CAPSULE

Sharing insights, one Capsule at a time.

CS 147 - LOW-FI PROTOTYPE - FALL 2023

Kendal Murray, Allen Nie, Julia Markel & Tristan Sinclair

Concept Sketches

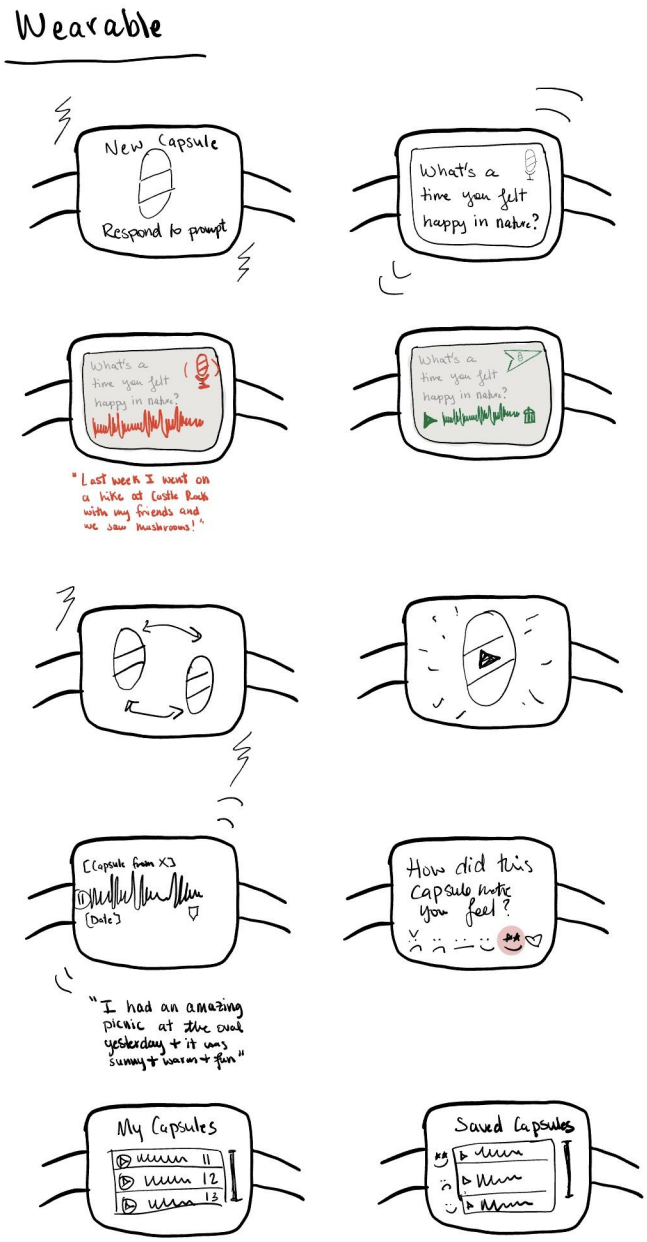


Figure 1: This concept is for a smart watch app which focuses on voice recordings and simple reactions instead of written messages.

