

DiarWe



FINAL REPORT

Bridging generations through interactive journaling.

CS 147 Fall 2023

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Introduction

Project Name

DiarWe

Value Proposition

Bridging generations through interactive journaling.

Team DiarWe



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Problem and Solution Overview

People are all, in some capacity, part of an intergenerational relationship. Whether it's grandparents with grandchildren or parents with children, **miscommunication** and **disconnect** are prevalent due to generational differences in slang, pop culture, technology, historical events, and more.

DiarWe's goal is to transform the mismatch in generational culture into engaging topics, cultivating **personal connections** and **meaningful conversations** that reach beyond mundane small talk. This interactive journaling app facilitates immersive first-POV learning experiences by empowering the sharing and reading of interactive and reflective entries that encompass text, voice memos, and photos.

Needfinding Interviews

Methodology

Recognizing that intergenerational relationships form in various contexts and involve disparate backgrounds and age ranges, our team aimed to interview user groups that spanned different generations. As such, when searching for potential participants, we considered interviewees who represented different age groups, cultural backgrounds, sexual identities, and more to ensure we gathered diverse perspectives. In saying so, our recruited interviewees came from a variety of professions and backgrounds: classical musicians, professors, single mothers, international and college students, and medical industry retirees. We relied on mutual connections, inside and outside of Stanford, to find them.

In total, we conducted **6 needfinding interviews** that lasted ~30 minutes each: 2 interviews were held virtually via Zoom and 4 interviews were held in person at Stanford. Our team recorded audio/video for later synthesis and analysis with the participants' consent, and we had two team members at each interview to serve as interviewer and notetaker.

While we prepared open-ended questions to ask all our interviewees, we also used our best judgment to freestyle appropriate follow-up questions. As such, we were able to build rapport and establish a welcoming environment for the interviewees to share (or opt out of sharing) relevant anecdotes.

Some of the questions we asked include:

1. Could you walk me through a time you interacted with someone from a different generation?
2. Tell me about a time you felt connected between you and someone from another generation or culture.
3. Tell me about a time you felt a disconnect between you and a younger/older generation.
4. Tell me about a time when you felt that a person from a different generation could not understand where you were coming from.
5. What aspects of your culture/heritage (i.e. trends) are you curious about?

Synthesis: Empathy Maps (Consolidated)

The following screenshot captures the key takeaways from the empathy maps we created for each interviewee:



In general, our interviewees expressed **curiosity to learn** more about the past and a **desire to connect with others** in different generations. Storytelling and being able to have meaningful/accessible conversations amongst intergenerational individuals seemed like crucial elements that our interviewees wanted more facilitation with. Based on these findings, team DiarWe moved forward with the process of formulating POVs, HMWs, solutions, and experience prototypes.

POVs and Experience Prototypes

Once we identified the initial needs from our needfinding interviews, we developed **3 POVs (“Points of View”)** and corresponding **HMWs (“How Might We”)** statements to guide our solution process. From there, we developed and tested experience prototypes to better understand which potential solution would effectively tackle our problem domain.

POV #1: BF



WE MET a 60+ year-old flute teacher who interacts with multiple generations on a daily basis.]

WE WERE SURPRISED TO REALIZE he continues to make historical references, even when his students don't understand them, and doesn't realize that misunderstanding until a third POV interjects.

WE WONDER IF THIS MEANS he thinks it's important to pass down the historical references of his generation to spark curiosity amongst his students to learn more about the past.

IT WOULD BE GAME-CHANGING TO have immersive ways to make learning/storytelling about the past more interesting, accessible, and interactive.

How Might We...

1. How might we leverage visual storytelling to make learning about intergenerational content more interesting?
2. How might we help younger generations stay more in touch with the past?
3. How might we curate historical content that is more accessible?

4. How might we incentivize younger generations to feel more compelled to explore unfamiliar topics?
5. How might we transition from more static learning methods to more dynamic learning methods?
6. How might we assist teachers in upholding a relatable rapport when communicating less familiar ideas with students?
7. How might we use technology to create immersive experiences for learning about historical events and figures?
8. How might we “spark curiosity” in ways other than “time-based” historical references?
9. How might we share elements of generational popular culture in interesting ways?
10. How might we relate generational anecdotes to present-day experiences?

POV #2: KC



WE MET a 20+ year-old cotermin student at Stanford, who was born/raised in Taipei, and went to an international high school.

WE WERE SURPRISED TO REALIZE she feels awkward talking to her grandparents and goes out of her way to use language that they will best understand, despite growing up in the same country as them.

WE WONDER IF THIS MEANS cultural similarities don't necessarily bridge generational gaps, and understanding more detailed historical content could facilitate stronger connections/bonds.

IT WOULD BE GAME-CHANGING TO allow people to understand the lived experiences of other generations.

How Might We...

1. How might we make learning about intergenerational content an immersive, “day-in-the-life” experience?
2. How might we strengthen familial relationships through interactive two-way learning?
3. How might we facilitate an environment where each generation can use the slang/language they are familiar with when conversing without misunderstandings?
4. How might we help younger/older generations stay proactively connected on a regular basis?
5. How might we diminish moments of intergenerational disconnect when topics or vocabulary are too complex for the counterpart generation to comprehend?
6. How might we motivate younger generations to learn more about the history and lived experiences of older generations?
7. How might we help people rigorously understand another generation’s history beyond just surface-level “textbook descriptions”?
8. How might we facilitate meaningful conversations despite generational gaps?
9. How might we leverage elements of shared experiences, pastimes, or culture (e.g. food, photos, games, etc.) to facilitate storytelling?
10. How might we help people connect across generations by asking the right questions about generational history and culture?

