

A5: Low-Fidelity Prototyping

— superbloom —

Myan, Felicia, Sunny, Thu

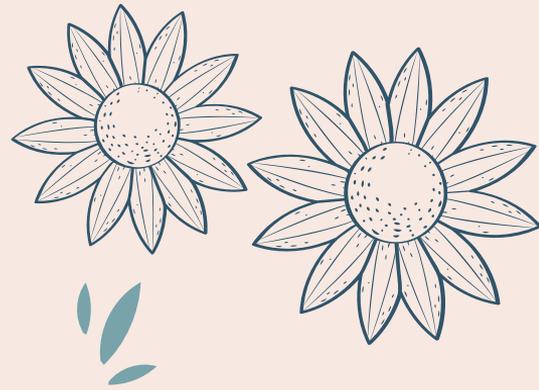




Value Proposition

superbloom

Celebrate Life.





Problem

People who have recently lost a loved one often struggle to process their grief and feel isolated.



Solution

superbloom provides a **“virtual memorial”** for people who lost a loved one to commemorate their death and **heal**: In superbloom, users plant their inner (private) and outer (public) garden, where each flower is **a piece of memory** and users’ reflections of them. Users can also browse the outer gardens and start conversations.



Table of contents



01

**Sketching
Exploration**

02

**Selected
Interface &
Rationale**

03

**Low-Fi
Prototyping &
Testing**



04

**Results &
Discussion**



01 ———

Sketching

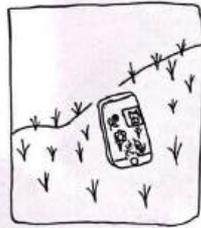
Exploration

AR, VR, Website, Mobile
App

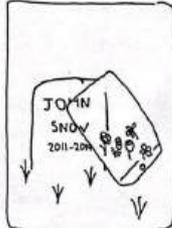


Realization modality: AR

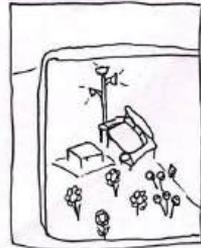
- phone app w/ extensive camera use



AR interaction, bring your garden to life on your screen and in real life.



Interact with geographical locations such as memorial sites or cemeteries



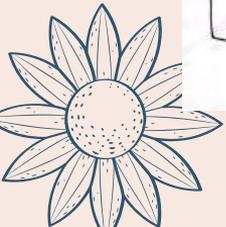
Interact & view gardens any where and every where you go



Leave virtual flowers and messages

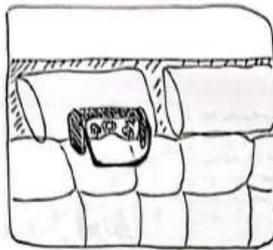
Attend & pay respect the remotely keep a virtual record

Realization 1: AR



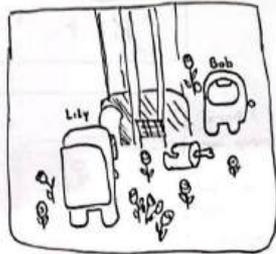
Realization modality: VR

VR headset

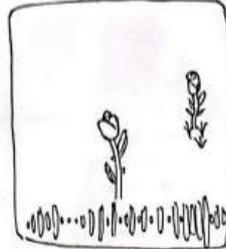


Walk your garden
Gain your bed

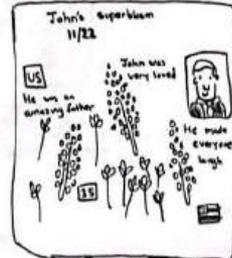
View your garden in reality
what moving (e.g. hospital)