AR

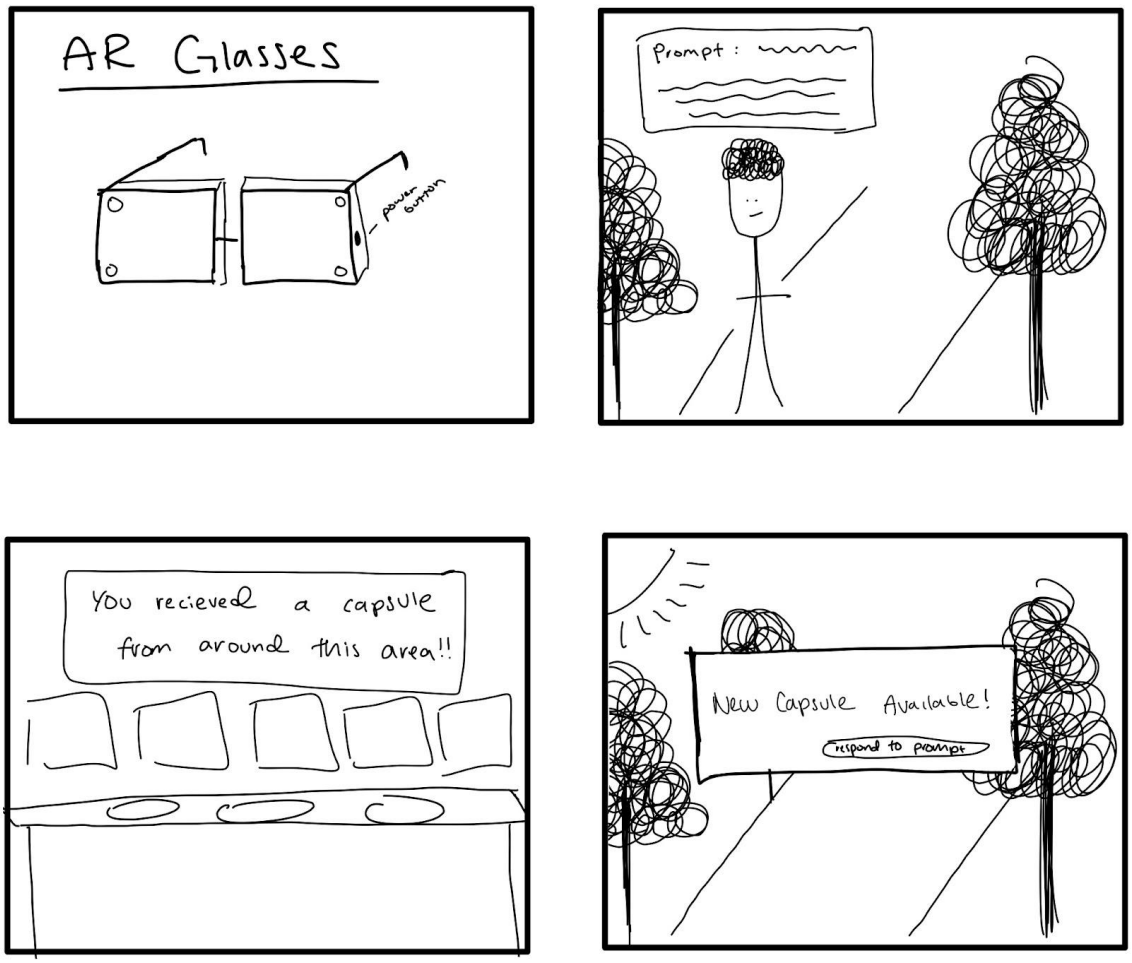


Figure 2: This concept is an AR glasses app which focuses on location based capsules.

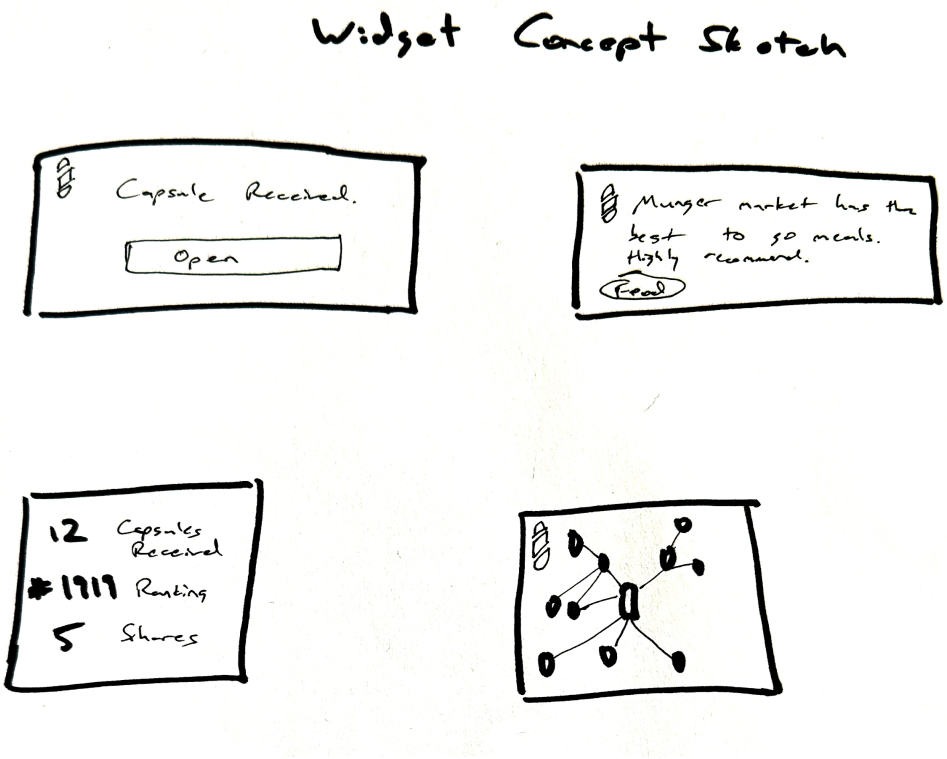


Figure 3: This concept is for simple home screen widgets on your mobile device to track and see your capsules.

