MUSE
LOW-FI PROTOTYPING & USABILITY TESTING
CS 147 ART AND CULTURE
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VALUE PROPOSITION

Inspire others. Inspire yourself.

PROBLEM & SOLUTION

Although engaging with art can provide personal expression and emotional fulfillment, people feel discouraged when they can't turn inspirations into reality--or can't find inspiration at all--and feel they don't belong in the art community.

Muse encourages everyone to cultivate their creativity providing a community where users can share inspiration with artists who want to improve their skills or try unfamiliar ideas. We believe a collaborative art community will help every user find their own creativity.
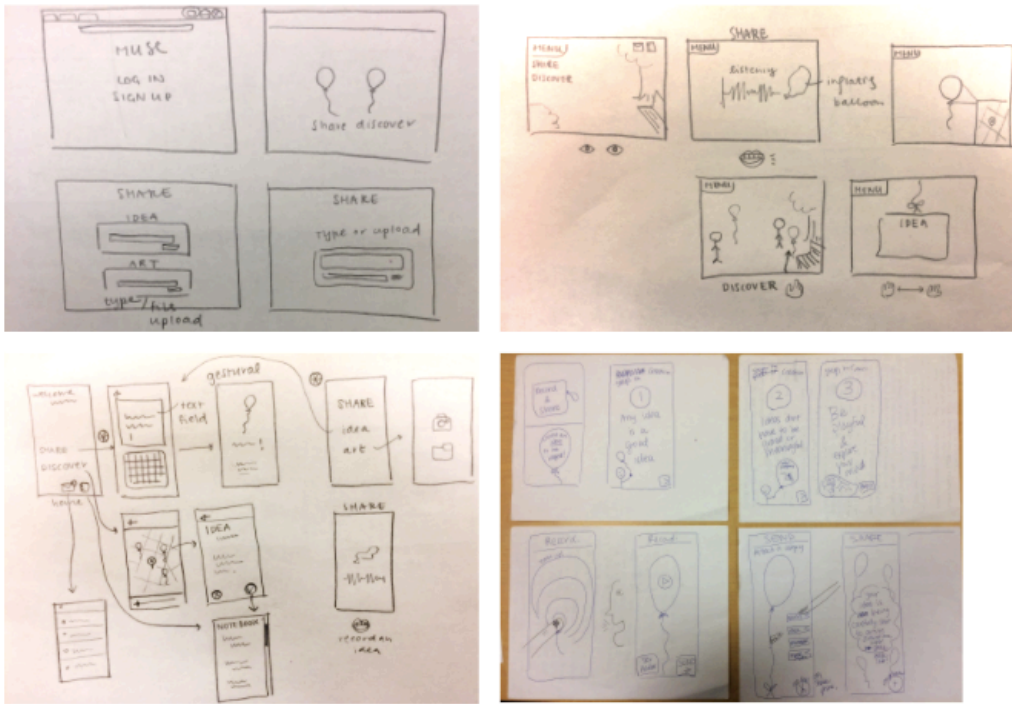
CONCEPT SKETCHES

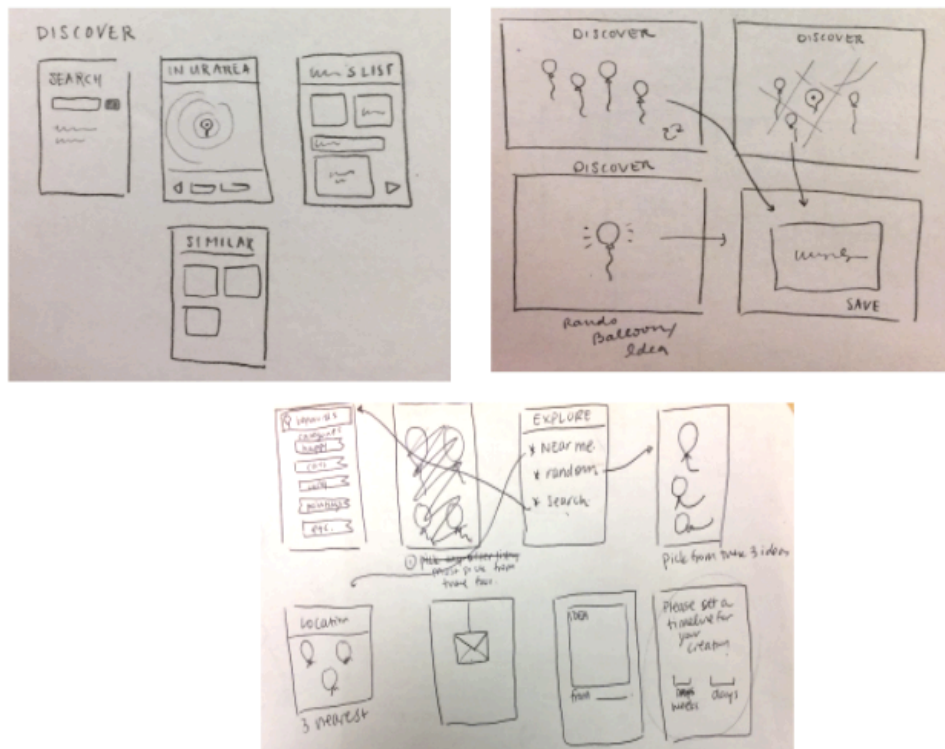
Figure 1. Concept sketches for sharing ideas