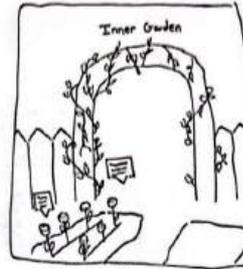
Interact w/
others in VR



Walk our
Flowers to
hear some
memories
recorded by
others



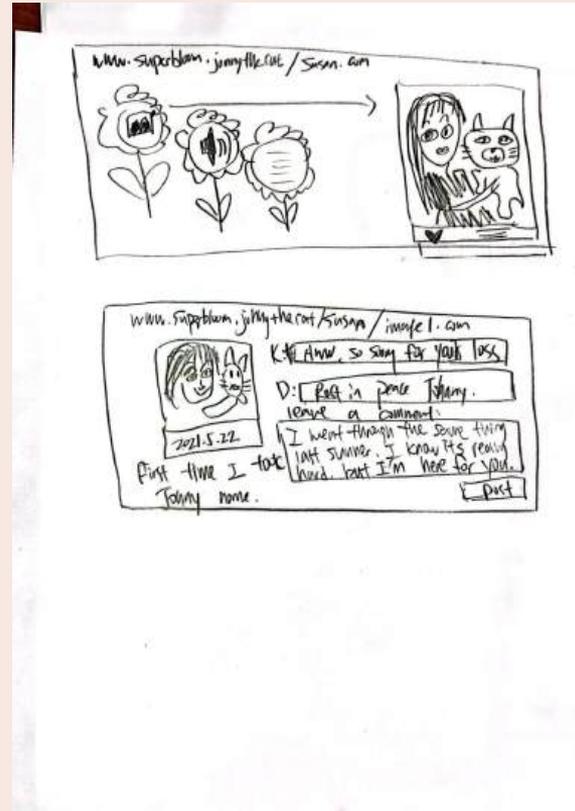
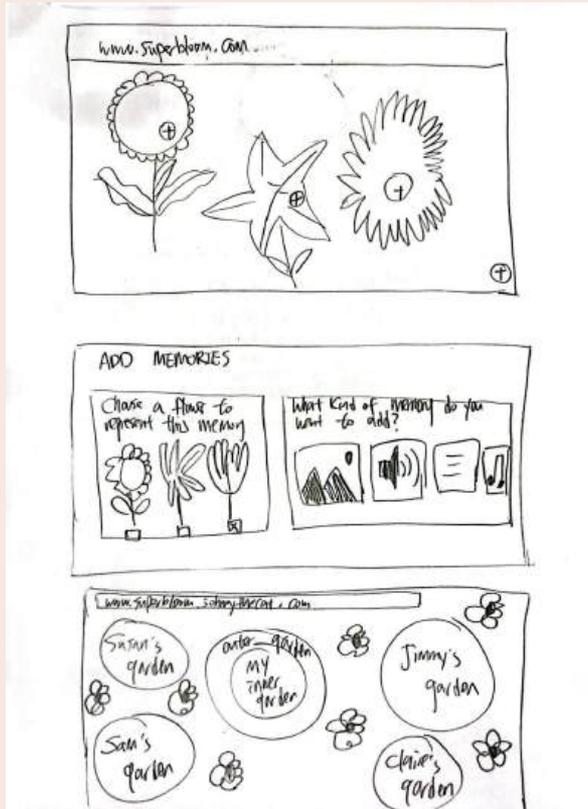
See superblooms in virtual reality



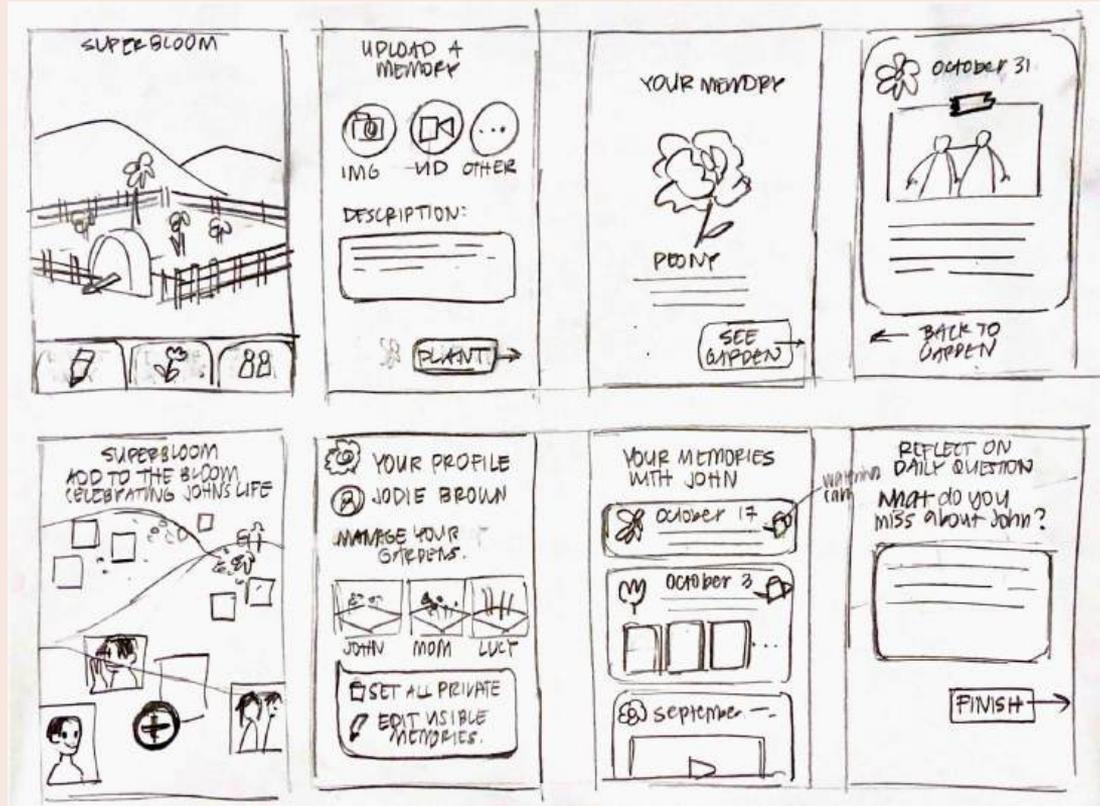
Visually separate
inner gardens (outer gardens)

