILS

Details on how the Maze test study was created, and what it asked of the users towards a better implementation of a Sign Up/Log In screen.

## RESEARCH QUESTIONS

1. Try and navigate your way to the app's Home Page by tapping the Sign Up button. From there, go ahead and try to Clean Your Kitchen.
2. Do you think the Landing Page screen gives you enough information on what the app is about?
3. Which button on the previous screen did you notice first?
4. Do you think the Sign Up page gives the users enough information on creating their account?
5. Even if it isn't here, where on this Login page would your eyes look FIRST to find a "forgot your password" button?

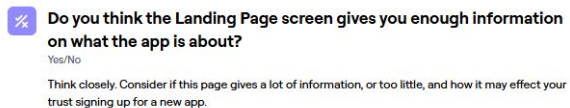
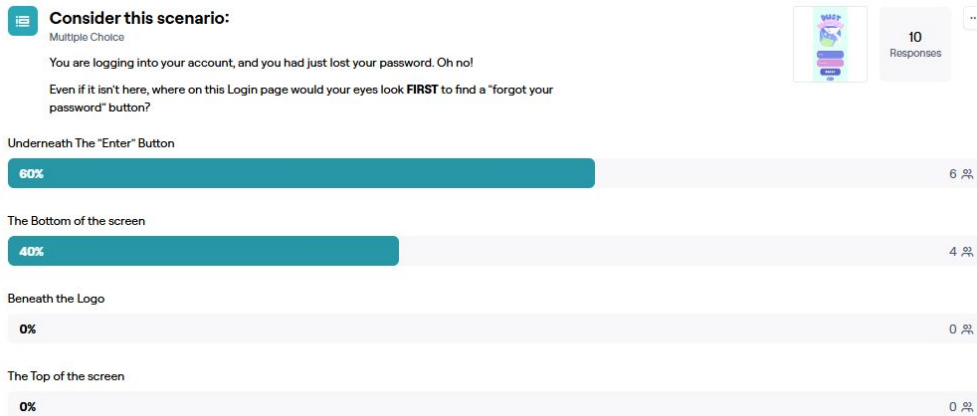
## PARTICIPANTS

- 14 total recruited participants
- Participants were self-recruited, including outsiders who's age averages to about 20 years old.
- Study was accessible for use with a screen reader, along with both TTS (Text To Speech).

## METHODOLOGY

- 10-15 Minutes
- Maze Study was done remotely and unmoderated.
- Users were asked to complete a smaller version of the prototype login, as well as answer a few multiple choice & yes/no questions about the app's layout and design.

# Samples Of Preference Testing Data



YES/NO

92%  
12 testers

8%  
1 testers

YES/NO

90%  
9 testers

10%  
1 testers

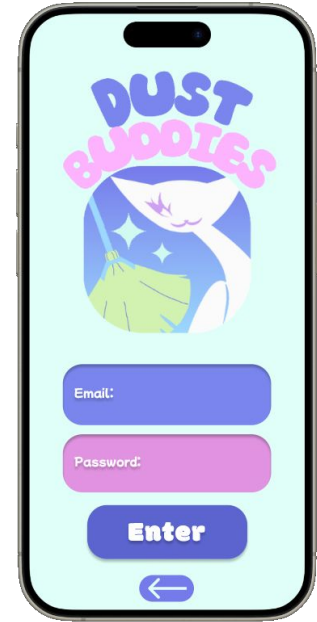
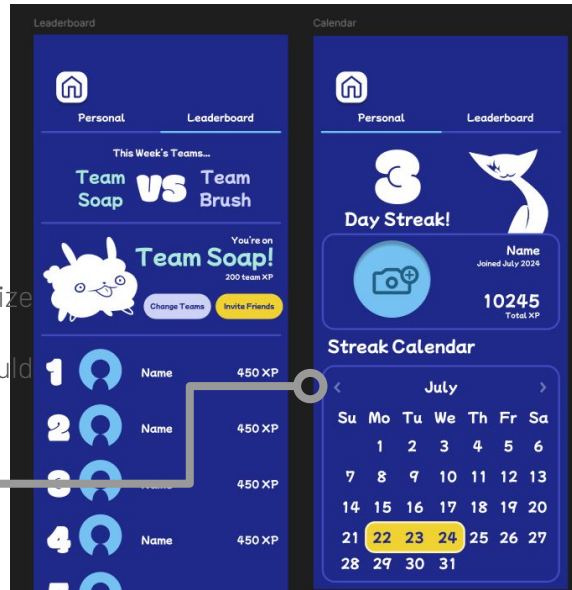
## Before

