

ATHENA SHIRAVI, ZOYA GARG, ESHA GUPTA

A5: Low-Fi Prototypes

SKETCHING, LOW-FI PROTOTYPING & PILOT
USABILITY TESTING

Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

Team Cybele



Athena Shiravi

B.A. Econ

B.S. CS

HCI Coterm



Esha Gupta

B.S. SymSys

B.A. IR



Zoya Garg

B.S. CS

B.A. Classics

We Pivoted...

Here's what's staying the same

OUR PROBLEM SPACE

Working Moms

Working moms experience mental health challenges as they navigate **career demands** and **family responsibilities**, often *without adequate support systems*



OUR PROBLEM SPACE

**Shared art has historically
built community and helped
people heal.**

OUR PROBLEM SPACE

**Shared art has historically
built community and helped
people heal.**

(but we aren't drawing roses anymore)

We Pivoted...

Here's what's different

Moms often experience moments of
isolation or mental fatigue
throughout the day.

Our

Solution:

MUSE

Moms often experience moments of isolation or mental fatigue throughout the day.

An interactive, online mural to doodle on with their loved ones offers them a playful, creative outlet to express themselves and connect with others.

**Our
Solution:**

MUSE

Moms often experience moments of isolation or mental fatigue throughout the day.

An interactive, online mural to doodle on with their loved ones offers them a playful, creative outlet to express themselves and connect with others.

This helps foster a sense of community and mental well-being.

**Our
Solution:**

MUSE

Our Value Add:

MUSE provides moms with a low-friction space to leverage creativity to build community.

In moments of isolation or fatigue, moms said they wanted spaces for **communal comfort and self-expression**. MUSE brings community to these moms in a playful, inviting way.

Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

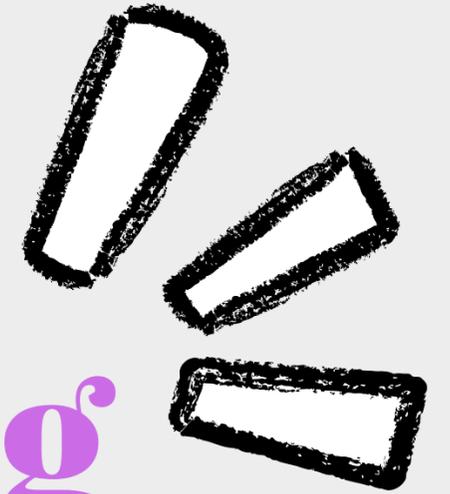
TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