Realization 2: VR

Realization 3: Website



Realization 4: Mobile App

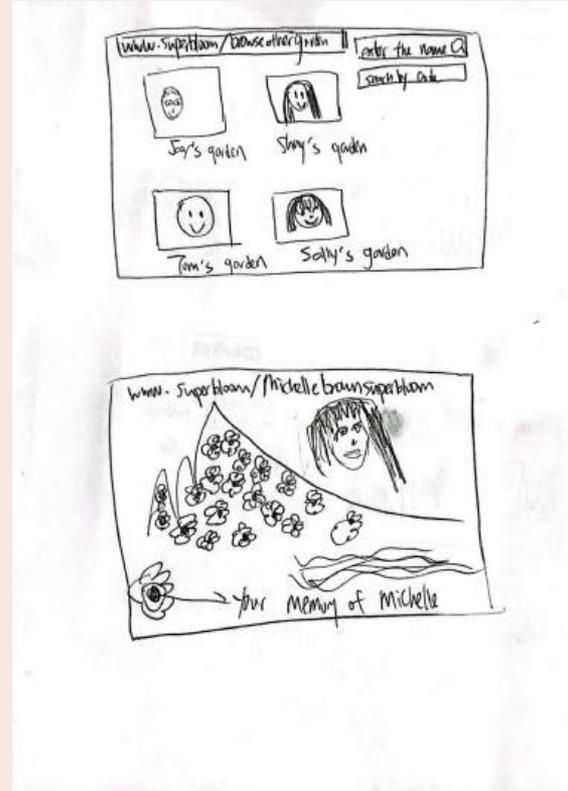


Top 2 Diverse Realizations

Mobile Application and Website



Website - Key Screens



Pros and Cons - Website

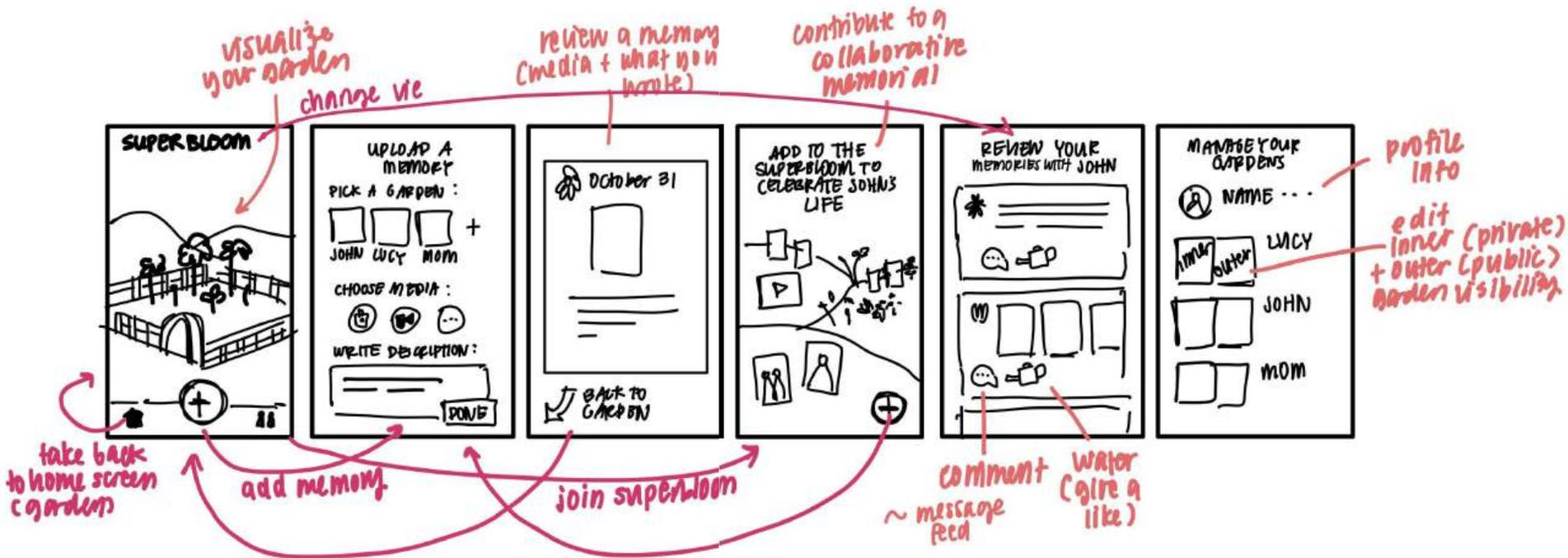
Pros

- Functional across platforms
- Larger screen – can put more memories on each page
- Can easily access a public page using links

Cons

- Could be inconvenient to upload images or audios from the laptop
- Difficult to customize or drag items around in the garden
- Inconvenient to type in the website link

Mobile App - Key Screens



Pros and Cons - Mobile App

Pros

- Easy access to user's existing phone photo/media albums
- Integrating notifications
- Smoother touch interaction with garden

Cons

- Limits users to those willing to download app
- Less screen space for showing or creating media

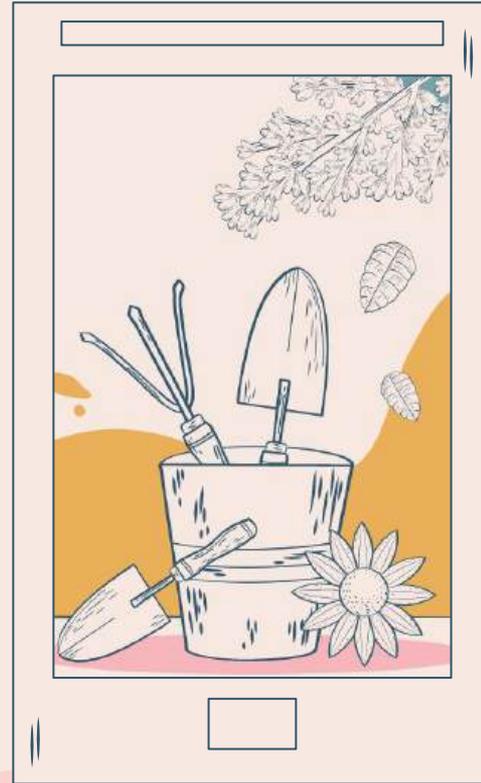


— 02

Selected Interface & Rationale

Mobile App

Compared to the website, the mobile application is **easier to use** and creates a **smoother experience** for the user.