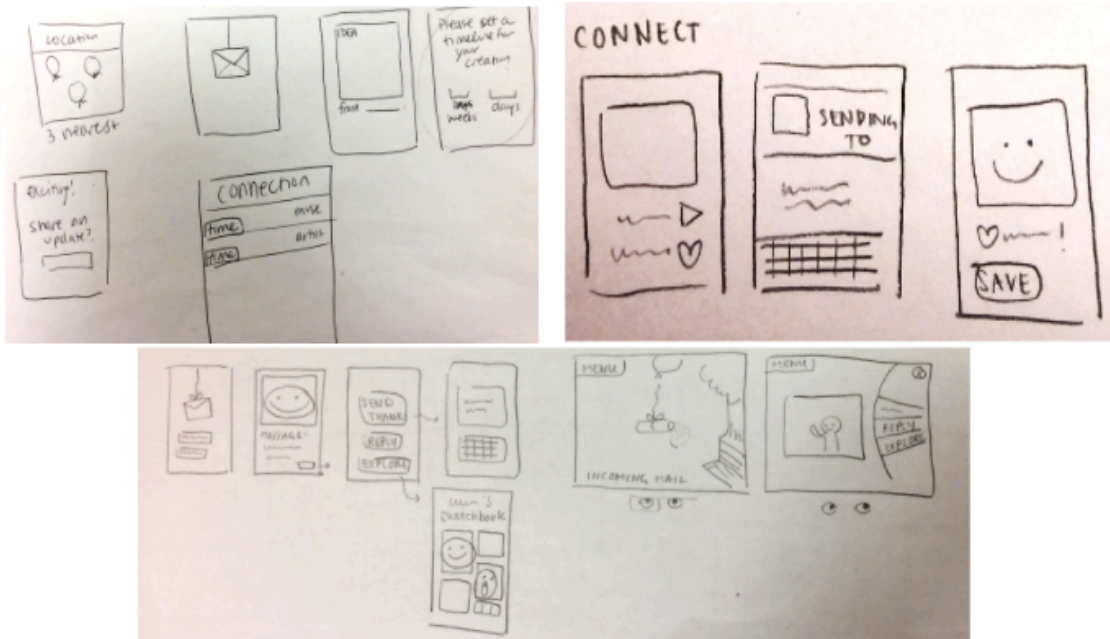Figure 2. Concept sketches for discovering ideas

Figure 3. Concept sketches for connecting with others

DESIGNS

DESIGN 1: RANDOM/UNDIRECTED DISCOVERY

Our first selected mobile-interface design focuses on sharing and random discovery. As shown in Figure 4, muses share inspiration to one collective database. Artists "shuffle" 3 random ideas from the database when discovering inspiration.
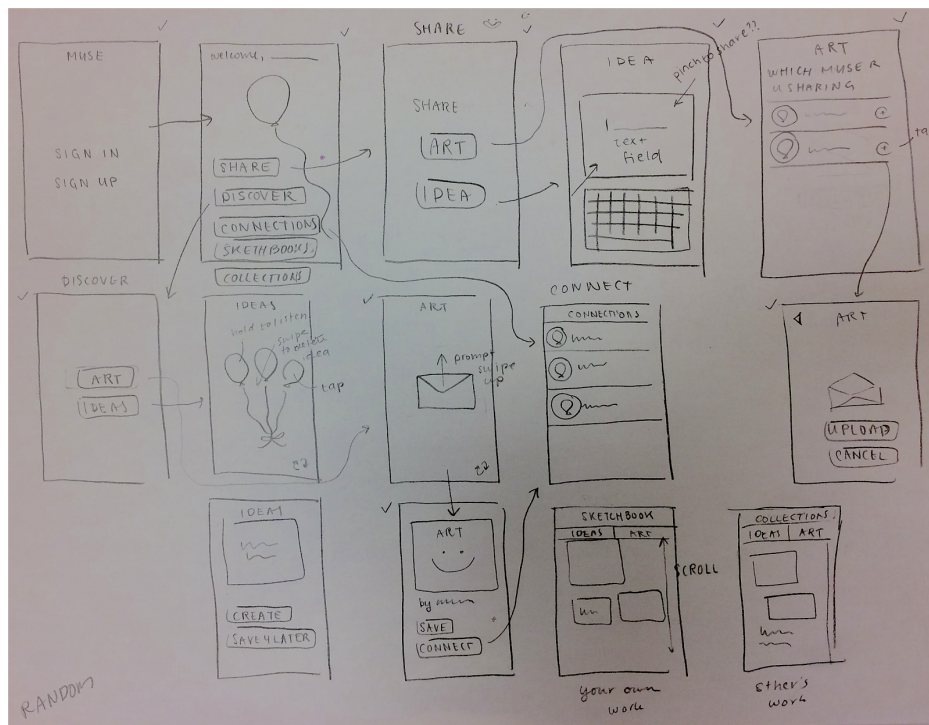