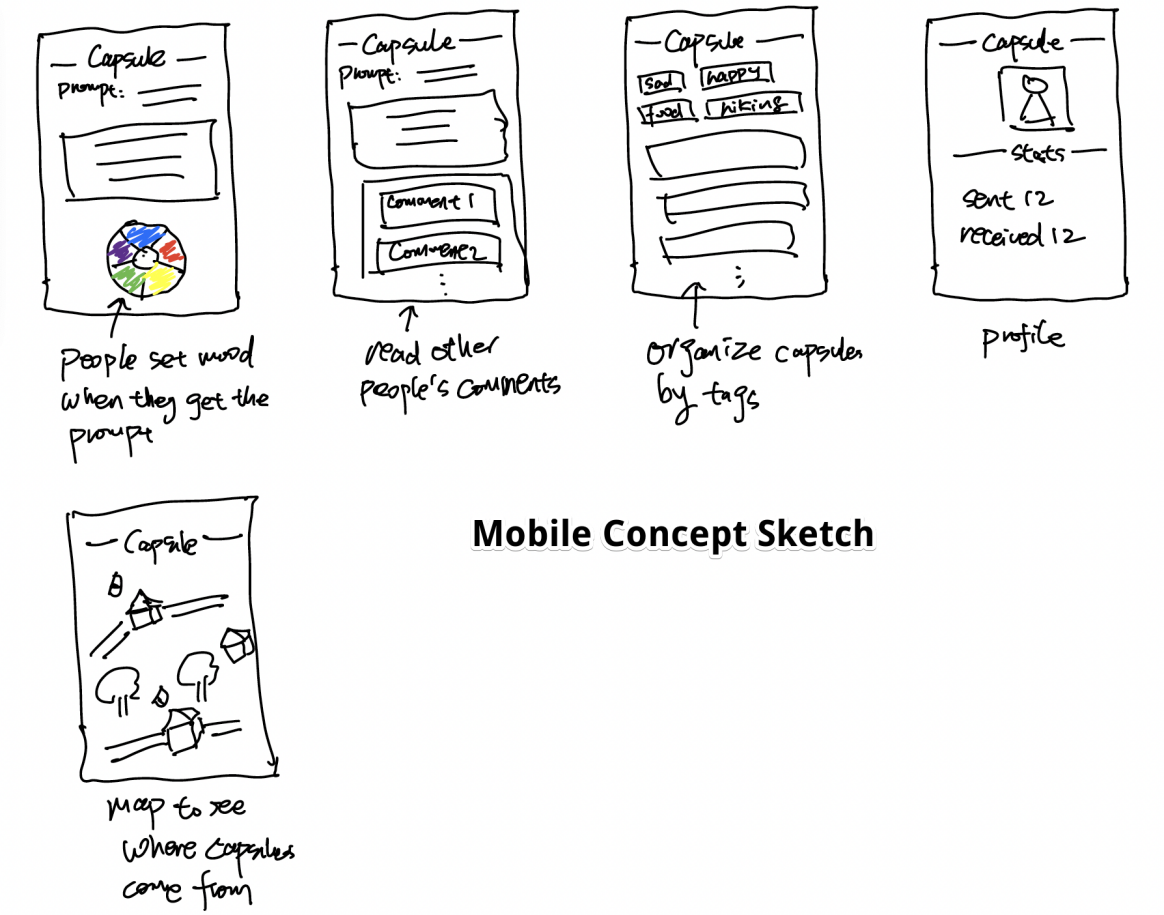


Figure 4: This concept is for our mobile version of our idea. Focuses on asynchronous receiving and sending capsules.

Selected StoryBoard for AR

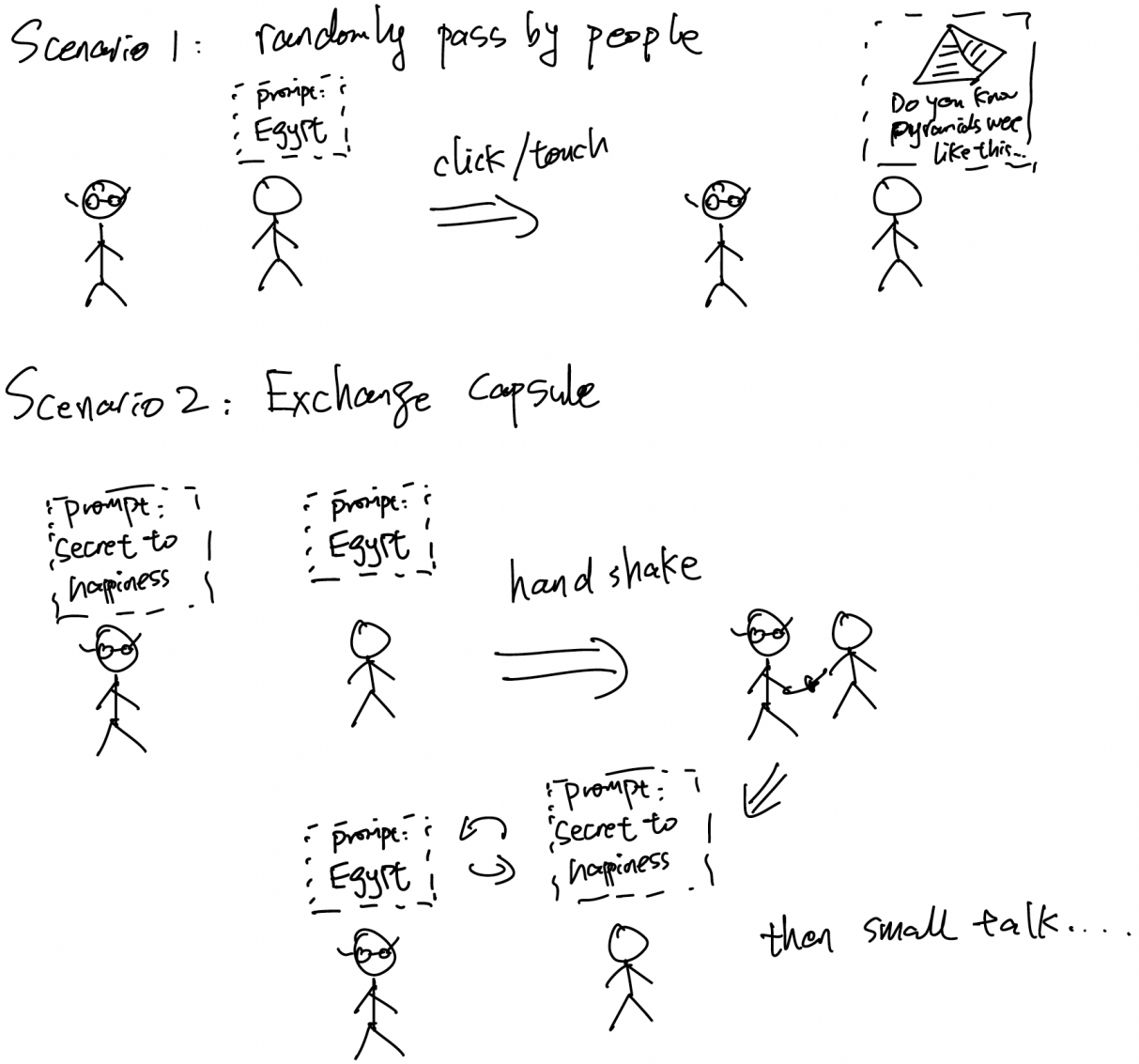


Figure 6: These screens are our mockups for the AR device with their designated Task Flow interactions.