POV #3: DF



WE MET a middle-aged instructor with Stanford Living Education, who has a daughter and two twin sons.

WE WERE SURPRISED TO REALIZE that she met her husband via online dating, but has reservations about her own kids using apps like Bumble and Snapchat (especially Snap Maps).

WE WONDER IF THIS MEANS she’s concerned that the privacy and

relationship she feels with her partner is a rarity, and will not be applicable to her kids.

IT WOULD BE GAME-CHANGING TO facilitate transparent conversations about intentions behind the usage of generationally popular trends/platforms.

How Might We...


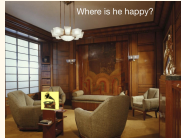
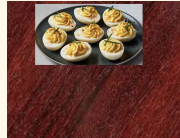
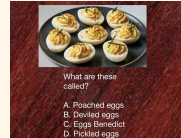
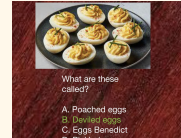

1. How might we encourage children to discuss their intention of using certain technologies with their parents?
2. How might we facilitate clearer communication between parents and their kids?
3. How might we mitigate privacy concerns?
4. How might we ensure online friendships are safe?
5. How might we help parents understand the concept of online friendship?
6. How might we dissolve double standards in an intergenerational context?
7. How might we pique parents' interest in learning new technology trends?
8. How might we increase trust between generations?
9. How might we create a psychologically safe space for children to share their ideas with parents?
10. How might we create an environment where parents and children can openly discuss their thoughts/intentions towards social media?

After coming up with this comprehensive list of HMWs, we were able to consolidate and revise our top 3 HMWs and come up with **3 different solutions**, with a corresponding **experience prototype** to test each solution's assumptions.

Experience Prototype #1: The Escape Quest

HMW make learning about intergenerational content an immersive experience?
Solution: A first-person POV experience through a generation-themed room with hints and clues to fulfill a designated quest.

We assumed that gamification would make learning about intergenerational content engaging; users would feel motivated to complete the objective. As such, for this experience prototype, we used a premade slide deck on an iPad to simulate the exploration of a generation-themed room. Users are then guided through different parts of the room through clues and questions that help them learn generational facts.

					
User sees a Roaring 20s themed room with a glowing, clickable record player. Upon clicking the record player, a song from the Roaring 20s plays.	After the song is finished playing, user is prompted on the screen, "Where is he happy?" The answer to this question is "shelf" which can be found in the lyrics of the song that was just played.	After clicking on the shelf in the room, the user is taken to the shelf, where they find a picture of deviled eggs, a food dish from the Roaring 20s.	User is prompted, "What are these called?" and is given four options to choose from.	Upon clicking the right answer (deviled eggs), the answer is highlighted in green to indicate that the user chose the correct answer.	User is taken back to the main room and is told "You Passed! Thank you for playing."

The Escape Quest (click [here](#) for the slide deck)

We tested this experience prototype with a Stanford CS PhD student who has done extensive research in educational technology, HCI, and game design. His expertise shed some perspective on the shortcomings of our gamified prototype. While the escape room-esque gamification allows for clear guidance on what to do next, it was difficult to uncover clues that the player needed to answer

questions correctly. Instead of learning, our participant felt like he was more focused on guessing the right answer so that he could unlock the next part of the quest.

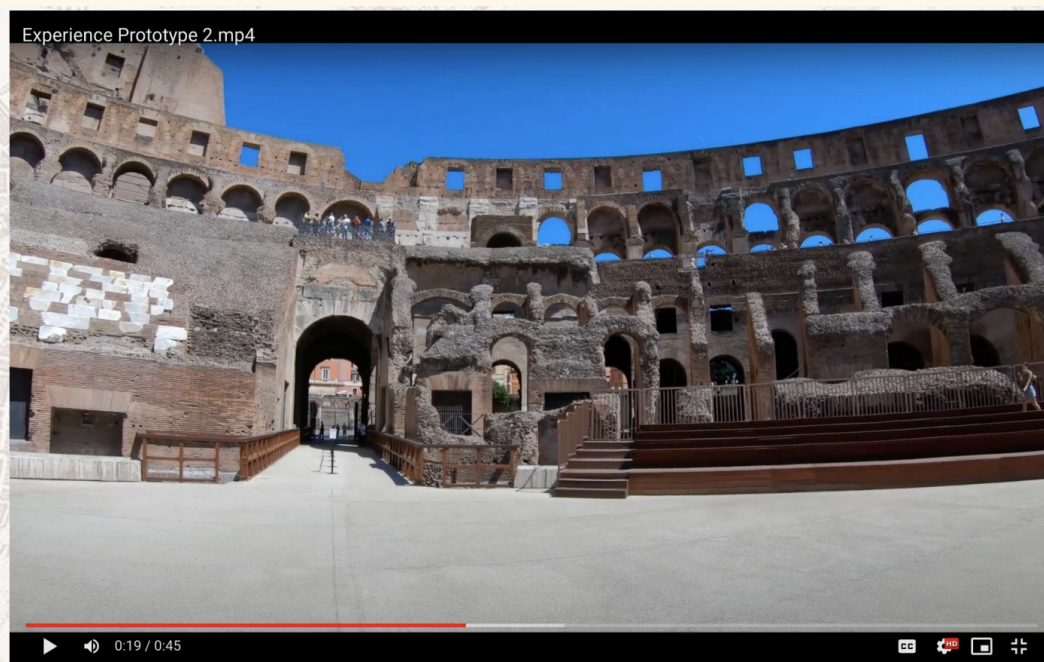
Our findings suggest that gamification does not necessarily lead to increased user engagement and content learning, but rather causes the user to focus on getting the right answer via trial and error.