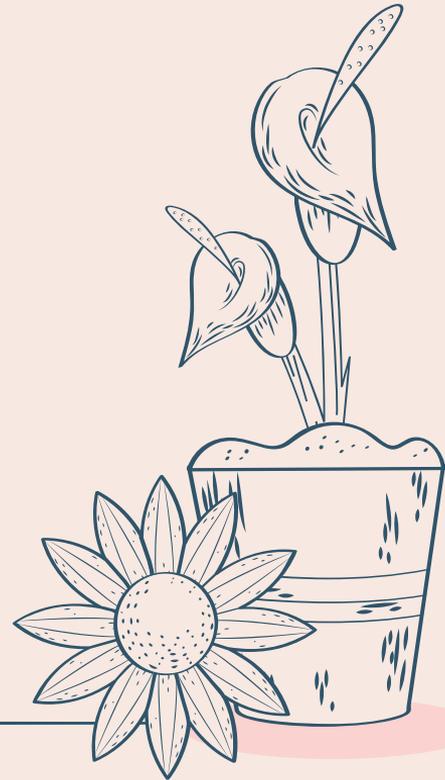
Rationale / Data

97% of Americans aged 18-49 own a smartphone ([Pew Research Center](#)).

- Age 50-64: 87%
- Age 65+: 76%

On average, people spend 4 hours, 11 minutes using mobile internet ([eMarketer](#)).

- 3 hours 47 minutes spent on apps
- 23 minutes spent on browser





— 02

**Low-Fi
Prototyping
& Testing**

Tasks Flows



Simple

Planting flowers in garden by uploading prompt response or media



Moderate

Interact with other outer gardens by giving them a flower or exploring



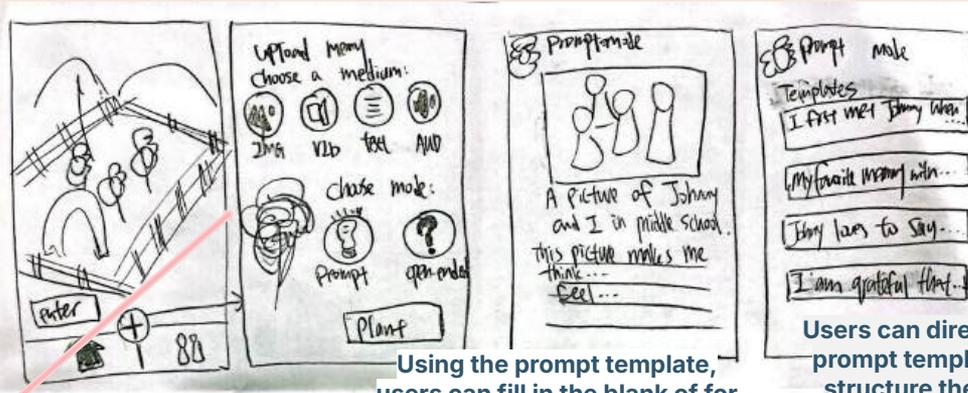
Complex

Organize and contribute to a *superbloom* (field of multiple gardens) on a set date

Simple Task Storyboard:

Add a memory with media to your garden

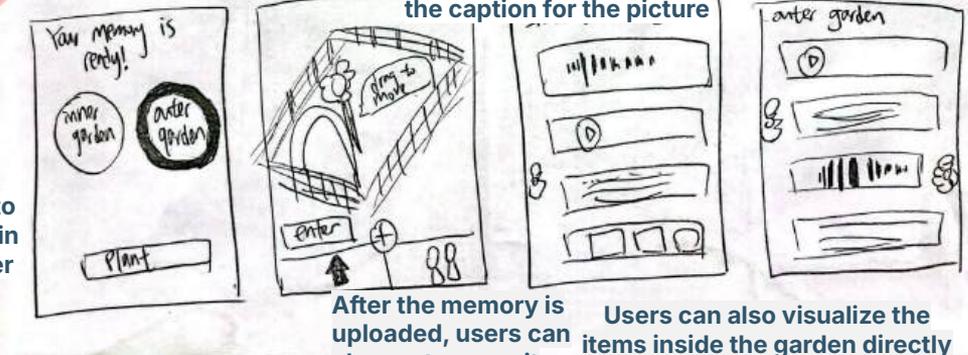
Home page displays the existing memories



Using the prompt template, users can fill in the blank for the caption for the picture

Users can directly select the prompt templates to use to structure their memories

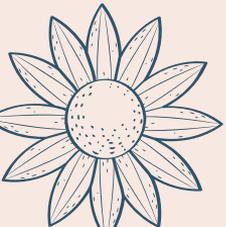
When users click the add button, they can choose the type of memory to add and whether to use existing prompts for those memories