Selected StoryBoard for Mobile App

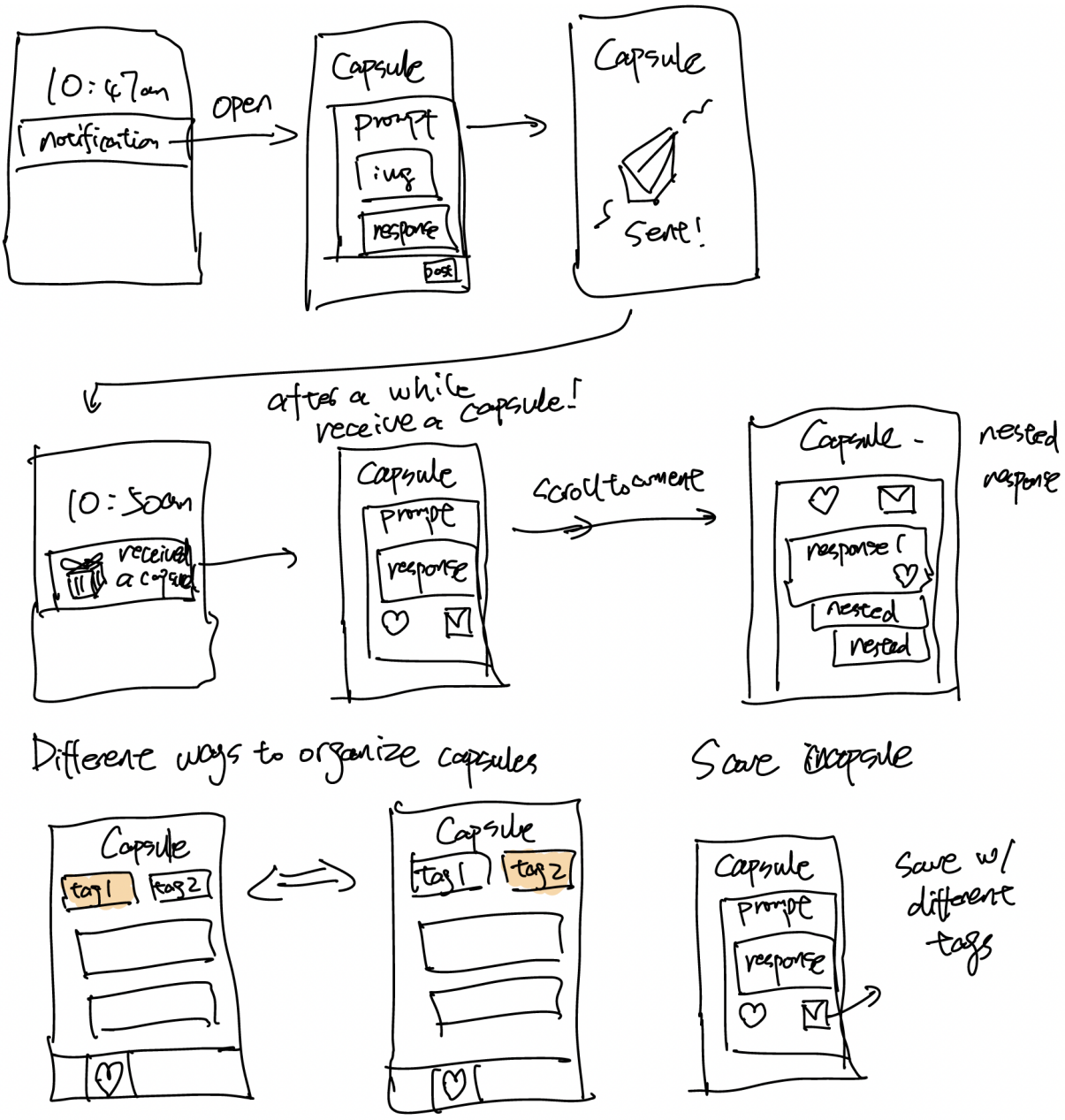


Figure 7: These screens are our mockups for the mobile app with their designated Task Flow interactions.

Final Interface

After our initial sketches, we narrowed down our interface options to an AR app and a native mobile app.

AR App

Pros	Cons
• **Enhanced User Experience**: users can see capsules directly floating over another person's head and start a conversation based on that. • **Better Visualization**: Instead of limiting the interface to a flat 2D screen, capsules can be displayed in a 3D world, where users can actually feel a sense of community when they see others who also send/receive capsules.	• **Distraction and Safety**: Requires the user to interact with the environment through a screen – it can be distracting and takes additional effort to hold one's phone for a while. • **High Development Costs**: none of our teammates knows how to build an AR app. • **Performance Issues**: sometimes AR apps are not very stable – tracking and displaying capsules over a person's head might not be very easy and choppy display will cause users to lose trust in our app. • **Battery draining and Streaming**: AR app uses a lot of real-time compute and camera/recording consumes a lot of energy and use up a lot of data. Not everyone has an unlimited 4G/5G plan.