Based on Survey Feedback,  
Users Struggle With...

# Securing Their Account

With the leaderboard being attached to a "personal" tab, users were unable to recognize where their user information would be, and where they could be able to find their own information

Streak & Login info were viewed as a separate thing.



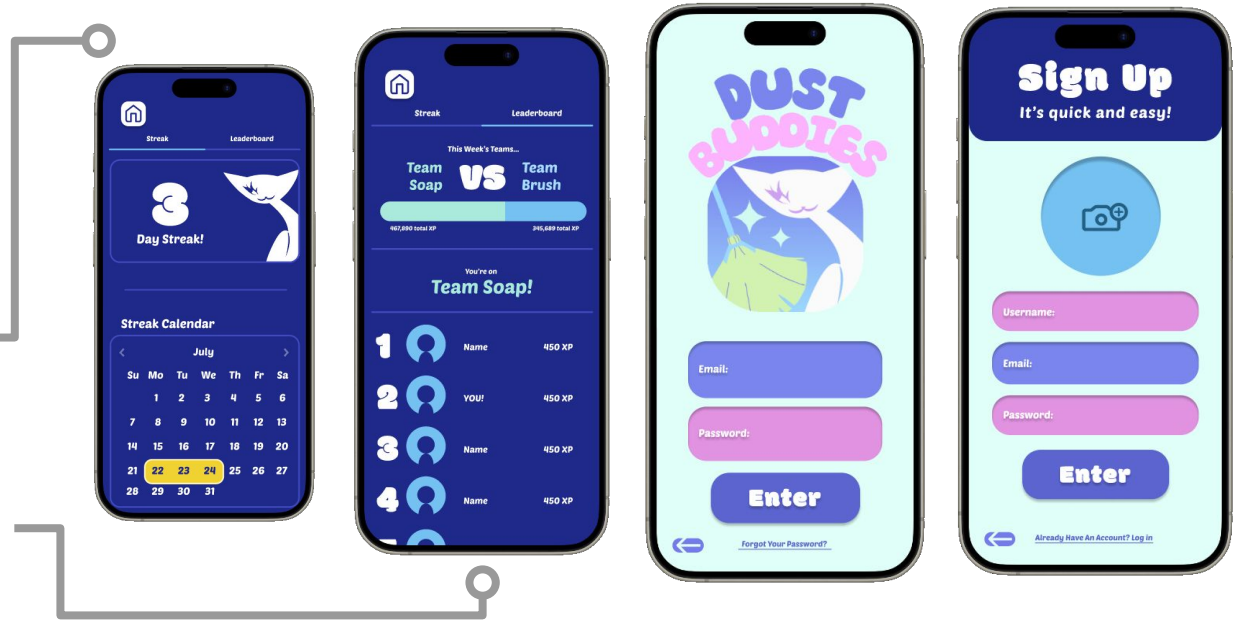
How can  
we make  
this easier  
for the  
user?

During testing, users had no desire to have a difficult login menu. They found the information placed in the sign up and login page to be extremely simple. Due to this, the lack of clutter allows for information to be added to help aid in accessibility for users in the future. Originally, a "forgot your password" was not included in the login & sign up, with no redirection in case if a user landed on the wrong page, leading to a 49% misclick rate in the MAZE test.

After

“Personal” now has the name of “Streak”, as to not be confused with the newly added profile page.

For now, these pages give all the information a user will need. Clients come to these pages to see both their streak, their goals, and their team leaderboard.