SKETCHING EXPLORATIONS

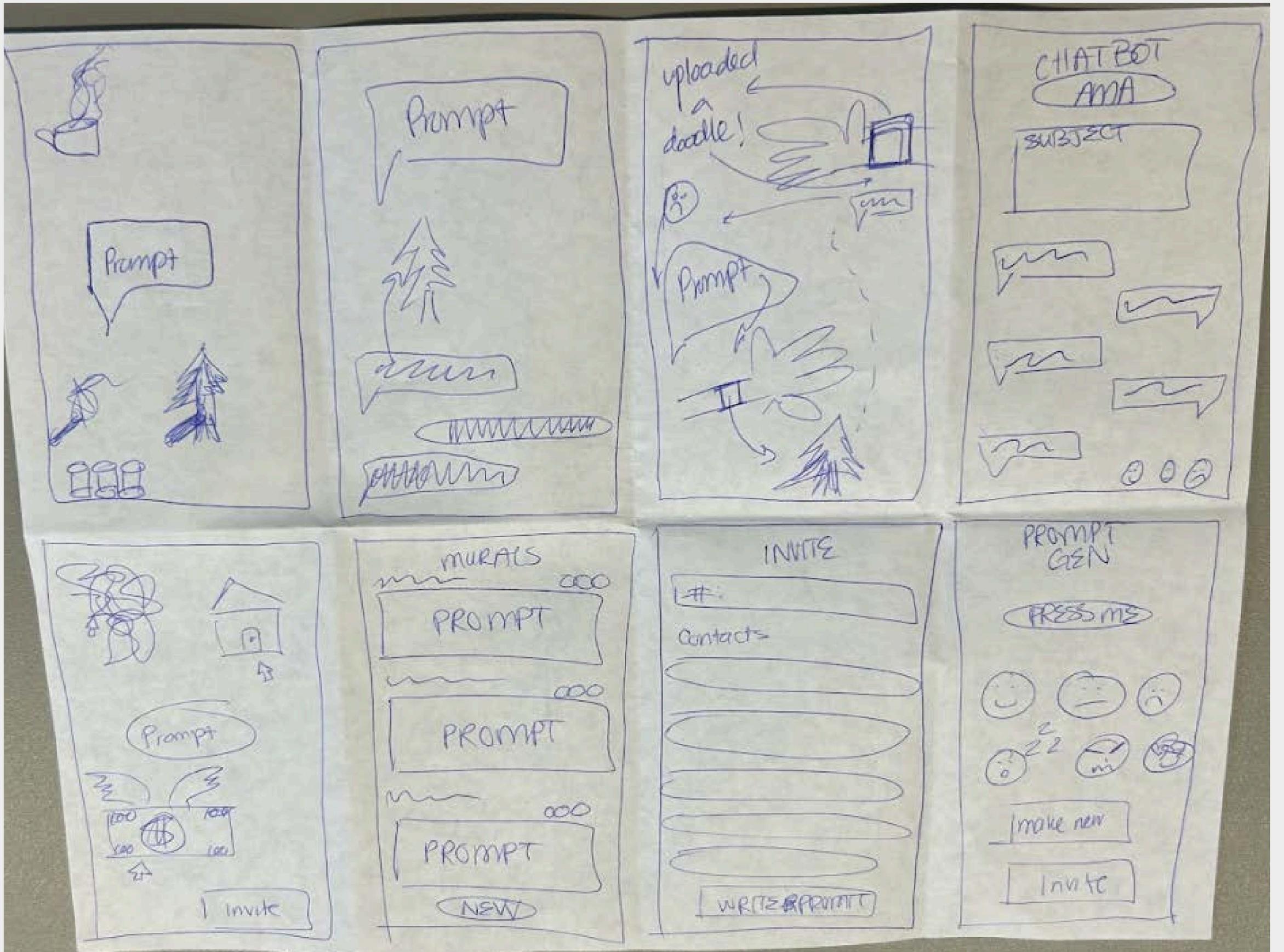


Meet us at the Drawing

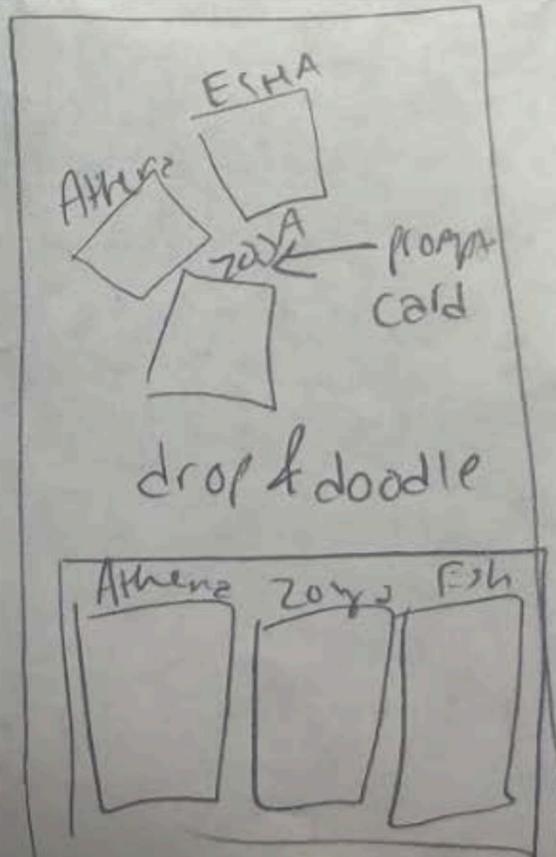
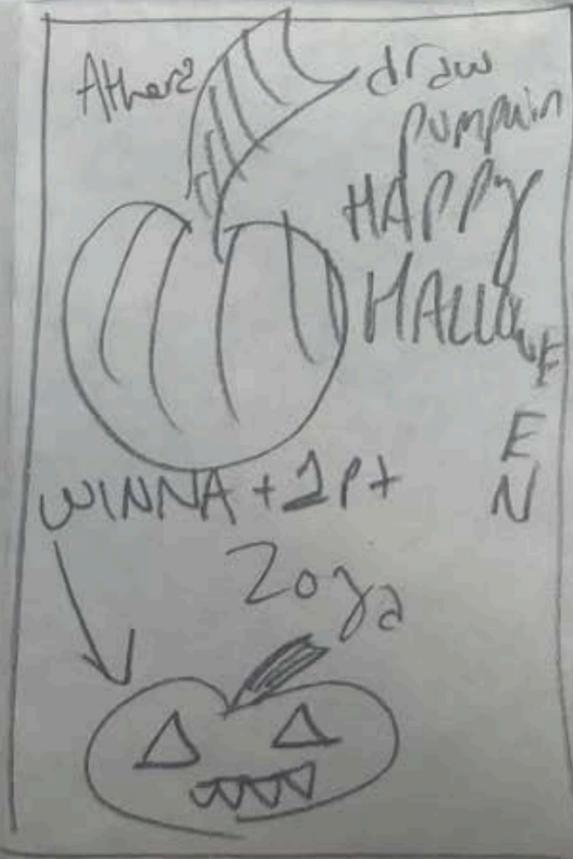
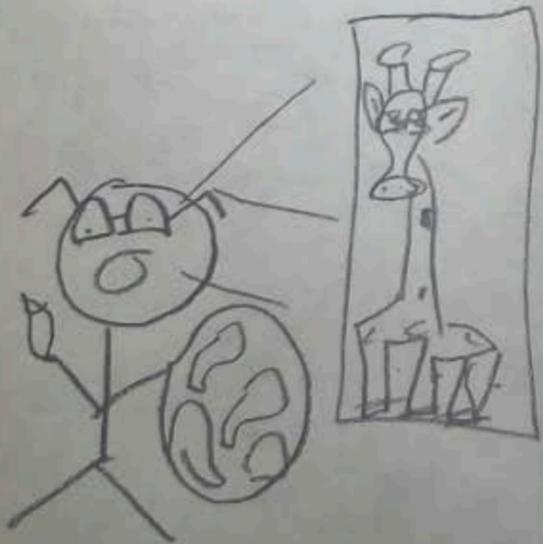
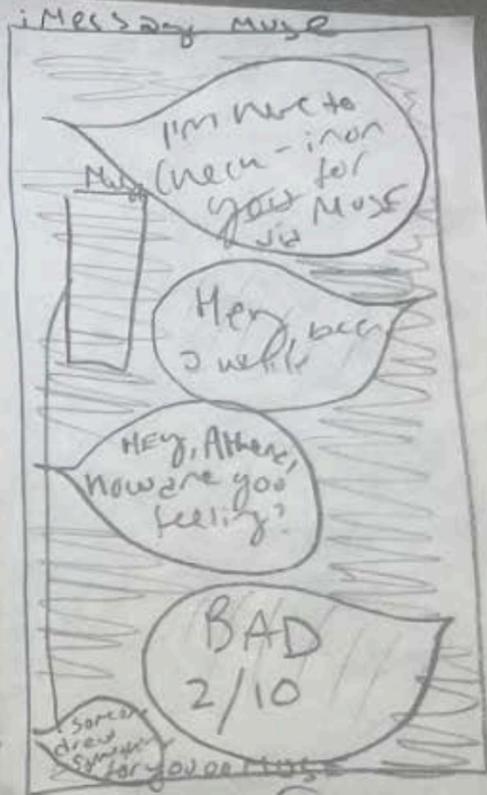
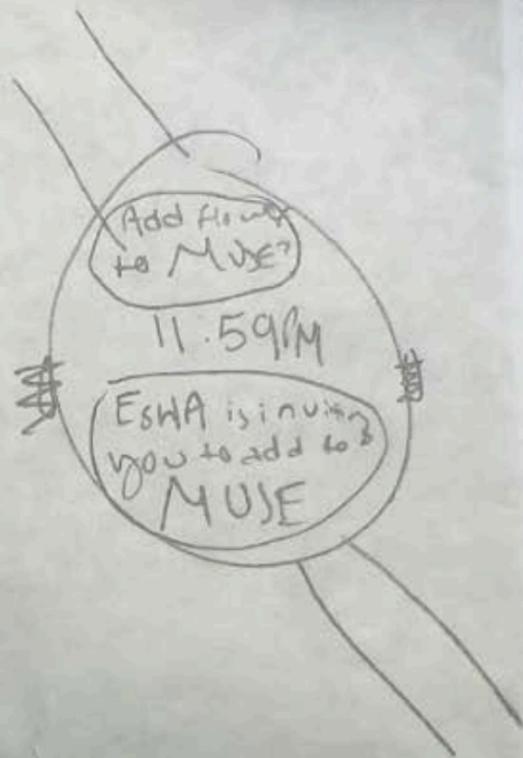
Board