Experience Prototype #2: Immersive Tour

HMW encourage the sharing of personal experiences across generations through visual storytelling?

Solution: *A platform where users can immerse themselves in a “walk-along tour” that highlights major events and turning points from a chosen generation.*

We assumed that users would feel more engaged and excited to learn about historical events via immersion compared to traditional paper or textbook methods. As such, for this experience prototype, we created a “walk-along tour” simulating the Colosseum with a first POV narration and representative background effects/music. We then had a participant watch and react to this tour:



Walk-along tour in the Roman Colosseum (click [here](#) for full video tour)

We tested this experience prototype with a row house hasher, someone who would diversify the age range and ethnic background of our user base. Upon completing the tour, she felt that the interactive scenery and narration helped her feel immersed in the historic location. Furthermore, she said she could almost even imagine a gladiator fight happening in the Colosseum. However, she thought that the people in the video were a bit distracting.

Our findings suggest that users would be able to experience vivid imagery and feel captivated by being immersed in a walk-along tour. As such, the tour sparks a curiosity for users to continue learning about the topic. A caveat with this solution is that this prototype would not facilitate a two-way learning experience, which is crucial to upholding values in interactivensess and immersivity.

Experience Prototype #3: Interactive Journaling

HMW leverage elements of shared culture to bridge generational gaps between family members?

Solution: *A daily interactive journal/diary with prompts incorporated with visual mediums (i.e. photos, video, audio, etc).*

We assumed that users would feel a deeper connection when completing interactive journals with a partner compared to just keeping a personal diary. As such, for this experience prototype, we invited two participants who consider themselves acquaintances to journal about their day. We asked them to share a random photo of their day, a song that reflects their mood of the day, and a brief written blurb with key highlights of their day. Their entries are as follows:



We decided to test this experience prototype with two participants who consider themselves acquaintances. This was because while they had four overlapping academic years and friends at Stanford, they are now separated by distance and don't regularly keep in touch. After sharing and reading each other's journal entries, they felt a more personal/deeper connection to one another and commented that the interactive components made journaling feel more motivating. JG specifically mentioned that the whole experience felt like BeReal, with a much more personal feel.

Our findings suggest that interactive journaling could help users build a deeper connection with others and that this journaling method likely feels more appealing than having to journal by oneself. Furthermore, the content shared in these entries consisted of anecdotes that would be difficult to share in passing, especially if the users are separated by distance. However, we did recognize that the level of detail one is willing to include in their journal entry is definitely influenced by their level of familiarity with their journal partner.

Design Evolution

Final Solution

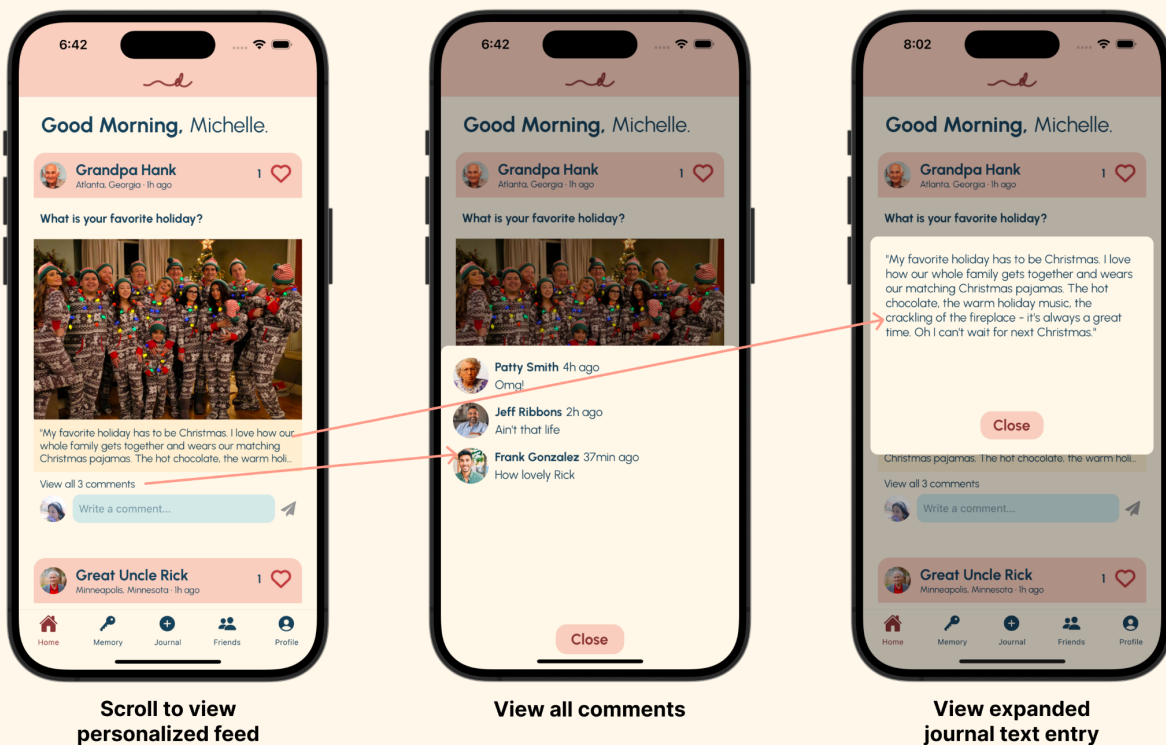
After testing all of our experience prototypes, we settled on **experience prototype #3 (Interactive Journaling)** as our final solution — later branded as **DiarWe**. While the Escape Quest and Immersive Tour provided interactive environments, neither necessarily offered a two-way learning experience, thus lacking the interactive element that's central to our problem domain. The Escape Quest deterred from the main objective, forcing users to feel like they were obligated to complete a task correctly rather than learning the educational material in question. The Immersive Tour was visually appealing and deeply engaged the user, but it felt like just a slightly enhanced video experience one could find on existing platforms like YouTube or Google Earth.