After the memory is uploaded, users can choose to move it around

Users can also visualize the items inside the garden directly as floating memories

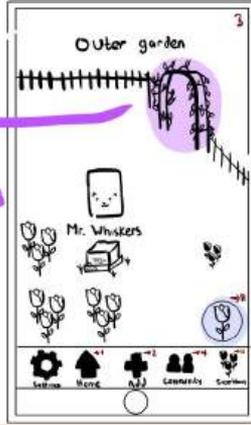
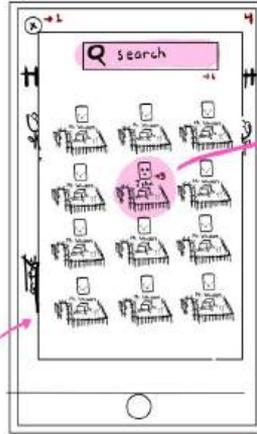
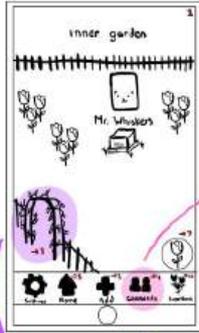
Select whether to put the memory in the inner or outer garden



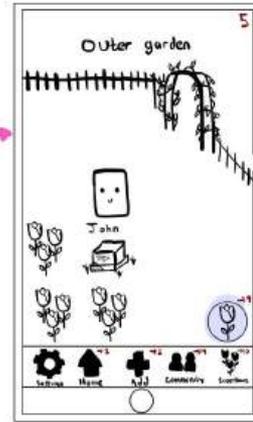
Moderate Task Storyboard:

Interact with someone else's garden

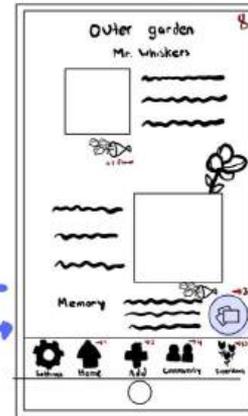
Use the community tab to find and visit others' outer gardens

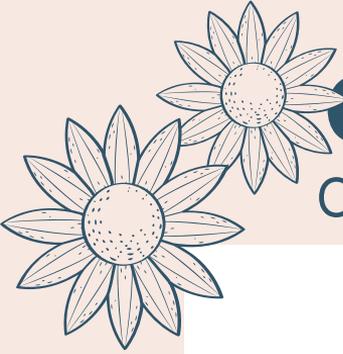


Press the gate to go between your inner and outer gardens (private and public)



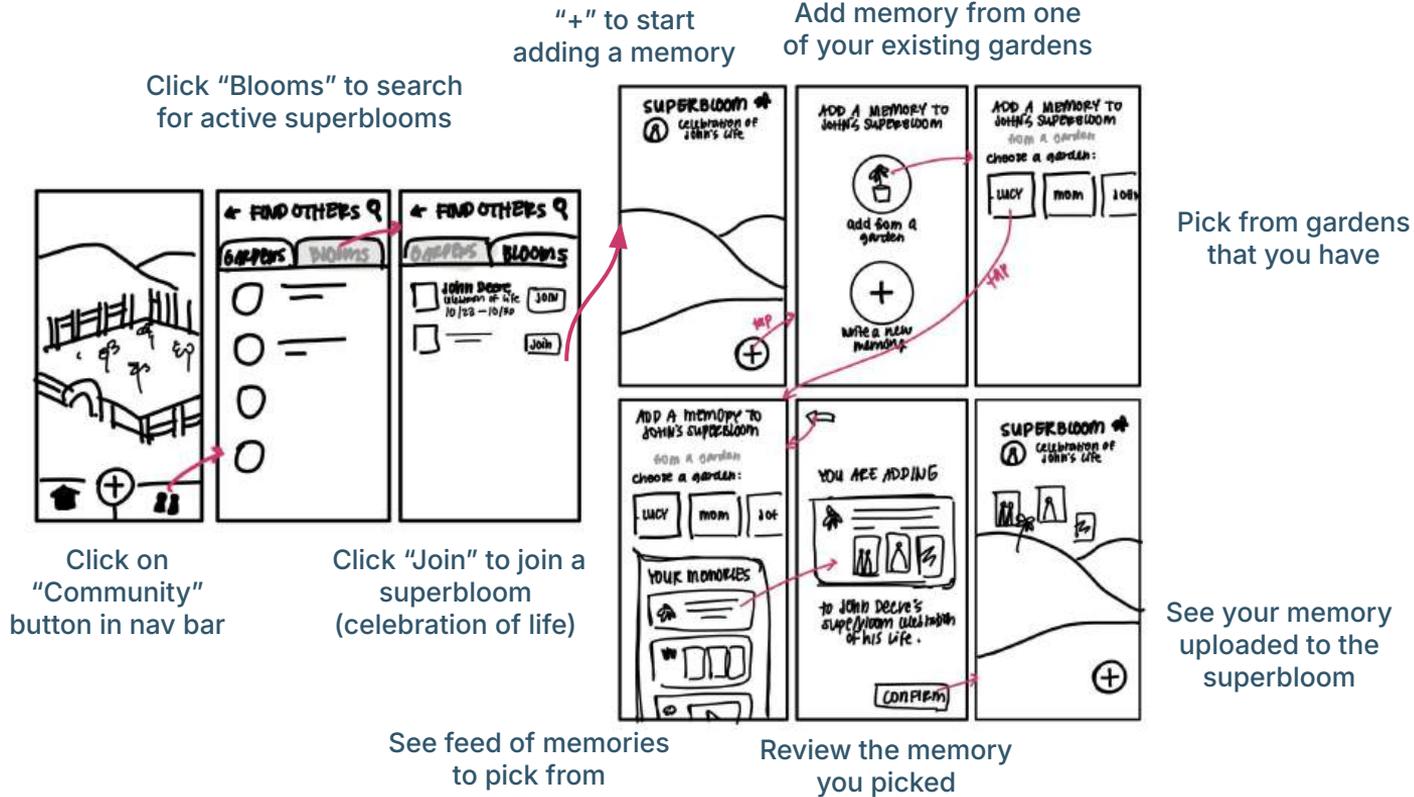
Switch between garden and collage mode to view flowers and memories