## After Improvements

To help with navigational confusion, the “personal profile” page is now going to be considered separate from the streak & leaderboard stats. The log in page now respectively includes a “forgot your password” recovery option, while the sign up page has a redirect button to those who may be looking to log into their account instead. The user details of the app’s flow can now be accessed quicker, rather than having to navigate back to the main menu.

05

**MODERATED USABILITY  
TEST**

# MODERATED USABILITY TEST DETAILS

Details on how the Moderated Usability test was created, and what it asked of the users.

## RESEARCH QUESTIONS

1. How long does it take a user to customize & complete a cleaning task on the app?
2. What can we learn from the steps the user took to complete their cleaning tasks? What are they missing?
3. What specific parts of the user flow do users find getting stuck in? What parts come easier?
4. Have you heard of feng shui in house decor before? If you had the option to redecorate your home to prevent future clutter buildup, how would that affect your daily routine?
5. What are the reasons users find the app easy or difficult to use?

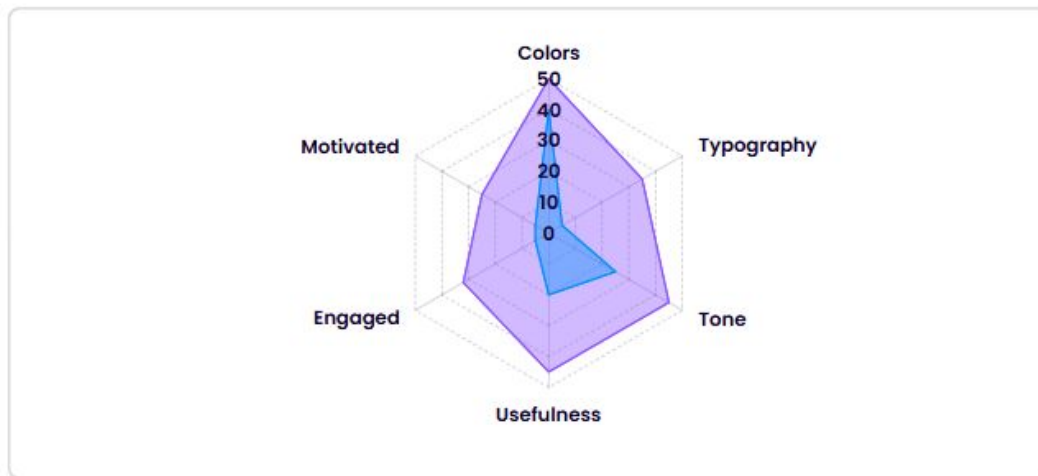
## PARTICIPANTS

- 2 participants, 1 spectator
- Participants will be students from the DME 211.0001 course at WTCC, who are 18 years or older in order to initiate proper consent to the survey.
- Study was accessible for use with a screen reader, a color contrast checker, along with both TTS (Text To Speech) and Real-Time Closed Captioning provided through Microsoft Teams.

## METHODOLOGY

- 25-30 Minutes
- United States, remote Study took place remotely (each participant will complete the study in their own home)
- Users were asked to complete a cleaning task on a high-fidelity prototype & navigate through the updated screens.

# Study On What App Features Peaked Testers Interest



● User 1

● User 2

## Before

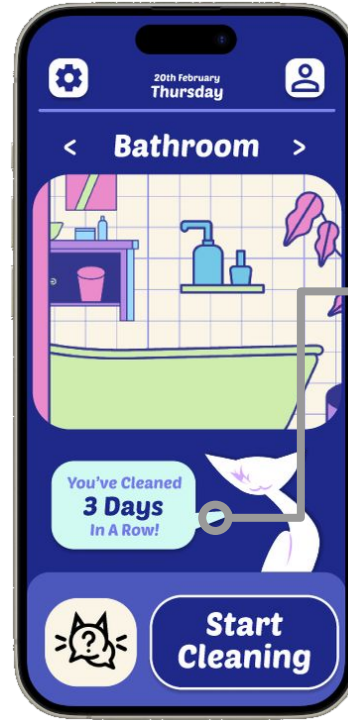
Based on Survey Feedback,  
Users Struggle With...