On the other hand, interactive journaling facilitates a two-way learning experience between intergenerational counterparts. This journaling concept integrates social aspects that offer a holistic space for visual and auditory story-telling that is rooted in first POV reflections. By going forward with DiarWe, we believe it'll provide game-changing opportunities to accessibly and authentically build intergenerational relationships.

Tasks

1. Simple Task – read & react to other's journal entries

Reading and reacting to other people's journal entries on a home feed is a core task flow of DiarWe, as our main objective is to allow users to engage with the content that their generational counterparts are reflecting on and sharing about. There are two ways users can interact with feed entries: (1) like (or "heart" an entry and/or (2) write a comment in the comments section.



Viewing comments on your personalized feed.



Tap on heart icon to like a journal

Comment on other's posts

Liking a journal entry and commenting on a journal entry.

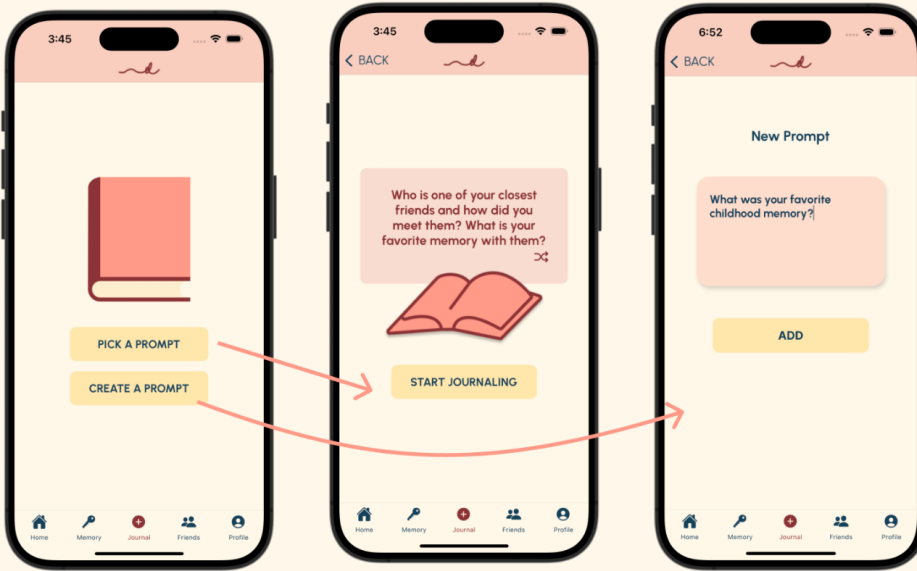
2. Moderate Task – create a journal entry with interactive elements of a user's choice

To populate personal profiles and home feeds, users are able to create interactive journal entries using either text or voice with accompanying photos if they so choose.

First, DiarWe offers a bank of generational-themed prompts that users may shuffle and choose from. Users may also create prompts of their own if they want to answer a specific question.

Then, users have the option to type their entries or voice record their entities, whichever is more accessible for them. Afterward, they are prompted with the option to take a live photo or upload an existing one from their photo library.

Finally, users can share and post their entries to their profile/feed, where they have the freedom to restrict who is able to view their journals as a way of mitigating any potential privacy concerns.