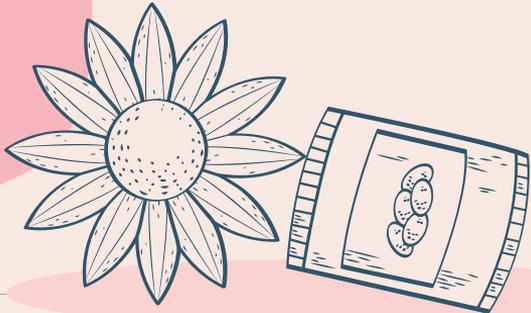


Complex Task Storyboard:

Contribute memories to a collaborative superbloom



Testing Process



Usability Test Set-Up



- Conducted tests in-person on campus in White Plaza
- User taps paper to navigate to other screens
- No compensation

Participants



Kareem

Male, 25-year-old
student (non-Stanford)



Sevinc

Female, 30-year-old
visiting scholar



Ivan

Male, 35-year-old HCI
engineer from China

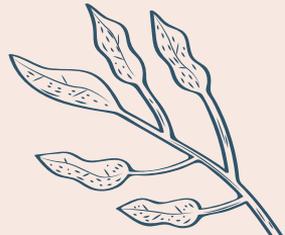


Aaron

Male, 37-year-old HCI
engineer from China

**All participants
have experienced
loss of a loved
one*

***All participants
were approached
at White Plaza*



Team Member Roles



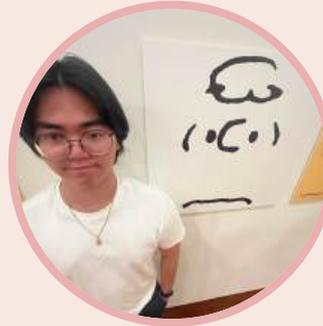
Felicia: Computer



Myan: Note Taker



Sunny: Facilitator



Thu: Observer

Process

Introduce participant to app concept & prototype:
Purpose of app & how to treat paper as "phone"

01

User completes task with instruction: Let them ask us questions as needed

02

03

04

User attempt to complete a task: introduce the task and let them try it w/out asking questions (x3)

Ask user to reflect on functionality: What was intuitive? What was unclear? Why?



Usability Goals & Key Measurements

Efficient - Able to perform tasks quickly
Task completion rate (w & w/out instruction)

Pleasant - User is likely to use features
Ask how likely they are to use each feature (scale 1-10)