Figure 4. Random discovery design

Pros	Cons
• Encourage people to step outside comfort zones • Unbiased method of searching for ideas and art • Randomness opens up opportunities to discover "limited edition" pieces of art • Wider range of ideas that can be later curated down via saved lists • Simpler interface	• Randomness may introduce lack of motivation for artists to search for ideas • Inability to filter ideas you enjoy vs. ideas you don't enjoy • Might take a lot of shuffling of random ideas to get one that inspires you

DESIGN 2: GEOGRAPHICALLY BASED DISCOVERY

Our second interface design (Figure 5) focuses on geographically based discovery. Muses leave inspiration at their current location for artists to discover while traveling by.
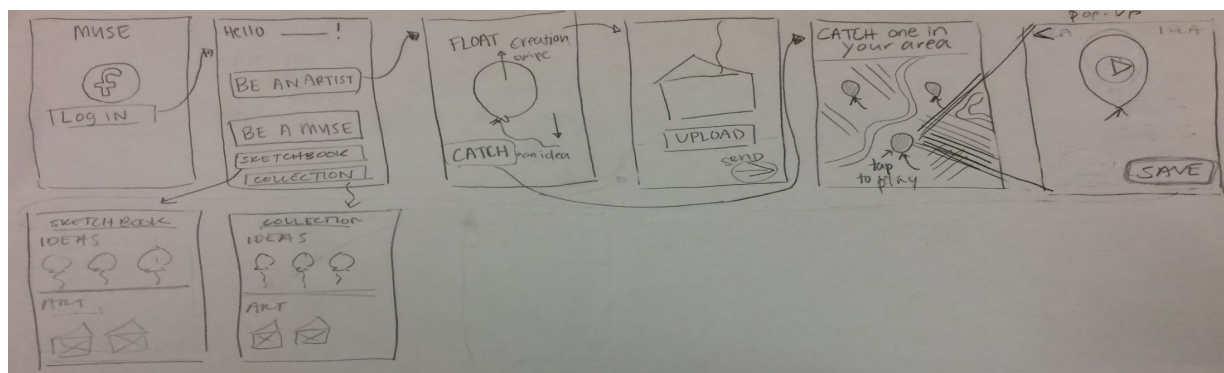

Figure 5. Geo-based discovery design

Pros	Cons
• Creative method of filtering ideas • May encourage people to also explore real world • Interesting way of grounding ideas with physical spaces	• "Creative hot zones" - some places will have more ideas than others • Limited exploration of new ideas • If local ideas only, can't connect a greater community • If global connecting (let ideas float everywhere), discovering ideas is essentially random

SELECTED DESIGN: RANDOM DISCOVERY

• Random discovery gives users unbiased opportunities to find something new
• Allows unknown artists and muses to engage. This lets people from less-visited places have an equal chance to be discovered.

- Forcing users to explore random ideas encourages engagement with ideas/artwork they may not initially enjoy.
- More intuitive than geographic implementation
- Displaying three ideas simplified the process and is less overwhelming.
- Mobile apps attract a more diverse community than VR

UI STORYBOARDS

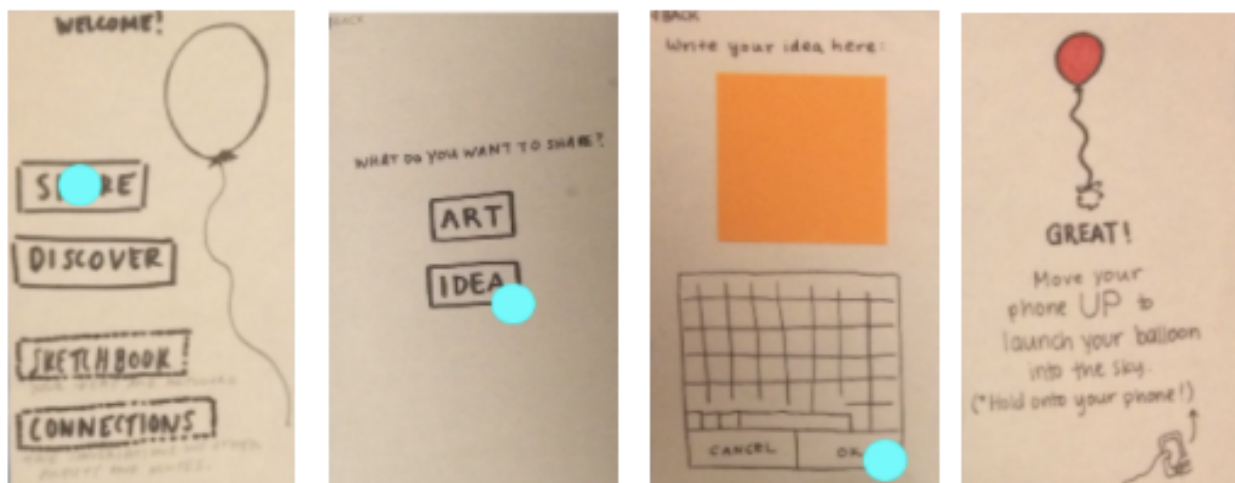### TASK 1: SHARE AN IDEA WITH THE COMMUNITY TO INSPIRE SOMEONE ELSE.