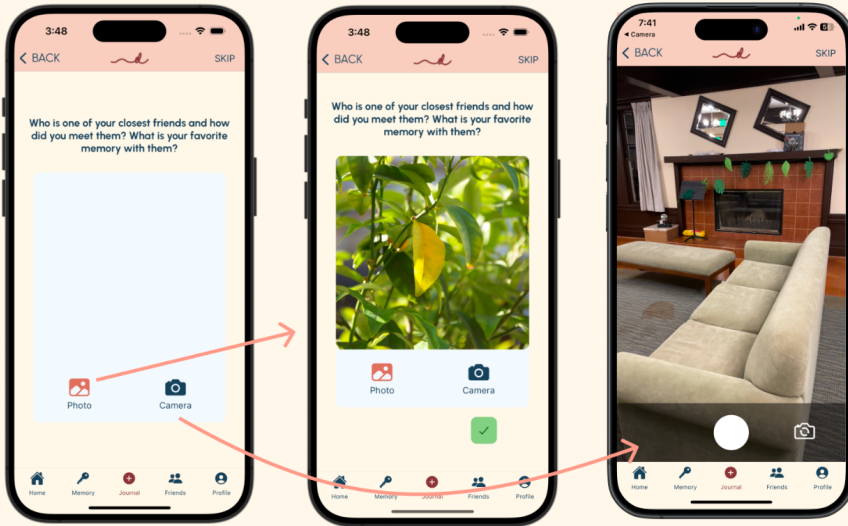
Pick or add a prompt to start journaling.



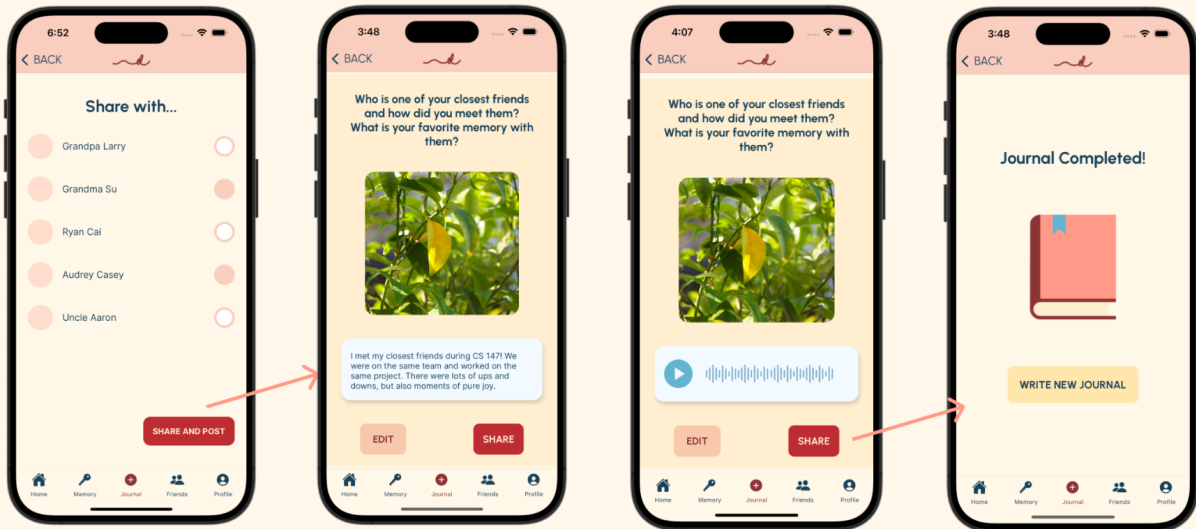
Choose to write or record journal.

Tap microphone to start recording.

Write journal.



Pick photo from library or take picture with camera.



Select friends to share the journal with.

View summary of the journal (written version vs recording version)

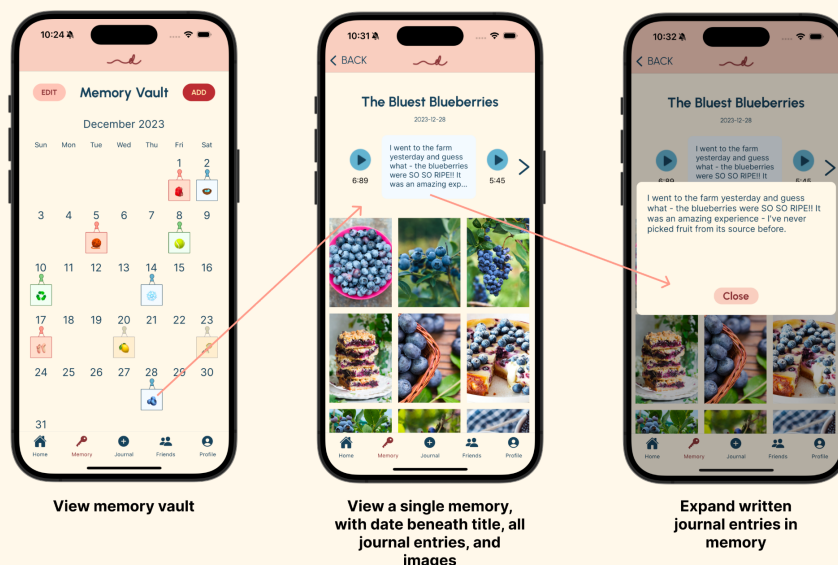
3. Complex Task – create & view customizable vaults with others where users can group journals by theme.

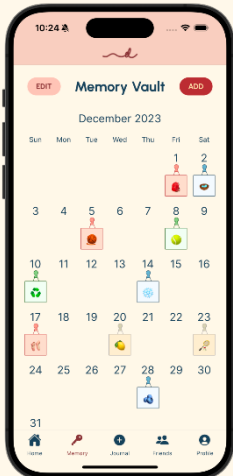
To access past memories, users are able to navigate to the vault tab of DiarWe to view customized collections categorized by theme. By revisiting memories, users can review what they've learned in the past from their intergenerational connections and continue honing those intergenerational relationships.