Sketching Explorations



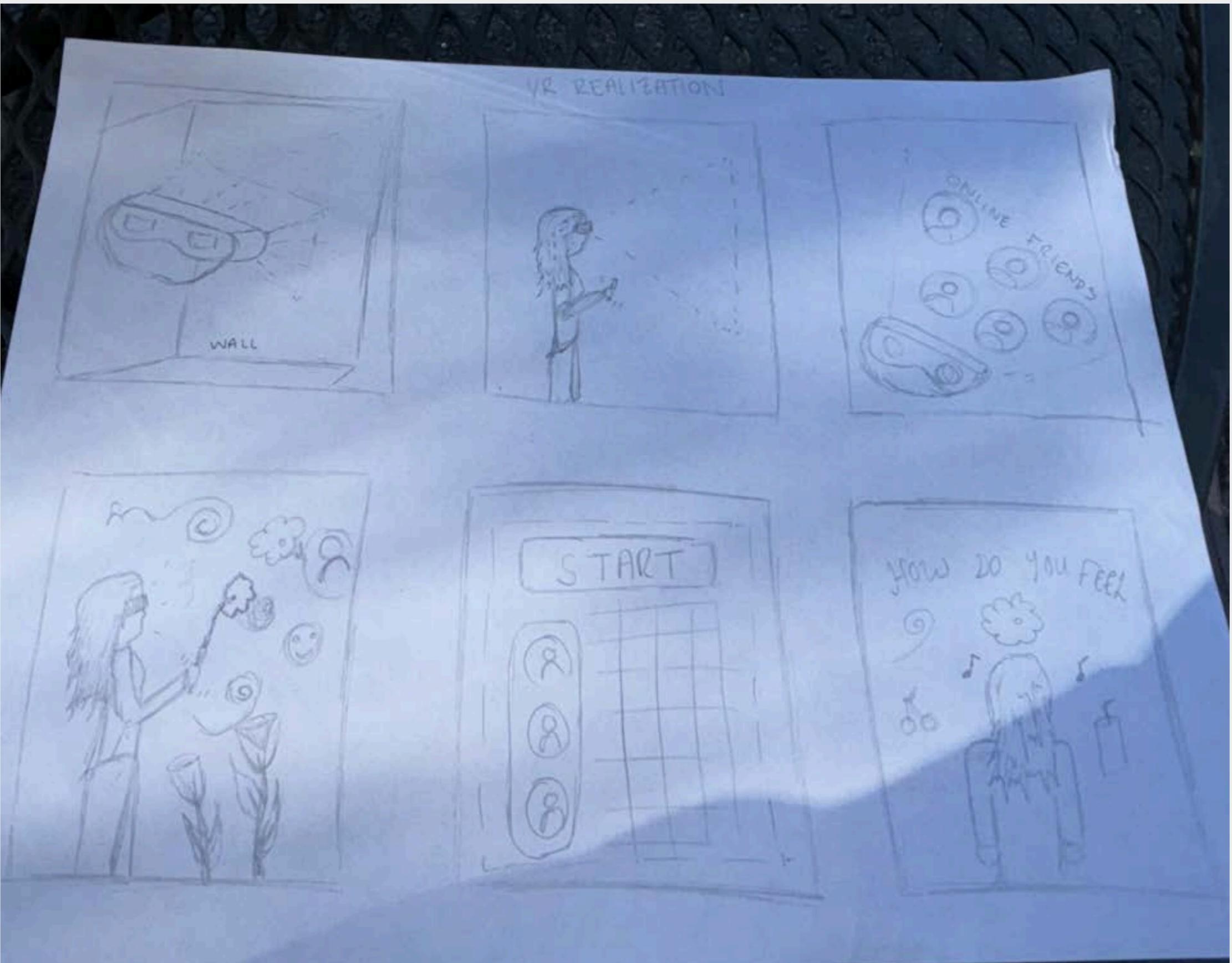
Sketching Explorations



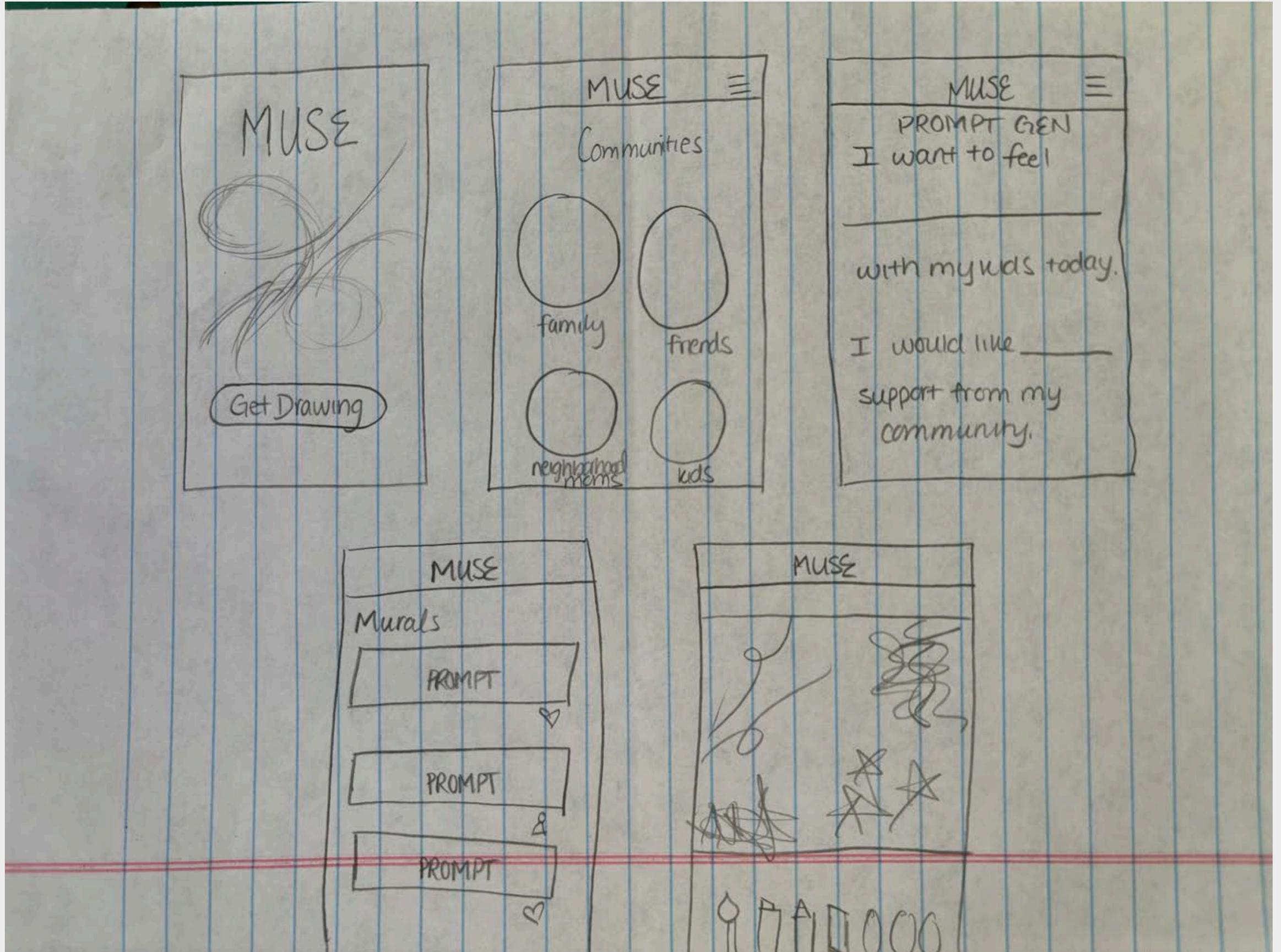
Sketching Explorations



VR Realization



Mobile Realization



Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

PROS:

Creating and viewing murals in their physical environment creates an **interconnected experience**

AR can enable more engaging, interactive features like gesture-based drawing

VR

PROS:

Creating and viewing murals in their physical environment creates an **interconnected experience**

AR can enable more engaging, interactive features like gesture-based drawing

CONS:

Some users might find it **confusing or intimidating** to interact with the app, along with **accessibility concerns**

VR

PROS:

Almost **everyone** has a smartphone!