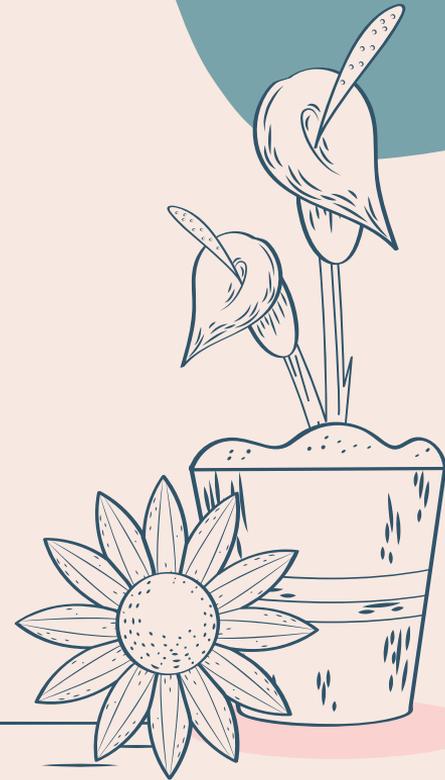
04

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Results & Discussion

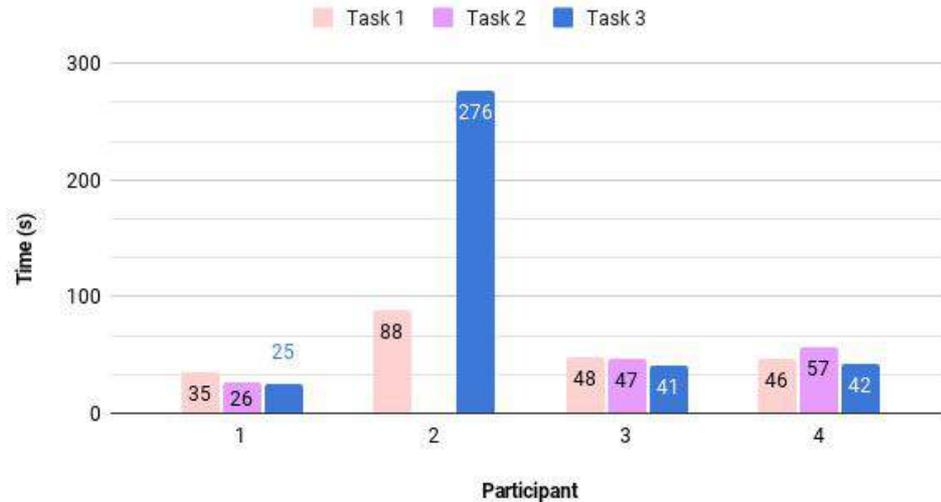
Process Data

- Overall, (most) participants enjoyed different parts of the app
- There was some sort of confusion from all participants for various features
- Language barrier could've been a factor



Bottom-Line Data

Time taken to complete tasks (in sec)



- Participant 2 was unable to complete Task 2
- On average, the simple, moderate, and complex tasks took about the same time to complete
 - Task 1 (simple, frequent) currently takes too long

Bottom-Line Data

Task	Misclicks
① Add a memory to your garden 🌱	3
② Interact with someone else's outer garden and leave a flower for them 🌸	6
③ Contribute to a superbloom 🌅	2

Bottom-Line Data

- 3/4 participants gave an overall “pleasing rating” of the app
 - 1 participant liked simple task the most
 - 1 participant liked moderate task the most
 - 1 participant liked complex task the most
- 1 participant *did not* enjoy the app idea and said he would personally not use it

Implications

"This is something *Facebook gurus* would like...*not for me*" - P1



People are hesitant to post so publicly about grief

"One thing *should only take 3 steps*" - P4



Tasks in the app take too many steps/pages to complete

"I think inner garden means people *within campus*, and outer garden means people *outside campus*..." - P2



Inner vs. outer garden terminology is very confusing

Usability Goal Results

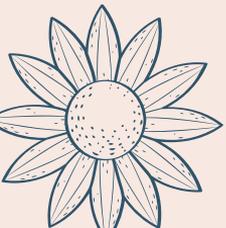
Average task completion rate

- **Simple:** 54 sec
- **Moderate:** 43 sec
(P2 could not complete)
- **Complex:** 1:36 sec

Average rating on ease of navigation (1-10):

6.5

Confusing terminology and icons created major pain points in the moderate and complex tasks.



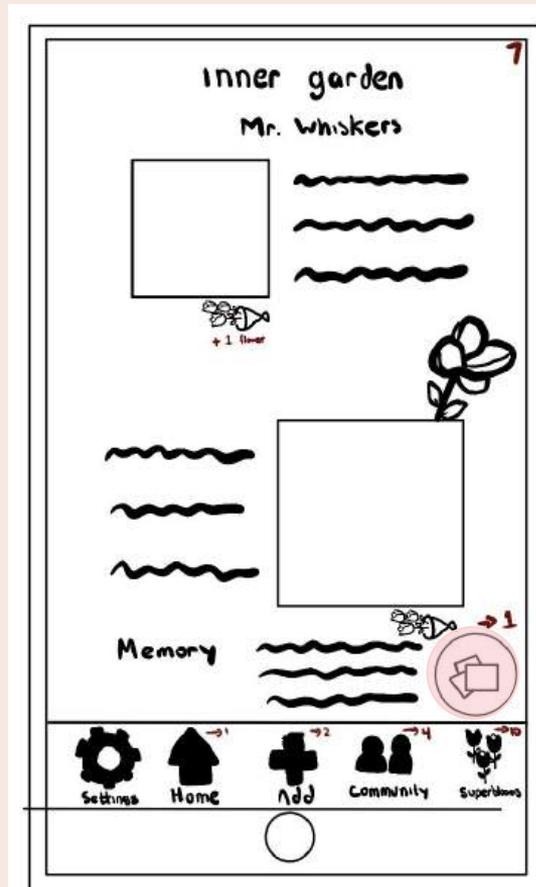
Other Observations

- People assume most/all visual elements in the garden are interactable
- Every user picked a different feature for what they would be most likely to use if they had the app
- Half of the participants did not understand the function of the toggle button

The background features abstract shapes: a large pink shape on the left, a large orange shape at the top right, and several small pink dots in the upper left. The text is centered in a dark blue, serif font.