First, users can navigate to their memory vault. There, they can find memories, each containing journals grouped by theme. By clicking on one memory, they enter a new page that shows all the images, audio entries, and written entries corresponding to the journals that are part of the memory. Users can expand written entries and scroll through images for increased accessibility and usability.

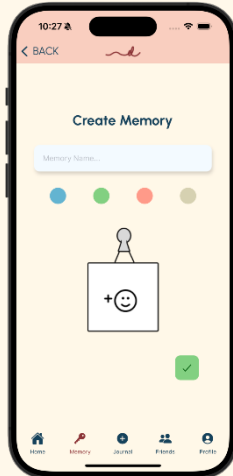
Users can also add memories to their memory vault. In order to add memories, users click the “add” button to start the create memory flow. First, they can choose a Title, color scheme, and emoji. Then, they can choose friends who have shared journals with them (and whom they have shared journals with) to share the memory with. Next, they can choose from all journals they themselves have written to all selected friends and the journals all selected friends have written to everyone else. Users can also preview each journal entry and select it accordingly. Lastly, they can post that memory, and a confirmation page confirms that they have posted.

Navigating back to the vault, users can now see the memory they've just created. The users they've shared the memory with will also see the memory in their memory vaults.

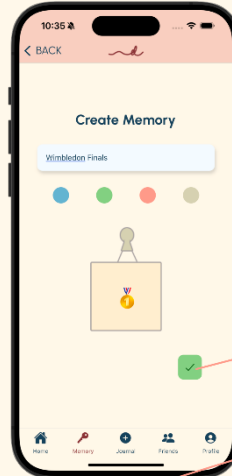




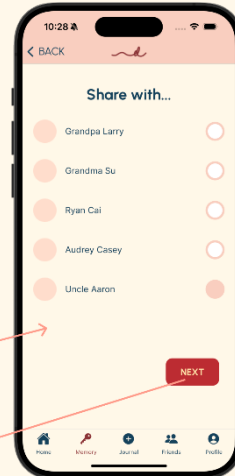
View memory vault



Start create a new memory flow



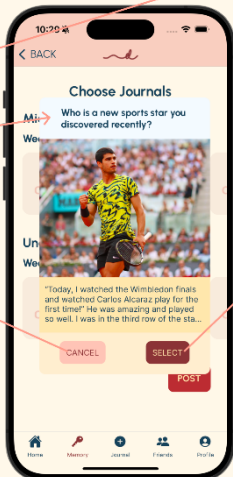
Choose theme for memory (title, color scheme, and emoji)



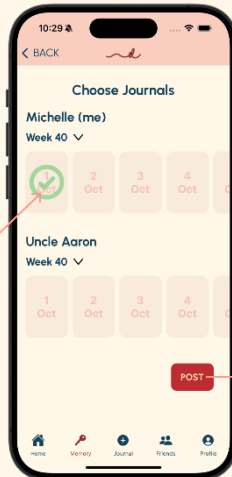
Share memory with friends who have shared journals with you



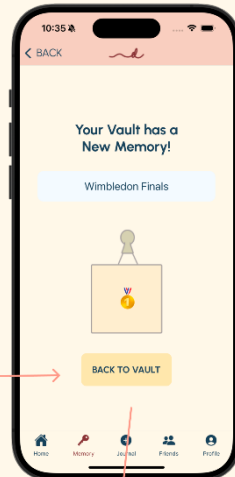
Choose journals your selected friends have shared with you (and the journals you have shared with all of them)



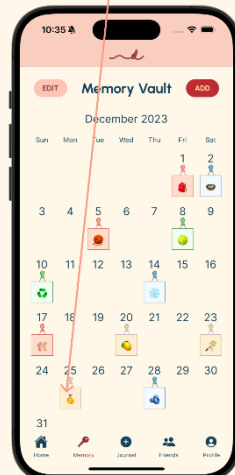
Preview a journal entry, with option to select it or cancel preview



Selected journal entry now shows a green checkmark



Completed memory confirmation page showing title, color scheme, and emoji corresponding to memory.



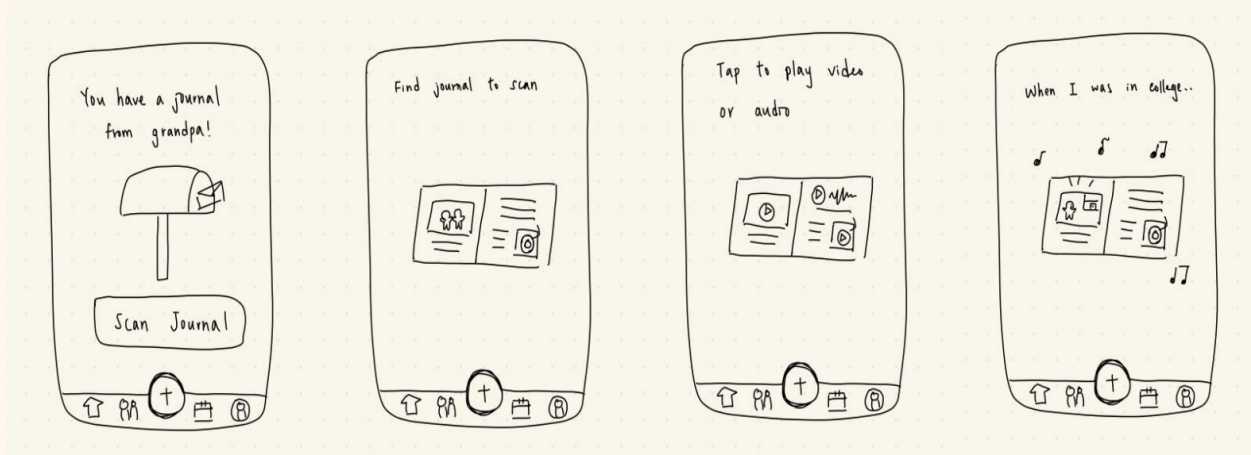
Memory vault now shows a new memory!