Users can engage with the app anywhere, anytime, creating or contributing to murals on the go.

Mobile

PROS:

Almost **everyone** has a smartphone!

Users can engage with the app anywhere, anytime, creating or contributing to murals on the go.

CONS:

Small screens may **limit the collaborative and creative possibilities** for drawing murals

Mobile

IMPLICATIONS

So what did we choose?

And why...

Mobile!

MUSE IS A COMMUNAL APP --> **MOBILE GETS MORE PEOPLE ON**
MOMS ARE BUSY --> **MOBILE IS PORTABLE AND FAST**

Mobile!

MUSE IS A COMMUNAL APP --> **MOBILE GETS MORE PEOPLE ON**
MOMS ARE BUSY --> **MOBILE IS PORTABLE AND FAST**

but...

MOBILE IS LESS IMMERSIVE

Mobile!

LOW-FI PROTOTYPE

From No-Fi to Low-Fi

Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

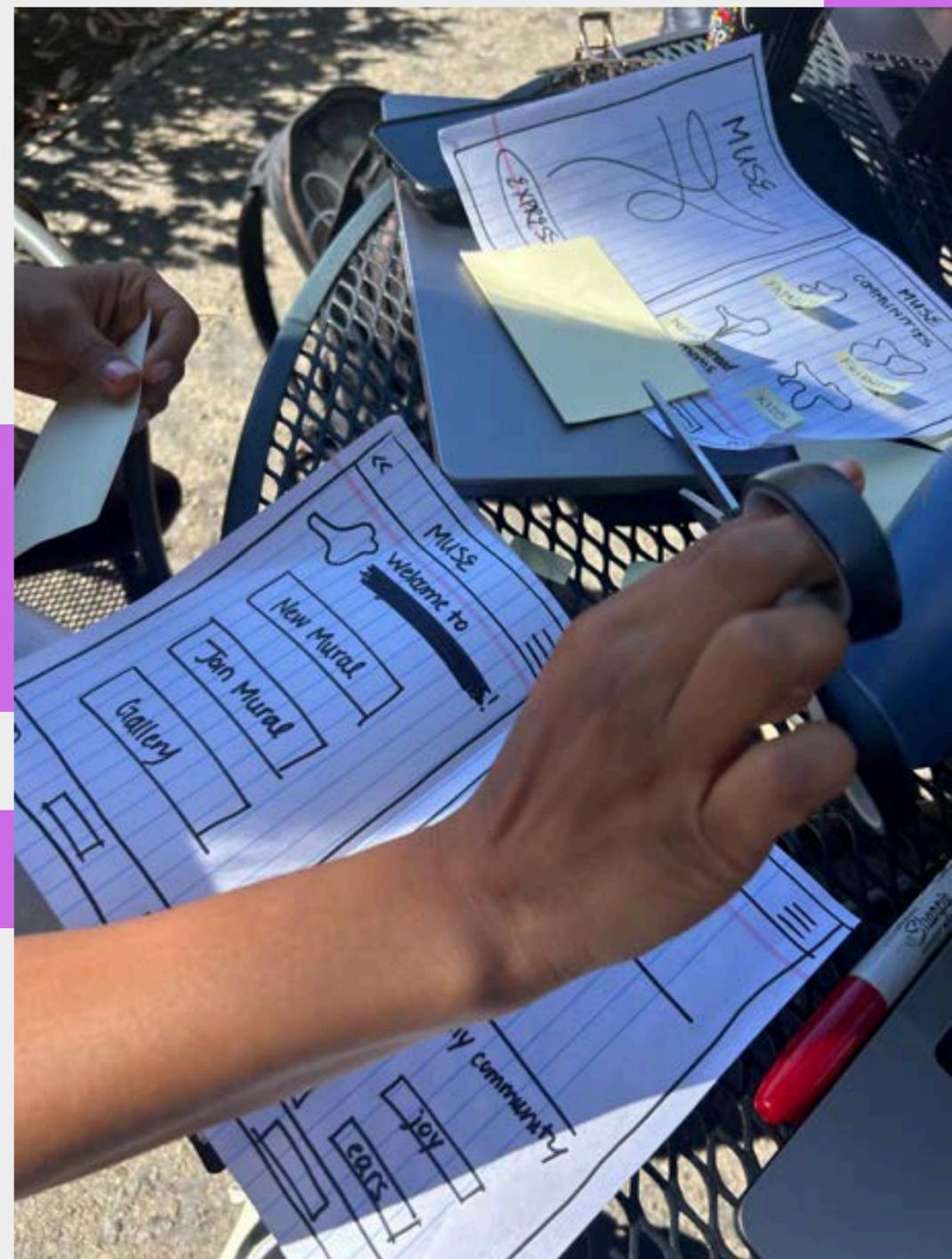
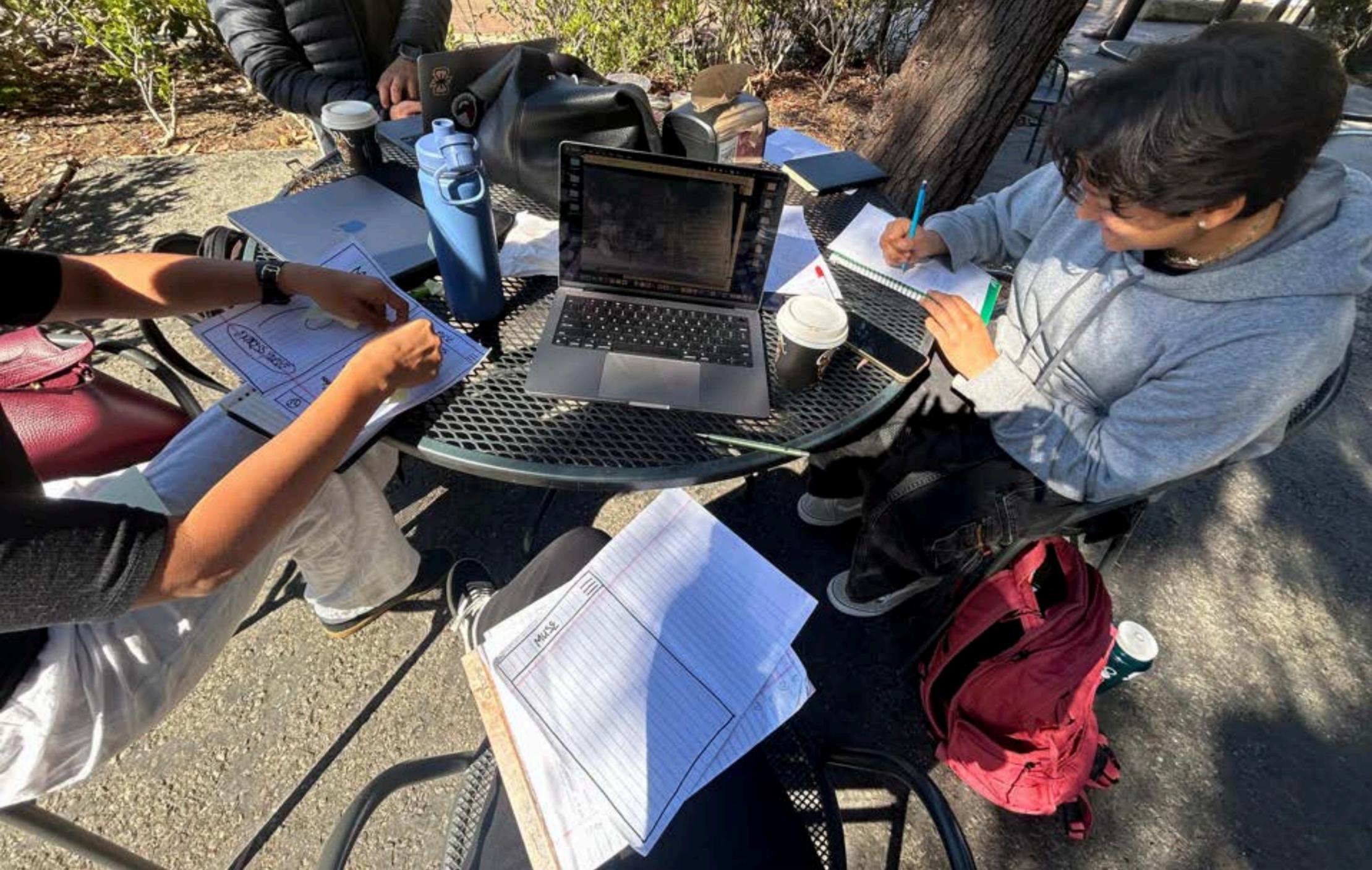
CONSTRUCTION PROCESS:

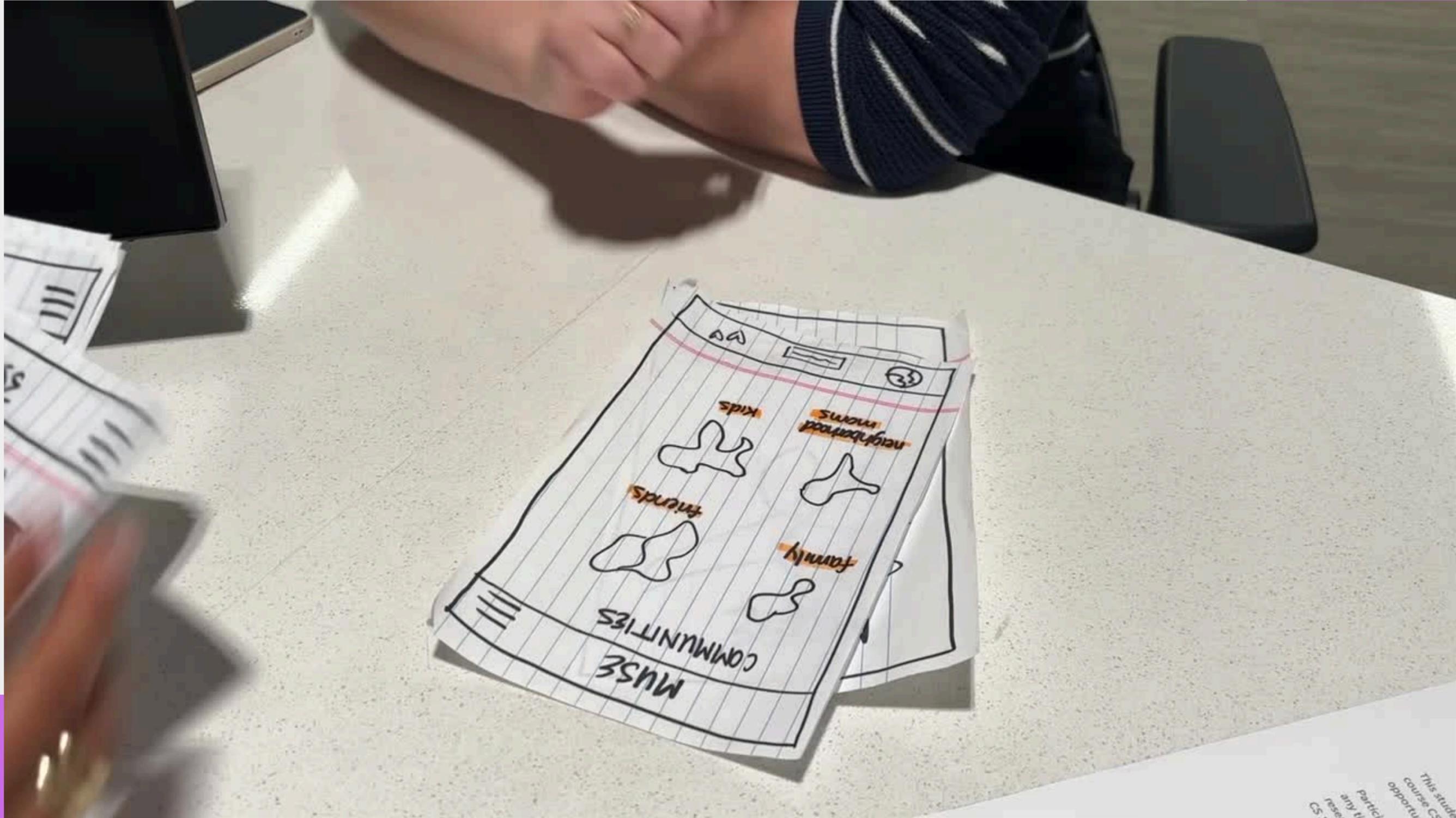
1. SKETCHED OUR 3 TASK FLOWS
2. DREW OUT EACH SCREEN FOR EACH TASK
3. FILLED IN GAPS BETWEEN TASKS
4. CUT UP ALL STEPS AND ADDED INTERACTIVE “BUTTONS” WITH POST ITS

KEY FEATURES:

OUR BUTTONS

HANDING THEM PENS TO DRAW *(SHOUTOUT GRAY!)*





This study course CS
opportu
partic
any N
rese
CS

Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

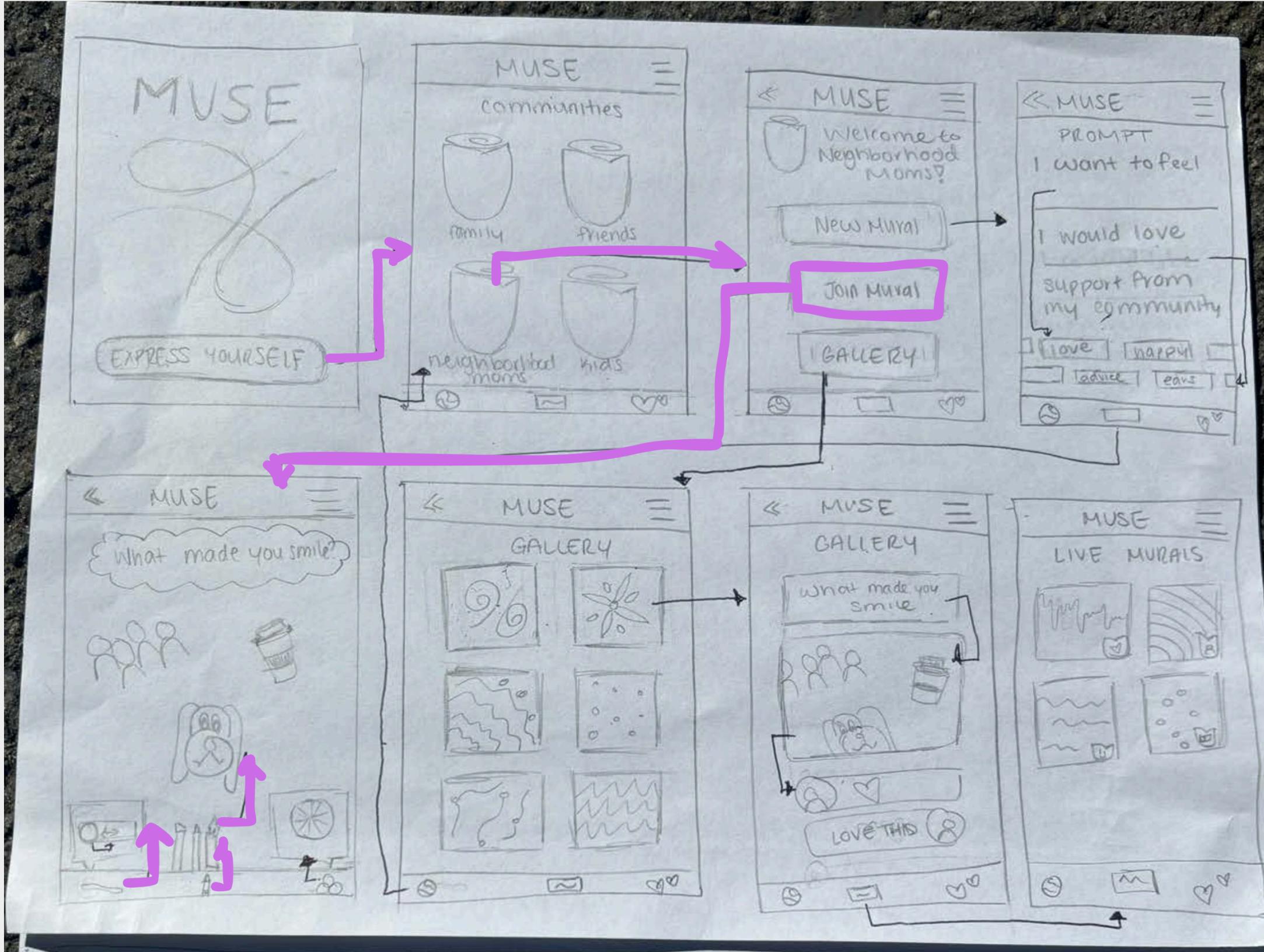
TASK FLOWS

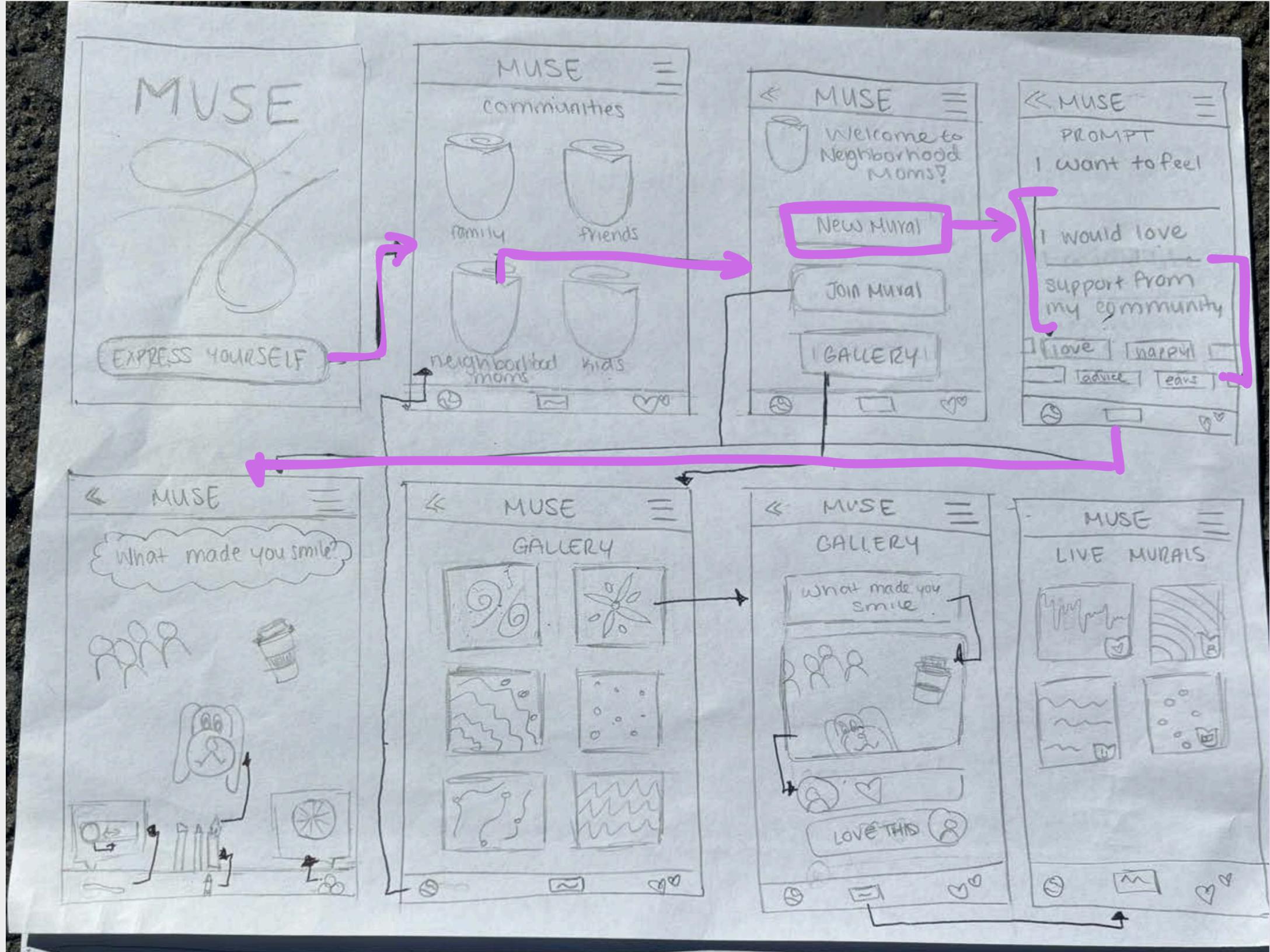
METHODOLOGY

RESULTS

DISCUSSION