Mobile App

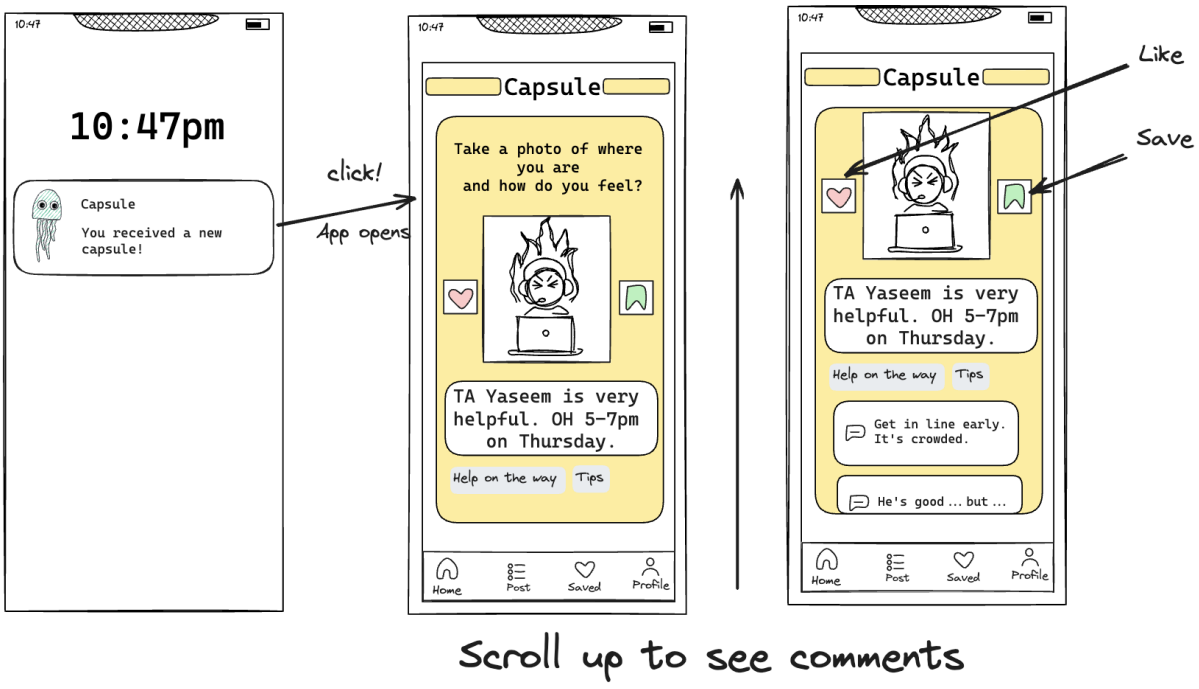
Pros	Cons
• **Lower development cost** • **Familiar user interface**: most of the interactions we design are already familiar to the users. We don't have to "teach" them any new interaction patterns. • **On-the-Go Access**: Unlike AR, where users have to interact with	• Less innovative and immersive than an AR/VR app. Less personal than a wearable. Less accessible than a widget.

the app using a camera – a mobile app they can use it anywhere, anytime – lying in bed, on the couch, in a bus.	