Figure 6. Task flow for sharing an idea
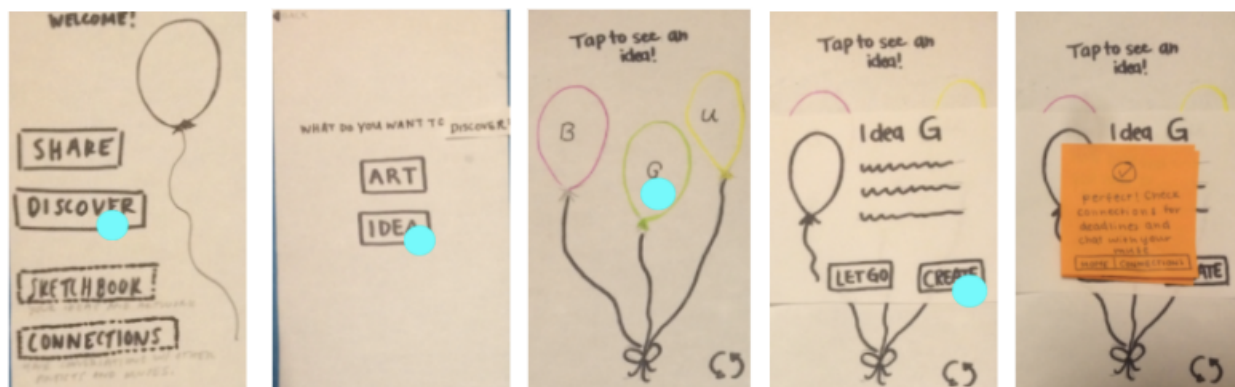
TASK 2: FIND AND SAVE IDEAS, GO CREATE THEM.

Figure 7. Task flow for discovering an idea

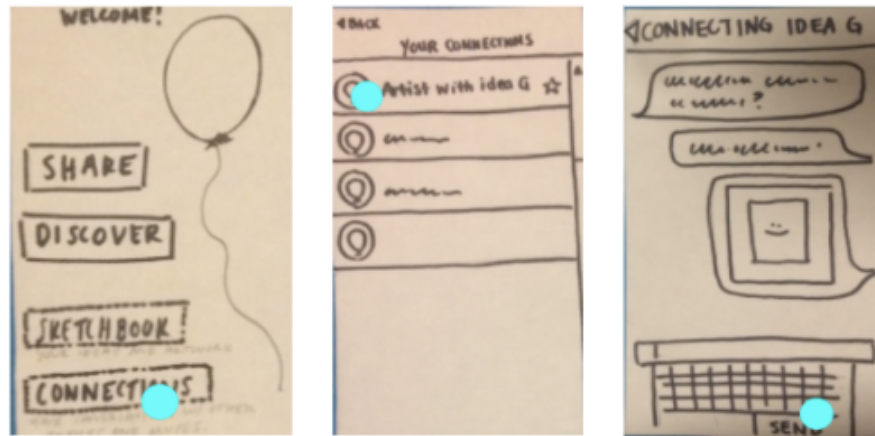## TASK 3: CHECK ON THE PROGRESS OF THE ART AND ENCOURAGE THE ARTIST.

Figure 8. Task flow for connecting with another user

LOW-FI PROTOYPE DESCRIPTION
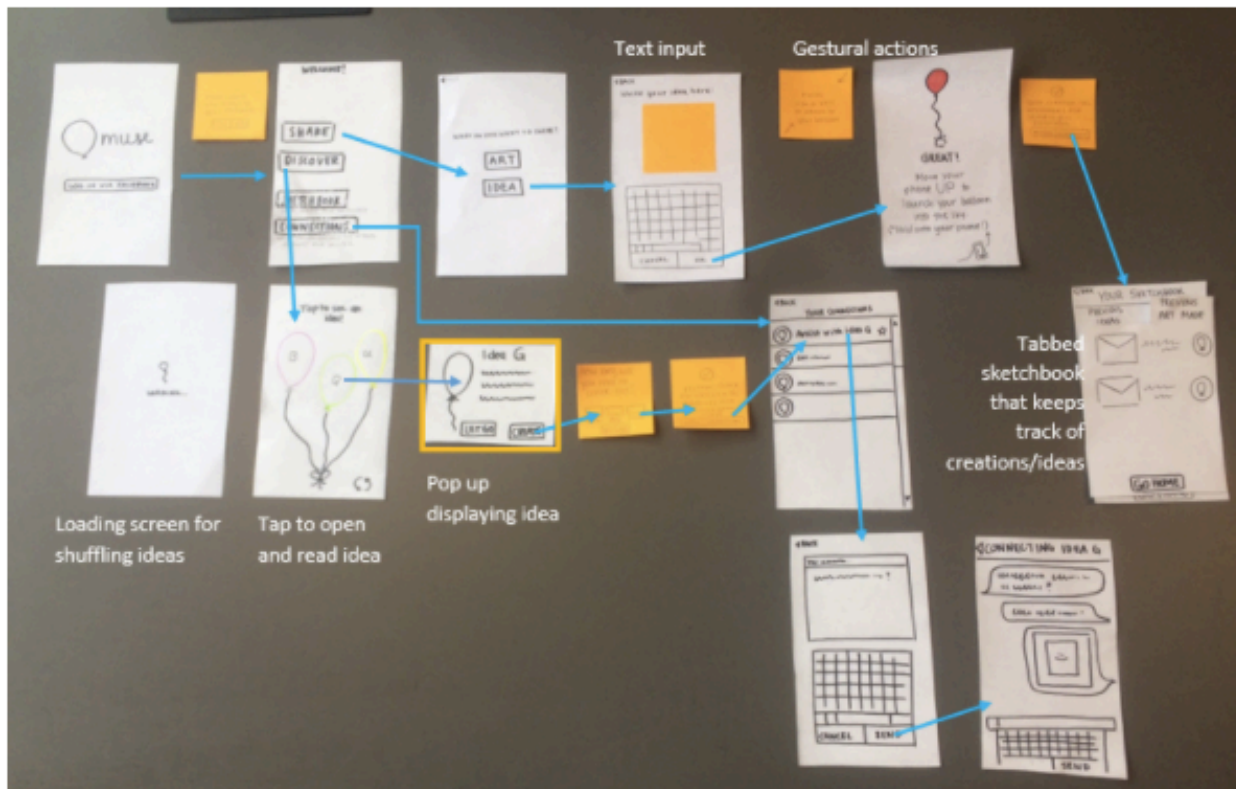
Figure 9. Full low fidelity prototype with task flow and annotations