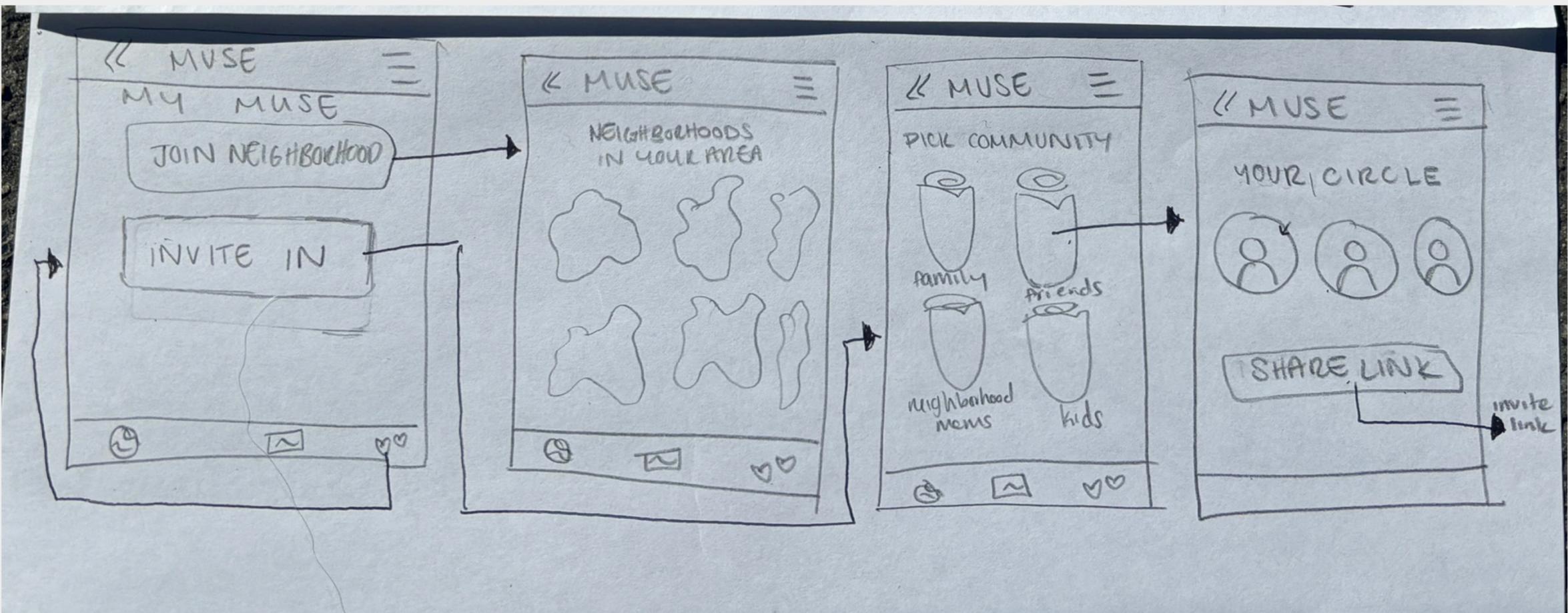
Making a Simple Task Doodle





Moderate Task Making a Mural

Complex Task Inviting a Mom



Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

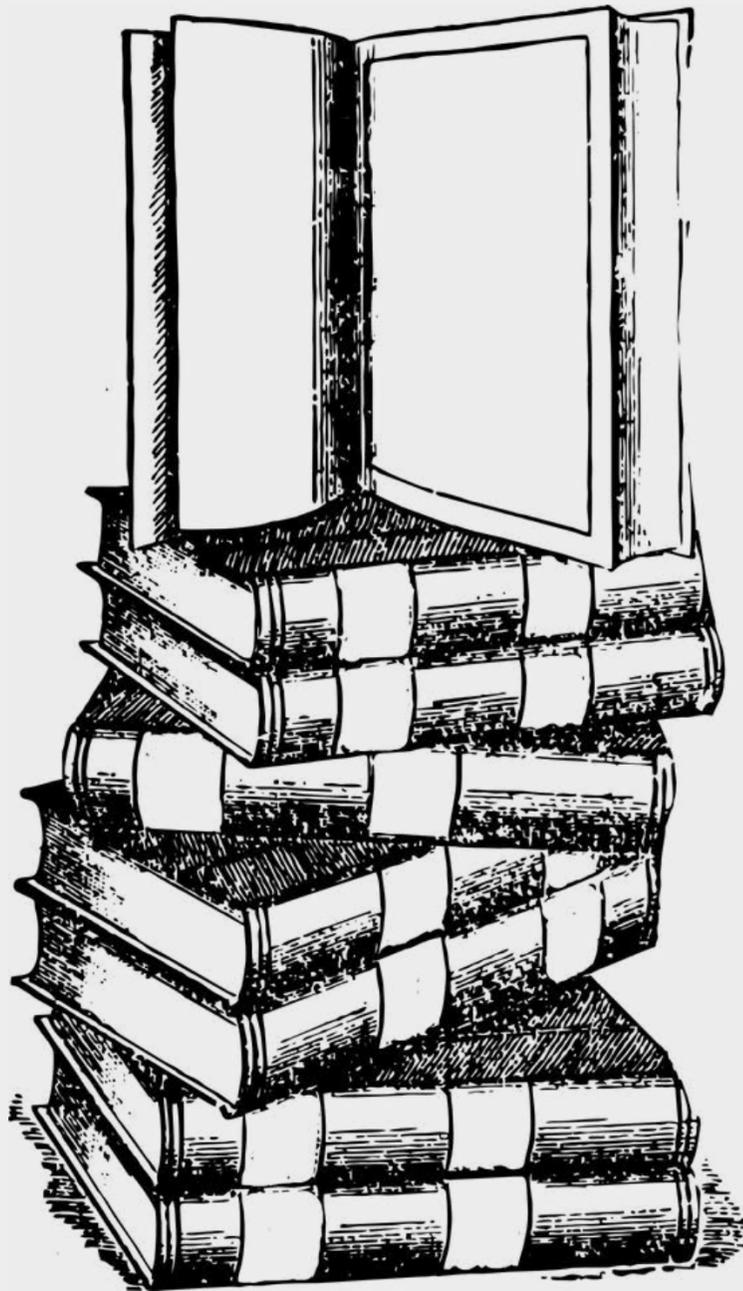
TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