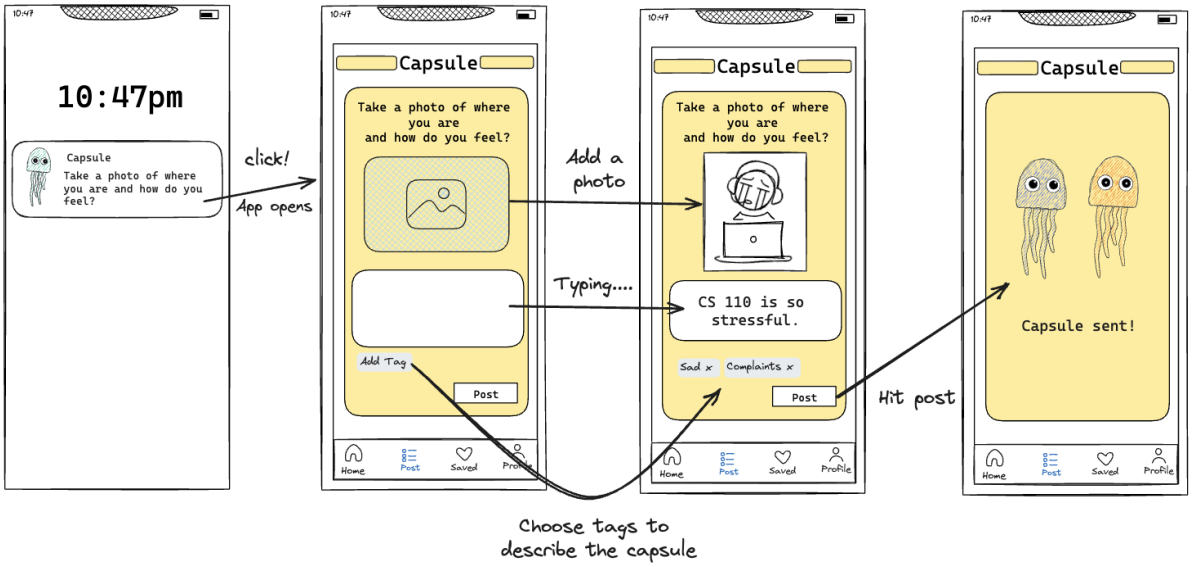
Low-fi prototype

We sketched out the Low-Fi prototype using Excalidraw, an app for quick prototyping.
The prototype begins when the user receives a notification of a prompt.
We ensure that our app follows the logic of “send some receive some” – so the user will only receive capsules if they put in the work of responding to a prompt.
We divide the task flow into receiving a capsule (simple), creating a capsule / responding to prompt (medium), and organizing capsules (hard).

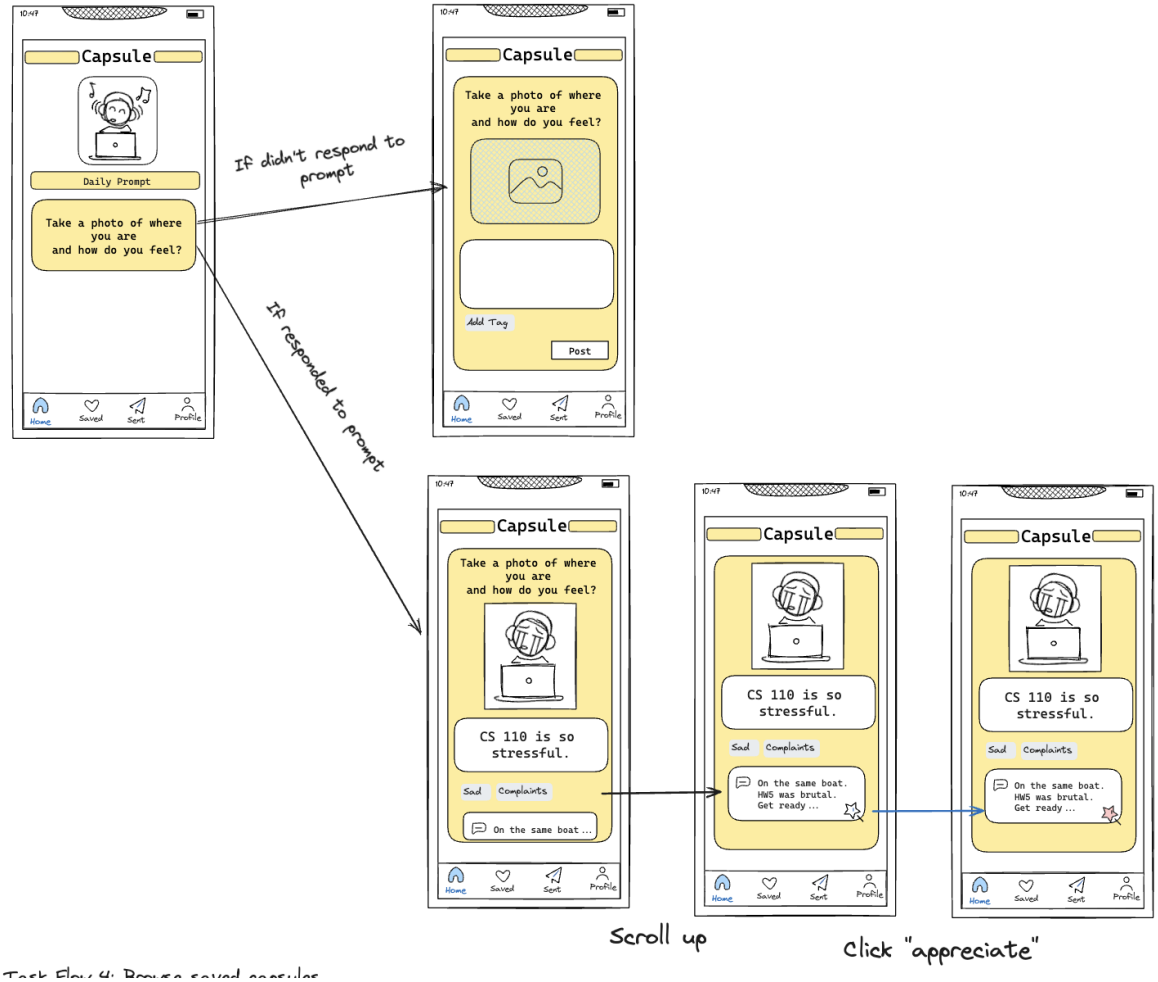
Simple Complexity Task:
Receiving a capsule