Visualized UI Iterations

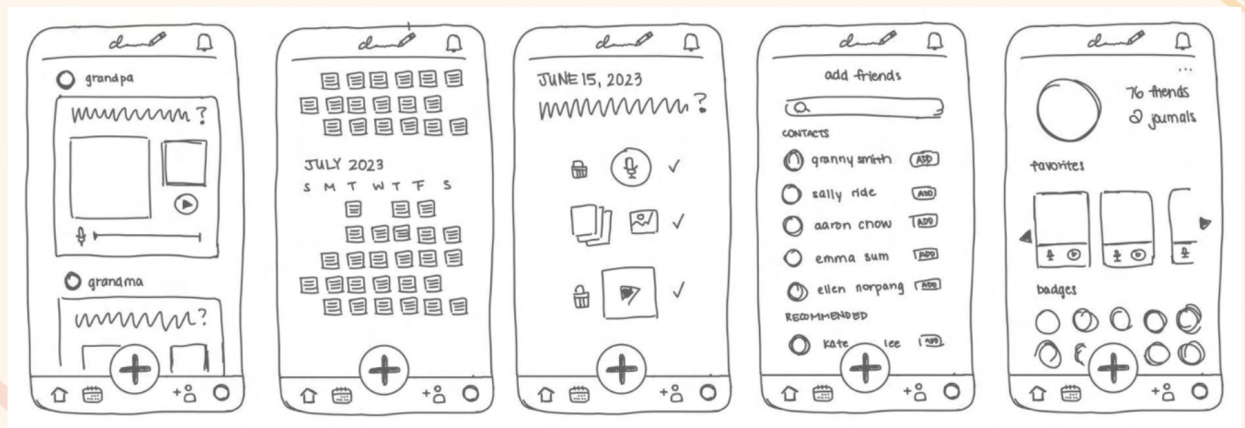
Initial Sketches

During initial sketching, we brainstormed several design iterations across all four team members, but we eventually narrowed down our list to a final two:

AR Realization:



Mobile Realization:

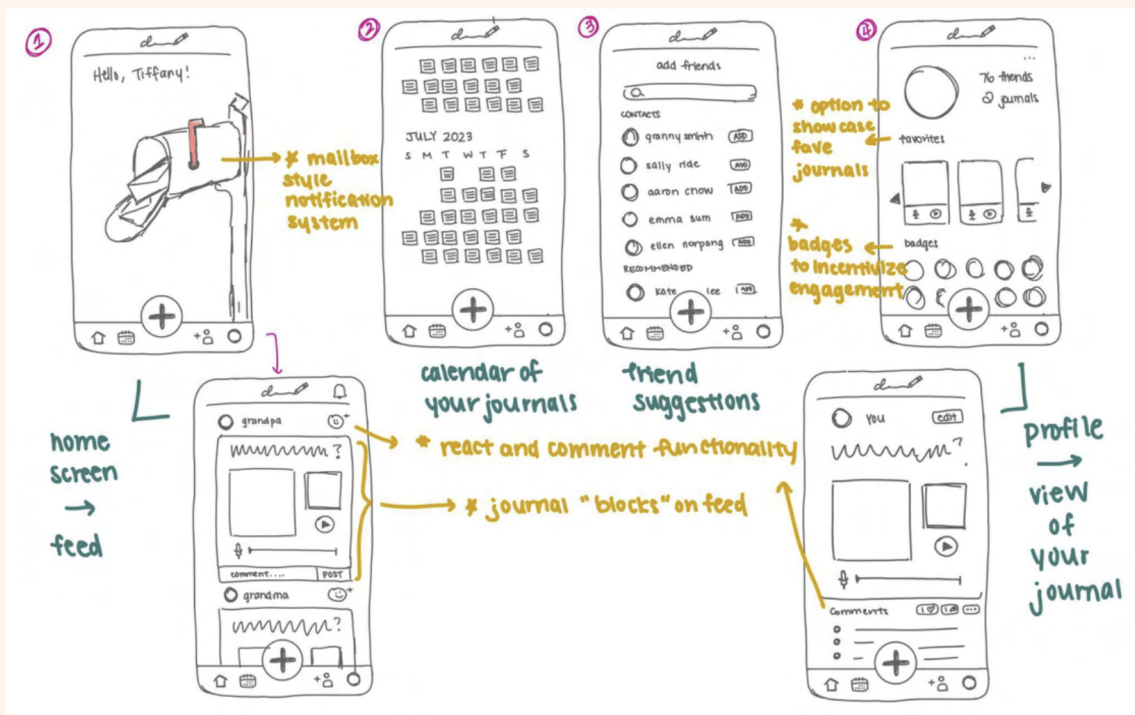


While the AR realization version of DiarWe would certainly provide an immersive experience that would set it apart from modern-day journaling apps, we recognized that it would be challenging for older generations to navigate, especially the learning curve of digital scanning. The mobile realization, on the other hand, would allow more design freedom where we can prioritize creating a