#1 Log in screen

#2 Access pop-up

#3 Home screen/Main navigation

#4 Share selection screen

#5 Idea text-input

#6 Gestural prompt

#7 Gestural motion 2

#8 Confirmation

#9 Discover selection

#10 Random idea selection

#11 Idea pop-up

#12 personal time-goal pop-up

#13 Confirmation

#14 Connections main screen

#15 Conversation message input

#16 Full thread screen

#17 Multi-tabbed sketchbook

METHOD

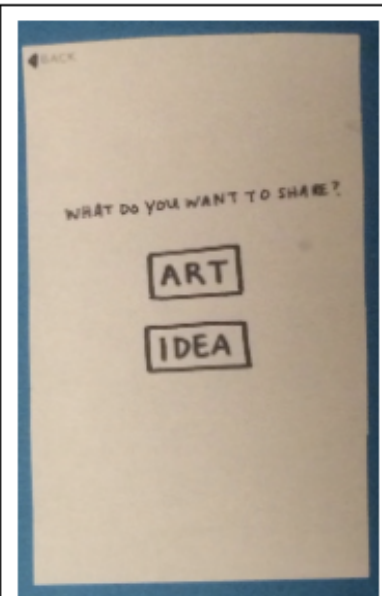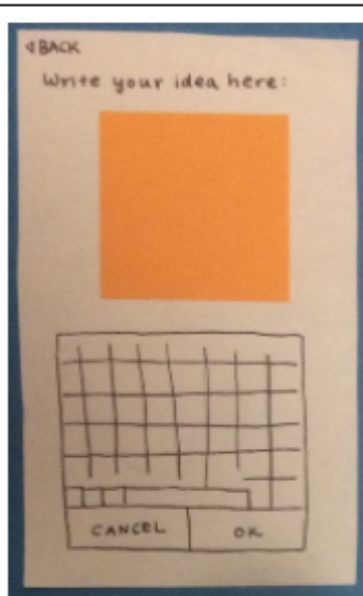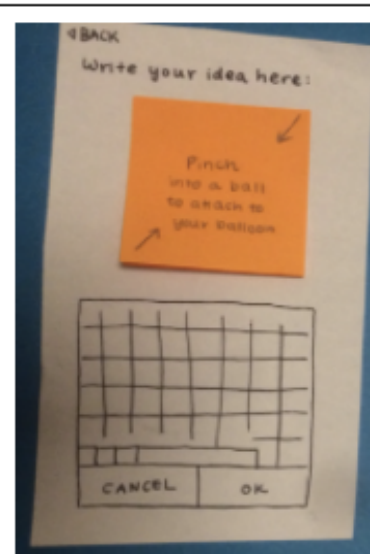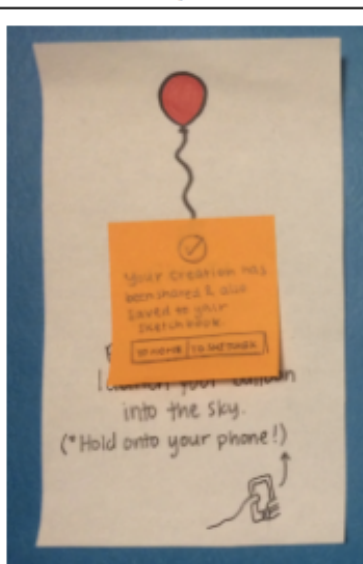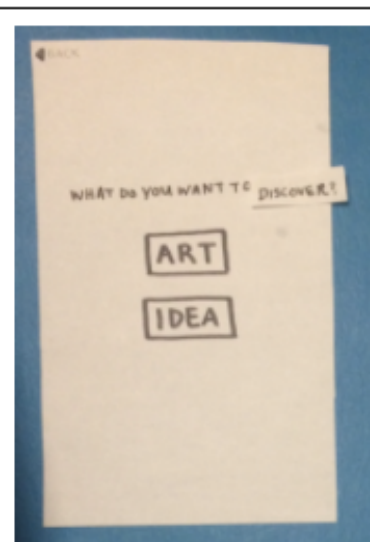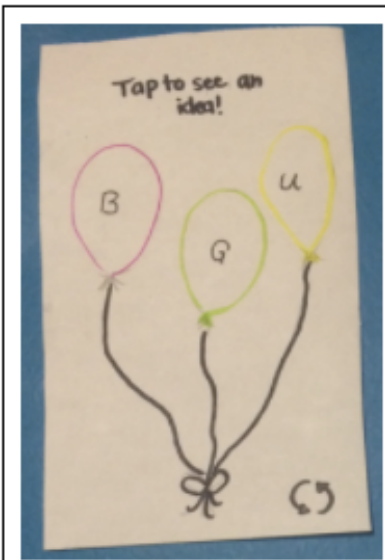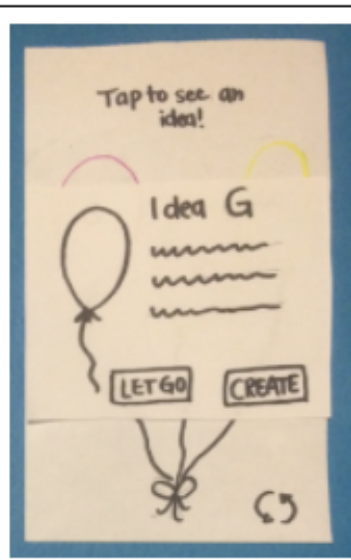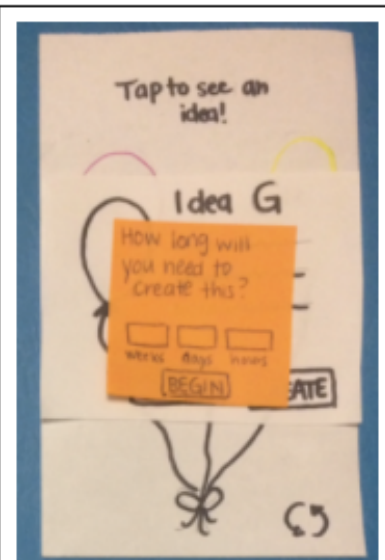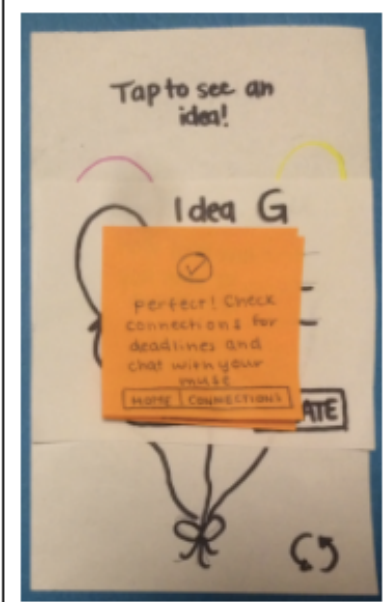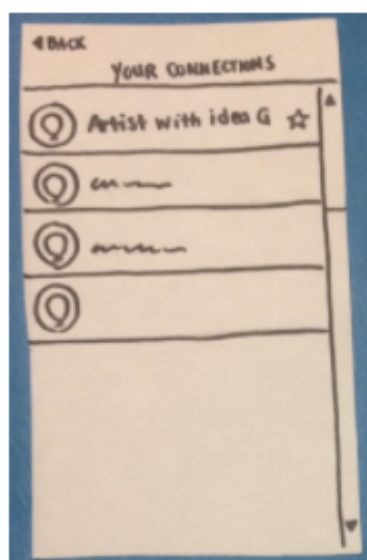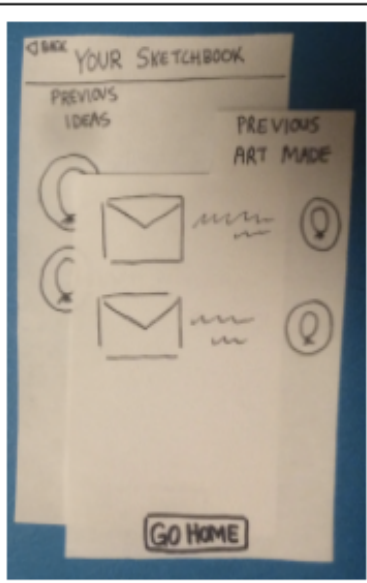## PARTICPANTS & ENVIRONMENT
Participants are referred to using they/them pronouns to preserve confidentiality.

We found participants in the Cantor Arts/McMurtry area of campus; there are generally more graduate students and visitors here with interests in art. We recruited our participants by searching for people who were alone or looking bored. Furthermore, we tested in the locations where we met each participant because Cantor is a place of artistic inspiration. All of our participants agreed to test without compensation, and all participants gave permission to be recorded for later analysis.

Participant 1 is a graduate student in art history whom we approached in the McMurtry lobby. They study art but do not practice it. They tested our prototype in the lobby where they had been studying.

Participant 2 is an 11-year old visiting the Cantor museum with their parent. They have taken art classes and had exposure to art. They tested the prototype in the Cantor art museum on a bench near one of the pieces.

Participant 3 is a young artist from Italy who is staying with a host family. They enjoy drawing and painting; we tested with them in Cool Cafe.