Medium Complexity Task:
Responding to a prompt

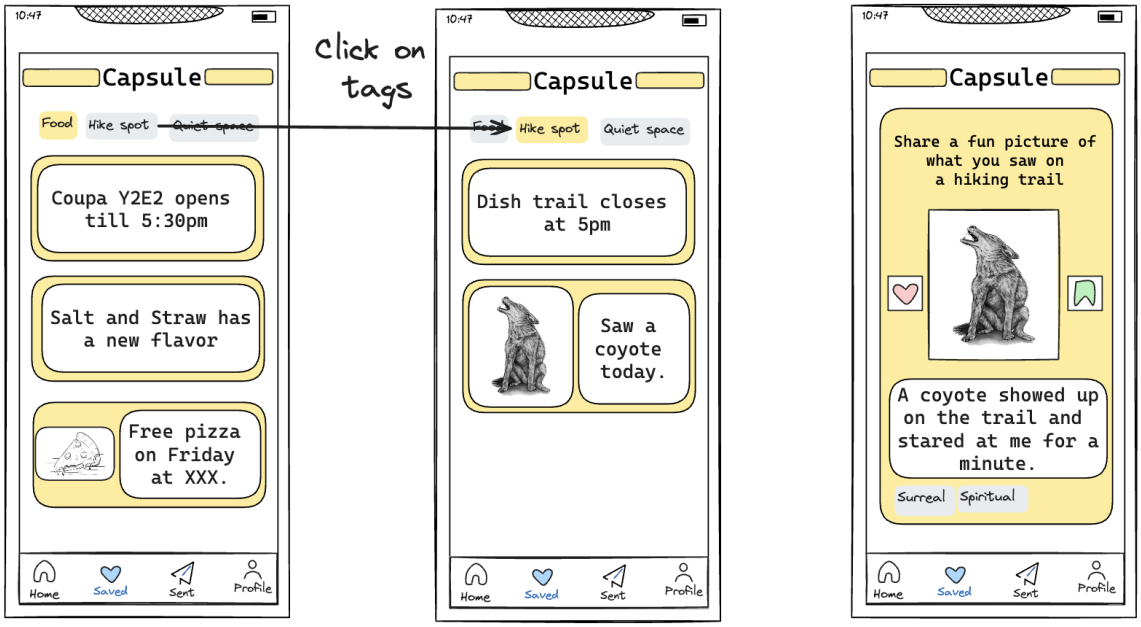


High Complexity Task: Browse Home Page Capsules



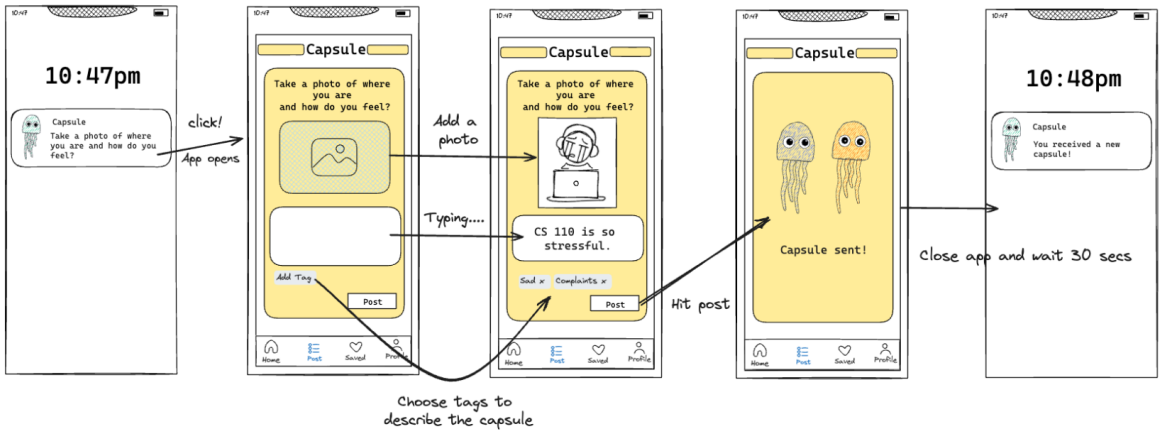
High Complexity Task: Browse Saved Capsules