Feeling Engaged &  
Motivated to use the app.

Some users did not feel very attracted to the thought of cleaning or using the app for their routine. Some felt intrigued by the social aspect, but quickly found the experience to feel a bit stunted.

How can  
we make  
this easier  
for the  
user?

Not every user is going to align with our perfect image of our target audience. Some users may not wish for the app to only encourage them to clean everyday. And while that is the primary goal of Dust Buddies, we still provide other features are accessible for the user to take part in, such as our social leaderboard feature, or our new paid AR feature. However, users who have tested the app report a drop in motivation once they had realized how little engagement each option provides compared to the main user flow.

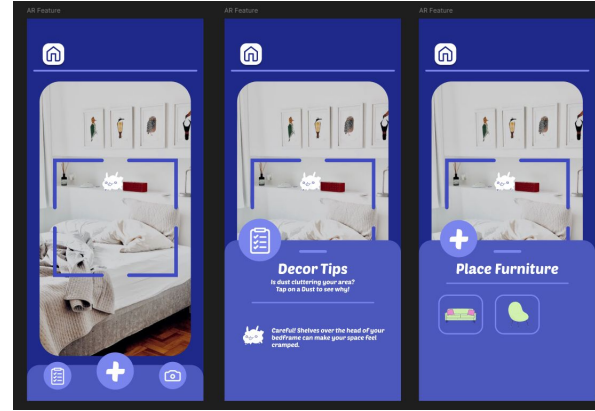


Profile needs to have its own page with a reason for the user to go there.

Testers were not as interested in a "daily" use of redecoration tips when asked about in the script. Rather, they felt more drawn to a general, non-daily use of a redecoration feature.

After

Profile (accessible from the home menu) now contains more rewards, information, and stats for the user that the leaderboard would not regularly give. Users can invite friends to join their team, unlock characters for the home page



AR Feature was given more options, such as for placing furniture, for style suggestions, and allowing Dusts to pop up and be tapped when the AR camera picks up information that can be given using classical feng shui, described in a more generalized language.