PROCEDURE
For our experiments, we used a paper prototype representing our app's screens. The main screens were on white paper cut to size of a large mobile phone, and pop-ups were smaller pieces of paper or post-its. While the participant interacted with the app, we took back the previous screen and replaced it with the next screen.

During testing, Shannon acted as the computer, Gracie acted as the demonstrator and recorded the participants, and Madison was the facilitator.

TASKS
Since interfaces for sharing and discovery are similar for both muse and artist, we had participants complete tasks for both muse and artist. This ensured testing experiences were identical across all three participants and that any behavior differences wouldn't arise from discrepancies between roles. After reading them the introduction script, we gave them one task at a time to complete.

I. Share an idea. (simple)
"You have an awesome idea that you'd like to draw but you're not confident in your drawing skills. Using Muse, please walk us through how you would share that idea with the community so that someone else might be inspired by it." Screens #1, #2, #3, #4, #5, #6, #7, #8.

II. Discover an idea. (moderate)
"You are an artist in a creative rut. Using Muse, please walk us through how you would find and save ideas that you might want to create." Screens #3, #9, #10, #11, #12, #13.

III. Connect with an artist. (complex)
"An artist has caught one of your ideas! Using Muse, please walk us through how you would check on their progress and encourage them." Screens #3, #14, #15, #16, #17.
* Although Task 3 tested the fewest screens, it was complex because of the multiple avenues possible to message another user. This task is the most open-ended; users may have diverse reasons to connect with other users in the community.

MEASURES

While testing, we remained as hands-off as possible to evaluate how new users would interact. We want the final version of our app to intuitive, so we looked for interesting behavior such as:

- <u>When/where they became stuck and how they attempted to resolve their problem</u>
  Instead of interfering when participants were lost, we repeated the task description and watched how they navigated to complete the task.
- <u>Deviations from our intended task flow</u>
  We wanted to see where participants behaved differently from how we assumed.
- <u>Points of confusion, during which participants would reach out to us for clarification</u>
  We wanted to find parts of our app that were confusing enough for participants to ask for help so we could resolve them in the final product.
- <u>General criticisms or compliments on instructions, prompts, buttons, etc.</u>
  We asked for general feedback on concept, app logic, and intuition after participants finished testing.

We went through our recordings and logged the behaviors and ranked them on the severity of the problem (0 = no problem, 4 = severe); see Appendix.

RESULTS

PARTICPANT 1
Participant 1 seemed skeptical about playing the roles of muse and artist. For Task 1, they were initially confused because the Share and Discover buttons looked different from the Sketchbook and Connections buttons. They said they didn't know whether their idea was already in the sketchbook or whether they were supposed to click Share. After clicking on Share, they mentioned that the "What would you like to share?" prompt should have come up sooner.

In Task 2, they were confused by the shuffle button at the bottom of the screen with the random ideas and what happened if they chose not to save the idea they tapped on the screen. When they chose to create with an idea, they did not enjoy the deadline pop-up and said that they were not comfortable with that much pressure to deliver art.

Finally, when connecting as a muse with an artist in Task 3, Participant 1 told us that the conversations would probably be negative or demanding. They imagined that they'd probably contact the artist to tell them how they want the art to look; our concept was too idealistic for Participant 1's liking.

Although they completed the tasks with the fewest errors of our three participants, Participant 1 was the most critical of our app's concept and called it "cheapening" the art-making process, and concept of taking another's idea as "sacrilegious." They thought that the app were an interface to share ideas they wanted to commission from an artist and mentioned that the experience did not capture the true process of art-making.

PARTICPANT 2
Participant 2 was the most comfortable interacting with the interface. The biggest problem was that the function of the Share button was unclear; instead, they had clicked Discover before arriving at the Share button. Once they started the task flow, Task 1 was relatively easy to complete. They found the gestural motion 2 (#7 in Figure 10) for sharing unclear; they first swiped up with their finger instead of moving the entire phone.

Task 2 was the most logical for Participant 2, but we noted that they first went to their sketchbook to see what art they've previously created instead of directly finding new ideas. We had not expected this, and it was one of the most interesting points from this testing experience.

Task 3 was understandably the most difficult task given the context. They found the process of opening a conversation with an artist logical but did not know why they were sending a message in the first place. We re-prompted them, and they completed it successfully.

Participant 2 was generally satisfied with the prototype functions--they enjoyed the ability to share with community members and send encouragement to artists in their connections--but found some of the gestural motions interesting but confusing. This provided insight for more intuitive actions.

PARTICPANT 3
Participant 3 had the hardest time getting used to the prototype. They also did not find it intuitive to click Share first and instead attempted to use Discover to complete Task 1. Like Participant 1, Participant 3 mentioned that they did not want to share an idea until it was fully "shaped".

Participant 3 actually walked through Task 2 when prompted to complete the Task 1. They understood and remarked that the balloons (#10 Figure 10) were ideas of other people.

When prompted with Task 2, they were, like Participant 1, uncomfortable using a muse's idea without permission. Participant 3 opened up the "connections" interface to ask their muse permission to use the idea first. Interestingly, they also asked *how* the muse created the idea. Participant 3 also hesitated when asked how much time a piece of art would take to complete.