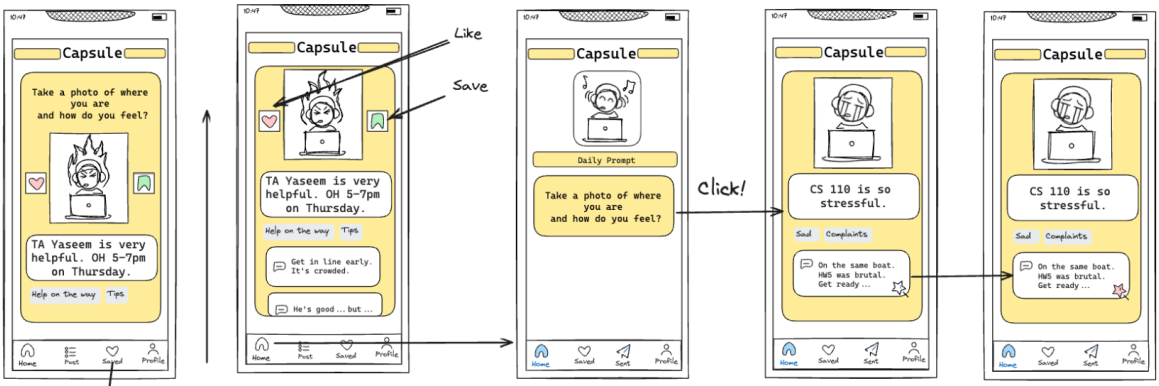
Task Flow 4: Browse saved capsules

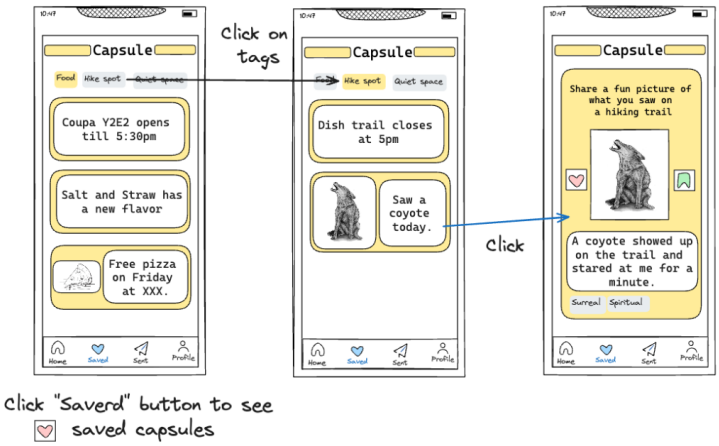


Click "Saverd" button to see saved capsules

Combined low-fi prototype


10:47pm
Capsule
Take a photo of where you are and how do you feel?
click!
App opens
Capsule
Take a photo of where you are and how do you feel?
Add Tag
Post
Add a photo
Typing....
CS 110 is so stressful.
Sad x
Complaints x
Post
Choose tags to describe the capsule
Hit post
Capsule sent!
10:48pm
Capsule
You received a new capsule!
Close app and wait 30 secs


Capsule
Take a photo of where you are and how do you feel?
TA Yaseem is very helpful. OH 5-7pm on Thursday.
Help on the way
Tips
Like
Save
Get in line early. It's crowded.
He's good... but ...
Scroll up to see comments
Daily Prompt
Take a photo of where you are and how do you feel?
Click "Home" button to see sent capsules
Click!
CS 110 is so stressful.
Sad
Complaints
On the same boat. HWS was brutal. Get ready ...
See other people's response to your capsule, respond to comments


Capsule
Food
Hike spot
Quiet space
Coupa Y2E2 opens till 5:30pm
Salt and Straw has a new flavor
Free pizza on Friday at XXX.
Click on tags
Dish trail closes at 5pm
Saw a coyote today.
Click
Share a fun picture of what you saw on a hiking trail
A coyote showed up on the trail and stared at me for a minute.
Surreal
Spiritual
Click "Saverd" button to see saved capsules

Testing Methodology

Interviewees

- Ryan, 22, college student visiting from Southern California
- Amelia, 31, lives in Menlo Park, works in tech
- Dalton, 26, law student
- Lauren, 23, nurse at the Stanford Hospital

For our testing, we tried to get a diverse set of individuals from different backgrounds and places in life. We ended up with two students volunteering, and one nurse working at the hospital.

Environment

Tests were conducted in person using printouts of our screens. Two interviews were conducted in Munger, with another outside at Coupa Cafe. Participants engaged with "Capsule" by pressing the buttons and attempting to complete the designated tasks. This method provided insights into their in-app interactions, and we observed their spoken feedback and facial reactions and took notes on their interactions.

Procedure

1. Introduction and brief overview of the project.
2. Secure consent for participation and optionally photographs.
3. Describe the test flow and the "Capsule" app prototype.
4. Remind the participants to verbalize their thoughts as they use the example.
5. Post completion, collect feedback on their likes, dislikes, and suggestions.
6. Express gratitude for their participation.

Team Member Roles

- Greeter: Julia
- Facilitator: Allen
- Computer: Kendal
- Observer: Tristan

Test Measures

Successes:

- Smooth task execution, users find the tasks to be simple and have success completing them
- People were interested in the idea and concept, and had curiosity about the topic

Errors:

- Unanticipated user actions
- Confusion on how the flow works and why certain buttons navigate certain places

Results

All four testers:

- Were able to carry out the task with little confusion
- Were interested to receive capsules full of knowledge that is useful or interesting
- Weren't sure if they'd always receive things they liked or enjoyed
- Enjoyed the idea of some sort of anonymous situation, but again unsure of the content they would receive
- Were interested in the ability to share capsules with friends and spark ideas to use the capsules they received
- Wanted to see more capsules than only the ones they received
    - Offered up the idea of searching through the capsules of a given prompt

Three testers:

- Wanted to make the capsules focused and specific, covering topics that were interesting to them
- Wanted a sharing process that was simple and easy
- Enjoyed the concept of 'give knowledge, receive knowledge'.
- Were interested in the concept of choosing your prompt
    - Some prompts were more deep than others, sometimes people aren't in the mood to be deep and vulnerable
        - Emphasized the importance of privacy here!

One tester:

- Was curious about a timeline/scroll feature to see more capsules than their own
- Suggested a forum or community feature for users to discuss popular Capsules.
- Expressed interest in a "trending" page

Discussion

Our "Capsule" app prototype testing with diverse participants provided critical insights into its development.

Key Takeaways:

1. **Content Relevance and Privacy:** While users appreciated the idea of receiving intriguing capsules, there was concern about content relevance and potential unsolicited material. The desire for an anonymous setup highlighted a priority for privacy and data protection.
2. **Interactivity and Engagement:** Feedback showed a need for varied prompts, from deep to light interactions, and features like searching through capsules or a "trending" section to enhance engagement.
3. **Sharing and Community:** The interest in sharing capsules emphasizes the community aspect. Features like a community forum could foster a sense of communal learning and connection.
4. **Navigation and UI Concerns:** Users sought clearer navigation, suggesting a need for interface redesign to make the app more intuitive.

Images