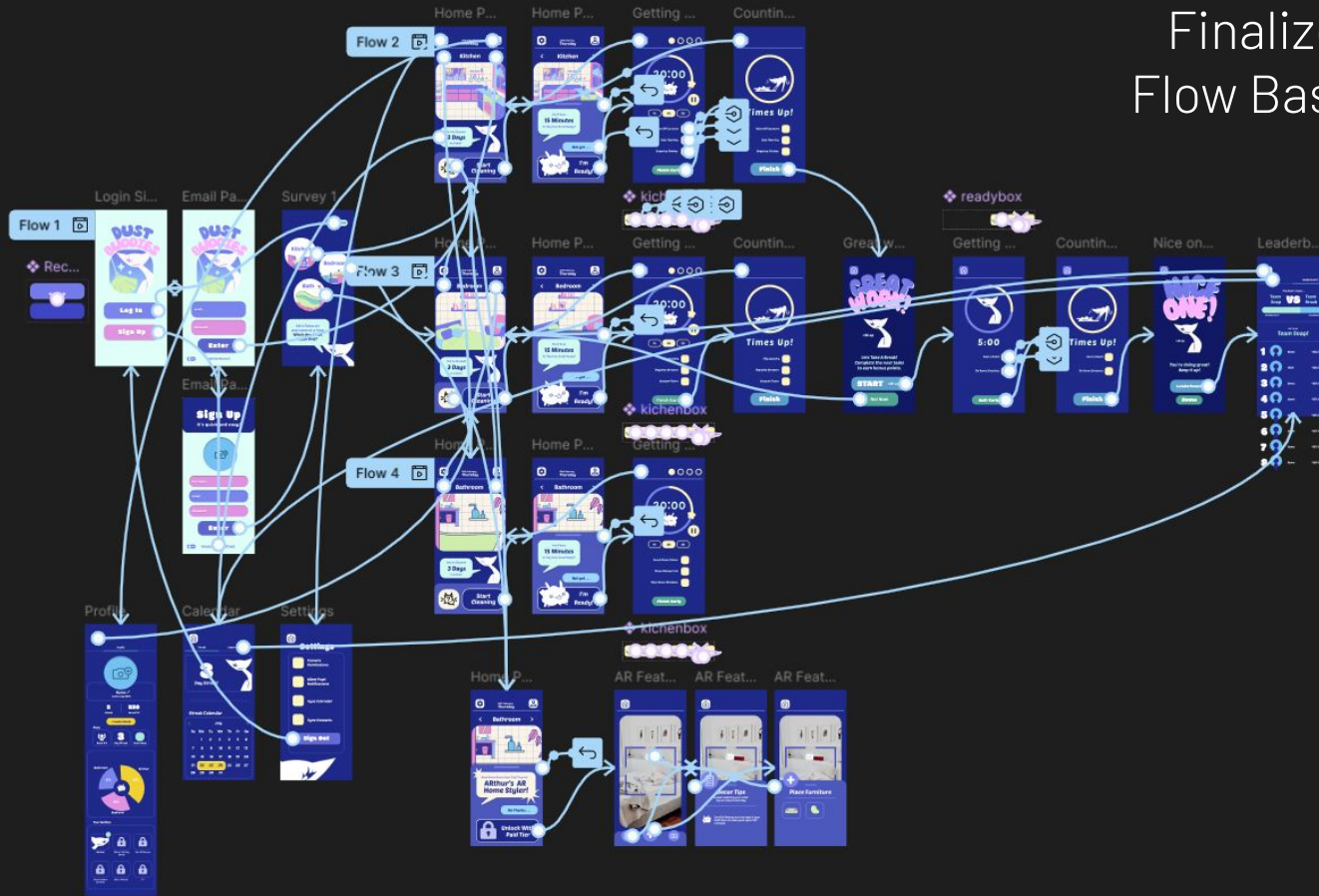
## After Improvements

Now that the primary user flow has more support with the profile update, users can feel motivated through a second user flow within the app. By adding the second user flow, the AR feature, as something that isn't required yet still carrying a lot of useful information, it can stand as a more calmer incentive to the app's primary, competitive way of increasing engagement.

06

Acknowledgement

# Finalized Updated User Flow Based On Identified Themes.



## Summary

In conclusion, the multiple rounds of testing done were critical in finding small quirks and design errors that only our consumers would notice. Text, layout, and navigation were all improved in small increments that made an incredible difference in the app's development. Users slowly discovered their preferences and needs were met overtime, which allowed Dust Buddies as a product to grow alongside the user's need.

In order for Dust Buddies to continue to evolve at this pace, having our product design stay people-first will always be our top priority.

## Additional Recommendations & Future Considerations

Dust Buddies plans to add these features in the future to help improve user experience and expand on the app's capabilities.

- 01 Add settings to change your password, email, and payment options if needed.
- 02 Adding a social page to those who use the Paid AR feature to share their progress
- 03 Add weekly achievements in the Streak page to encourage users on returning daily.

# Questions?



# Acknowledgement

I would like to thank the stakeholders here today for taking the time out of your schedule to give me this wonderful opportunity in research & development for this app.

I give my thanks to those that had assisted me in testing this application, helping me refine my research skills and gain a better understanding in user needs.

I appreciate your continued trust, and look forward to contributing to projects with Dust Buddies in the future!

THANK  
YOU!

JESSICA PERLIN | DUST BUDDIES

# Works Cited

All Character Figure Assets:  
*Illustrated By Jessica Perlin*

Assets Used In The Background Image of Bathroom, Bedroom, and Kitchen:  
*Dany Santos from Canva under Canva's Free Content License Agreement*

Photography of Bedroom Photo by *Monica Silvestre* from Pexels:  
<https://www.pexels.com/photo/photography-of-bedroom-1034584/>