Participant 3 had many creative ideas about Task 3. They wanted to send their own art back in connections to ask for feedback. They really wanted to have a "real" connection suggesting a feature to send location. For them, the connection was the most compelling aspect of the app.

COMMON PATTERNS
- People were confused about what sharing an idea meant and thought that the Share button was only meant for art
- People approached the app as if it were a platform for commissioning artists, which made saving shared ideas feel like "stealing"
- Three random balloons on Discover page were too many choices to pick from
- People were confused about the "Discover" button and were unsure about whether they should be looking at other ideas or pieces of art before sharing their idea.

DISCUSSION

We learned a lot from our testing experiences, and we have a lot to work from when constructing a medium-fi prototype.

In terms of usability, our biggest goal is to resolve the major task flow errors for Task 1 and make it more intuitive to share an idea. This may mean making button descriptions more clear or restructuring the task flow completely. We also want to take into account Participant 2's confusion over the gestural actions and make the movements more intuitive for the medium-fi prototype.

From our prototyping experience, the biggest problem was that the premise of our app was unclear to our participants, who then found the UI unintuitive--perhaps this problem could have been resolved with more context about the intent of Muse, but for our medium-fi prototype, we plan to refocus our efforts on making Muse a more fun, communications-based experience for both muses and artists.

Participants 1 and 3's feedback on the overall experience demonstrated that our app was a bit too idealistic for real professional artists to want to use. Consequently, our prototype couldn't capture how a user with a spontaneous idea or real need for inspiration would use

the app. Participant 1 mentioned that Muse established unnecessary delineations between art and inspiration, while Participant 3 mentioned that they enjoyed the premise that people would be willing to share ideas publicly but seemed skeptical that real users would be motivated to do so. Part of this skepticism stems from the assumption that Muse was a platform for commissioning artists, and perhaps these problems stemmed from unclear context given in the script. We will try to eliminate that confusion in the next iteration.

We want to find ways in our medium-fi prototype to make Muse focused on enhancing creativity in more "fun", less intense, ways. We want to focus on the interaction between people as muses--and focus back in on our value statement. Participant 3 really enjoyed receiving an idea and Participant 2 appreciated the ability to send thanks/praise to another person. We hope to build upon the aspects that our participants enjoyed in our next iteration.

APPENDIX

CRITICAL INCIDENTS

Task #	Description	Severity
1	People want to go to the sketchbook first before sharing their idea; they did not want to share before fleshing it out	4
1	Liked the gesture icons	0
2	Using someone else's idea feels wrong without explicit permission	4
2	Confused about the three balloons & refreshing them	2
2	Hesitated/disliked estimating how much time a piece would take to make.	3
3	Confused about how and when to talk to the muses/artists	3
2	Letter labels on the three balloons was confusing	2
1	Enjoyed the pinching to attach the idea to the balloon	0
1	More intuitive to swipe finger up to let go of the balloon than it is to raise entire phone up	2

3	Unclear what discover means. Is there a difference between discovering art and discovering ideas?	4
2	Wanted to know how people came up with their idea, their inspirations	2
2	Understood that the balloons contained other people's ideas	0

QUOTES FROM PARTICIPANTS

Participant 1

"It's in the process of working on [the art] that your ideas come out" (when asked to choose if they wanted to share art or an idea)

"The chance of me actually going for one of these is like 0" (while looking at the 3 random ideas)

"I'm an artist. I have no idea! I don't want to commit to that! I don't like that. It feels like a sacrilege to what I think of as art" (when asked to estimate how much time a piece of art would take to complete)

"Am I getting paid? Do I have to pay somebody?" (general questions about practicality)

"What if they never respond to me because they got my idea and out of their creative rut and they're off and running and I never hear back from them" (feeling skeptical about the connections screen)

Participant 2

"I want to see if there is anything I have drawn before" (while clicking the sketchbook to find inspiration)

Participant 3

"Discover what?" (when looking at the home screen)

"I don't want to steal another person's idea" (when selecting an idea)

CONSENT FORM

TEST SCRIPT

Intro
Thank you for taking the time to demo our mobile app, Muse. Muse aims to encourage creative expression through a collaborative art community. Essentially, users will be able to share their ideas with artists looking to practice their skills or work off of unfamiliar ideas. Before we get started, please sign this consent form.

Background Information
Next we would like to know a little bit more about you. Do you have any experience with art? Would you consider yourself creative?

Directions
In this demo, we will ask you to complete three tasks. This is a very early prototype, so any actions you take or thoughts you have are super insightful for us. There are now wrong answers. Please interact with the prototype as if it were an app on your phone and we encourage you to think out loud as you do so. My teammate will demonstrate what I mean.

Demo
Wow, this first page is very simple. Hmm, I think I want to log into Facebook.
tap "Log into Facebook"
That was easy! I liked the shape of that button.

Tasks
I. Share an idea.
You have an awesome idea that you'd like to draw but you're not confident in your drawing skills. Using Muse, please walk us through how you would share that idea with the community so that someone else might be inspired by it.

II. Discover an idea.

You are an artist in a creative rut. Using Muse, please walk us through how you would find and save ideas that you might want to create.

III. Connect with an artist.

An artist has caught one of your ideas! Using Muse, please walk us through how you would check on their progress and encourage them.