Design Changes Based on Results

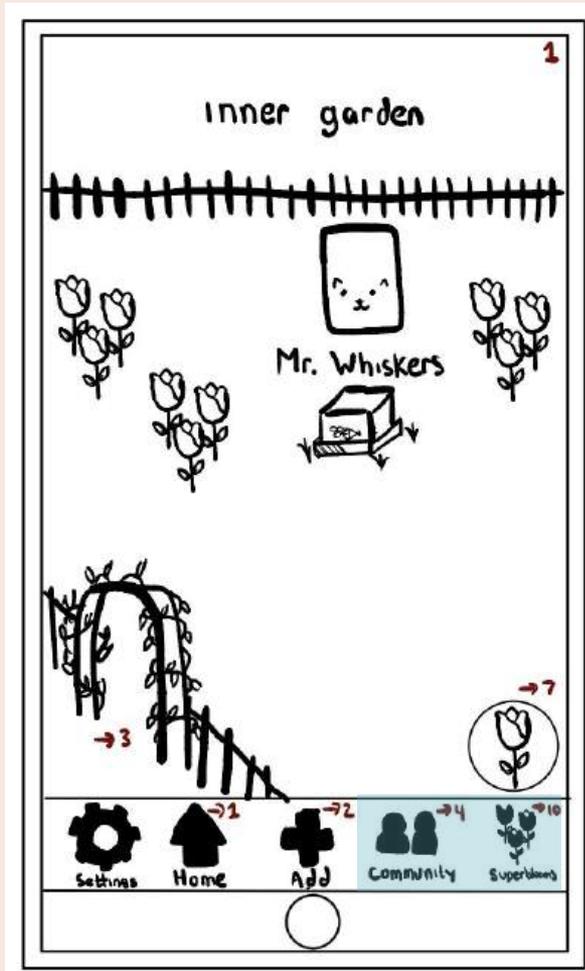
- Have a clearer **introduction/learning guide** for new users
 - Emphasize importance of **privacy** to users



Confusion about what clicking the toggle view buttons does



Add descriptive text, make look like a toggle between options



Confusion about distinction between "Community" and "Superblooms" pages



Combine the tabs and add descriptive text to provide more guidance



Testing Couldn't Reveal...

What an actual superbloom would look like (not enough users).

How useful it would be for people at different stages their grief journey.

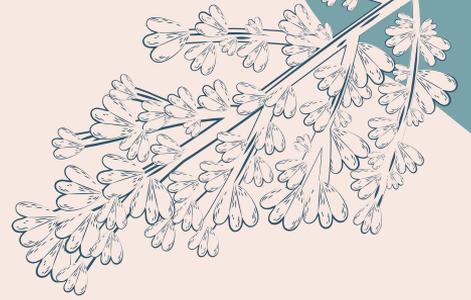
How the randomized prompt system would work.



The background features a light beige color with several decorative elements: a large orange circle in the top-left corner containing a white line-art illustration of a flowering branch; a teal shape in the top-right corner containing a white line-art illustration of a leafy branch; a pink shape in the bottom-left corner containing a white line-art illustration of a leafy branch; and a teal shape in the bottom-right corner containing a white line-art illustration of a flowering branch. There are also several small, solid-colored circles (orange, pink, teal) scattered throughout the background.

Thank You!

Appendix



Pros and Cons - Mobile App

Pros

- Easy access to user's existing phone photo/media albums
- Integrating notifications
 - This would be beneficial for increasing engagement
- Smoother touch interaction with garden
 - Better in terms of aesthetics & experience
- Works offline

Cons

- Limits users to those willing to download app
 - Ex. older population
- Less screen space for showing or creating media
 - You only have a phone sized garden, can't make it too small or else you'll lose accessibility to flowers/memories (Fitt's Law)

Pros and Cons - Website

Pros

- Functional across platforms
 - As opposed to limited to phone/tablet
- Larger screen – can put more memories on each page
 - Also, don't have to sacrifice size of memory
- Can easily access a public page using links
 - Easy to remember (url/name/garden_name)

Cons

- Could be inconvenient to upload images or audios from the laptop
 - Most people keep their media on phone (would have to transfer)
- Difficult to customize or drag items around in the garden
 - Have to use mouse
- Inconvenient to type in the website link
 - You'd have to remember the user name and garden name

Test Prep - Script

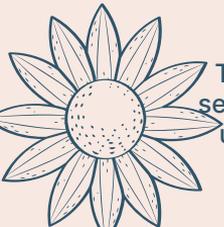
Intro: Hi! We're building an app called superbloom, which allows users to create a virtual memorial for a lost loved one. In superbloom, users plant their inner and outer garden, where each flower is a piece of memory (in the form of journals, photos, or voice memo) and users' reflections of them. Users can choose which parts of the garden to share with others and which parts to keep private, and users can browse the outer gardens (the ones shared) and start conversations.

[COMPUTER NAME] will control this paper prototype by switching the "screens" as you press on different things. First, we'll let you try to complete three tasks (that we'll introduce to you shortly) on your own and then after a bit we'll help you out if you can't figure it out. While you're navigating through the app, please share your thoughts out loud with us. Any questions, comments, concerns?

Task 1: Plant a flower in your garden!

Task 2: Interact with other outer gardens. Leave a flower for them.

Task 3: Our app allows users to create a virtual memorial service, called a superbloom, where approved users can all upload their our flowers for the honored. Contribute to a superbloom.



During:

Time how long it takes for them to figure out the task.
Keep track of how many questions they ask if they weren't able to figure out how to use the app.

Log critical events, then rate "severity" (1 being very negative, horrible even, to 5 being very positive. 3 is neutral)

Post questions:

On a scale of 1-10 how easy would you say it was to navigate through our app?

On a scale of 1-10 how likely would you use each of the features you tested today?

Any other feedback you would like to share?





Other Important Documents

[User Testing Results](#)

[Sketching Report](#)

[Crazy 8 Concept Sketches](#)