LOW-FI PROTOTYPE



**All Roads Lead to
Green Library...**

Participant 1

- **Demographics:** white, woman, librarian, 1 daughter who is 24 y/o and in Vermont
- **Recruitment:** Asked to participate in a 1-2 minute demo
- **Compensation:** we actually helped organize her office supplies drawer
- **Environment:** Green Library
- **Apparatus:** Paper demo
- **Procedure:** one person flipped through the papers, the other filmed
- **Usability and Key Measurements:** how long it took to process each slide and whether or not doodling actually made her feel community

Participant 2:

- **Demographics:** indian, mom, 1 daughter who is senior RA in Soto visiting campus
- **Recruitment:** Asked to participate in a 1-2 minute demo
- **Compensation:** Said thank you!
- **Environment:** Outside of Coupa Cafe
- **Apparatus:** Paper demo
- **Procedure:** one person flipped through the papers, the other filmed
- **Usability and Key Measurements:** how long it took to process each slide and whether or not doodling actually made her feel community

Participant 3:

- **Demographics:** white, mom of two sons, married to stanford alum
- **Recruitment:** Asked to participate in a 1-2 minute demo but was standing up no table surface
- **Compensation:** Said thank you!
- **Environment:** Meyer green
- **Apparatus:** Paper demo
- **Procedure:** one person flipped through the papers, the other filmed
- **Usability and Key Measurements:** how long it took to process each slide and whether or not doodling actually made her feel community

Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

LOW-FI PROTOTYPE

**Here's what the moms
taught us**

Bird's Eye Learnings:

**Our flow is a little confusing:
moms don't know quite what leads where,
and how to navigate to a screen they want**

PARTICIPANT 1:

Bird's Eye Learnings:

**Our flow is a little confusing:
moms don't know quite what leads where,
and how to navigate to a screen they want**

The Bottom-Line Data

- Did not understand what community slides meant
- Struggled with knowing where to click
- Gallery selected, due to it being "the most broad" when she was a little confused what prompt was

PARTICIPANT 1:

Bird's Eye Learnings:

We need to tinker with our prompts and “doodle” expectations -- there may be signs moms want more autonomy and nuance than we thought

PARTICIPANT 2:

Bird's Eye Learnings:

We need to tinker with our prompts and “doodle” expectations -- there may be signs moms want more autonomy and nuance than we thought

The Bottom-Line Data

- She clicked the back button
- Was the first to write in the blanks different words than the options given to her such as “Seeing my daughter at Stanford” vs. “joy, love, etc”
- Did not doodle, wrote words instead

PARTICIPANT 2:

Bird's Eye Learnings:

Yeah okay Gallery needs to go somewhere else...

But we saw and heard that doodling with
other moms made her smile a ton :)

PARTICIPANT 3:

Bird's Eye Learnings:

Yeah okay Gallery needs to go somewhere else...

**But we saw and heard that doodling with
other moms made her smile a ton :)**

The Bottom-Line Data

- She loved seeing the coffee doodle of a former mom
- Also clicked gallery, which was unexpected
- Said she loved to participate

PARTICIPANT 3:

“I had great coffee a few minutes ago, that made me smile, too!”



Roadmap

INTRODUCTION

EXPLORATIONS

INTERFACE

PROTOTYPE

TASK FLOWS

METHODOLOGY

RESULTS

DISCUSSION

LOW-FI PROTOTYPE

Looking ahead

STAKEHOLDERS & ETHICAL IMPLICATIONS

IMPLICATIONS

- Moms loved seeing other people's doodles and commenting on them
- It is unclear what our app is about from our initial launching screen
- Moms tended to choose Gallery as a default
- Drawing is not for everyone

DESIGN CHANGES

- Explore reaction features to murals
- Move the gallery to the NavBar so it becomes a supplementary feature of the app
- Include descriptive titles instead of just "communities" or "murals"
- Include a splash screen with a tagline to frame our app's purpose
- Add the option to drop an emoji or sticker instead of drawing

WHAT TESTING MISSED

- We caught moms when they weren't busy. It would be important to test the flow when a mom was in a rush or under a time crunch
- We did not test any moms whose first language was not English
- Live, real-time drawing with other moms
- A follow-up on how they felt 30 minutes after

Appendix

APPENDIX

PROS & CONS (MOBILE)

Pros:

1. **Accessibility:** Almost everyone has a smartphone, making it easy for users to access the app without extra equipment.
2. **Ease of Use:** Familiarity with mobile apps means a lower learning curve, ensuring more users can participate without technical barriers.
3. **Wider Audience:** You can reach a larger user base across different age groups and tech comfort levels, including moms who might be less familiar with advanced tech like AR.
4. **Portability:** Users can engage with the app anywhere, anytime, creating or contributing to murals on the go.
5. **Lower Development Cost:** Developing and maintaining a mobile app is generally less expensive than an AR app, as it uses well-established technologies.
6. **Offline Access:** You can implement features allowing offline drawing or saving, adding flexibility to how and when users participate.

Cons:

1. **Limited Immersion:** While engaging, mobile apps may not create the same level of immersion or spatial experience that AR could offer.
2. **Screen Size Constraints:** Small screens may limit the collaborative and creative possibilities for drawing murals, especially with fine details or large group interactions.
3. **Visual Impact:** The 2D interface may not fully capture the experience of communal and spatial artwork like an AR experience could.]

APPENDIX

PROS & CONS (VR)

Pros:

1. **Enhanced Immersion:** VR allows users to create and view murals in a shared digital environment, which can make the experience feel more connected and immersive.
2. **Spatial Collaboration:** VR can foster a sense of shared space, making users feel like they're co-creating artwork together in real-time, even when physically apart.
3. **Interactive Elements:** VR can enable more engaging, interactive features like gesture-based drawing, transforming physical surroundings into a canvas.
4. **Novelty and Engagement:** The novelty of VR can attract more users and increase engagement due to the unique experience it offers.
5. **Customization:** Users can visualize murals in different spaces, adding a layer of personalization and reflection based on their physical environment.

Cons:

1. **Accessibility Limitations:** VR requires compatible headsets limiting the potential user base.
2. **Learning Curve:** Some users, particularly those unfamiliar with VR, might find it confusing or intimidating to interact with the app.
3. **Higher Development Cost:** Building and maintaining an VR app typically requires specialized skills, more time, and higher costs compared to mobile apps.
4. **Battery Drain:** VR applications can be resource-intensive, causing devices to heat up and run out of battery quickly.