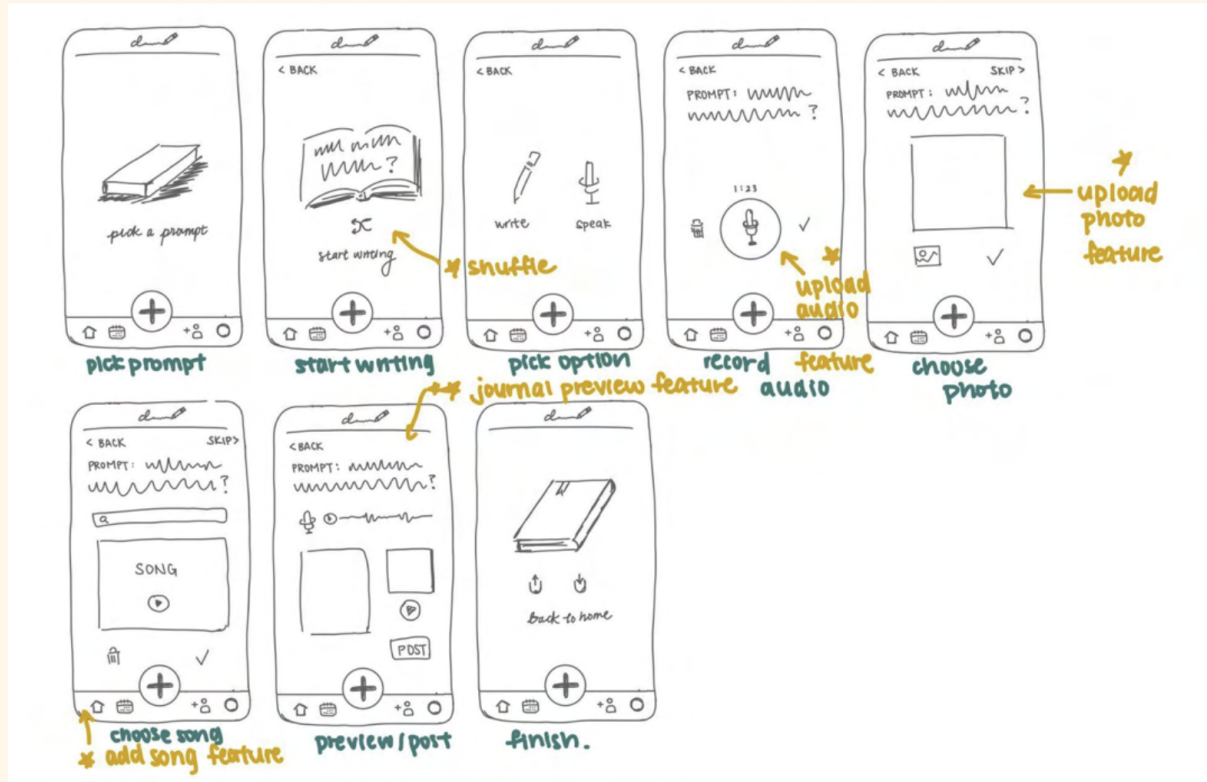
simple and user-friendly interface that follows the “status quo” of common app platforms today.

Low-Fi Prototype

The following is, at the low-fi stage, how we envisioned each tab of the bottom navigation bar leads to. The app greets the user with a mailbox that opens to a home feed of people’s journal entries. Tab 2 opens up to a calendar view of archived journals. Tab 3 opens up to a friends list. Tab 4 opens up to a personal profile.



Here, we visualized the process of creating a journal entry from picking a prompt, to shuffling, to choosing a journaling method, to adding a photo and song component, to hitting “post.”



Usability Testing at the Low-Fi Stage

Testing Methodology:

Delegating roles such as a notetaker, computer, and facilitator, we presented paper printouts of our low-fi prototype (1 page per screen) to participants to navigate through while vocalizing their thought processes. Given the nature of our testing environment, all 4 of our usability testing sessions were conducted in-person on Stanford campus. We selected participants that would represent a spanning age range in our target user base: (1) a pre-med college grad in his early 20s, (2) Department of Music faculty member in his 60s, (3) Department of Music faculty member in her 40s, (4) clinical psychology researcher in her early 20s.

Procedure:

With 20+ different screens from our low-fi prototype, we asked the participants to first start from the home page and freely navigate and explore the app. We then presented them with three tasks to see how quickly they would be able to discover features on our interface. In doing so, we were able to determine which features were less intuitive and which designs needed further iterations. As such, our usability goals are centered around discoverability and learnability.

Respectively, we kept track of how many features a participant could successfully discover, and timed how fast a participant could successfully navigate to certain features of the app.

Key Findings:

- Goal and value of the app were clear to the participants
- While all participants were able to complete all three tasks, the eldest participant needed more guidance than the others
- The mailbox on the homepage was confusing

Moving on to the medium-fi prototype, we recognized that we would need to make a handful of UI changes to increase intuitiveness and enhance visibility for some features by having more text-based instructions. Moreover, we needed to think about how to make the UX more accessible for less tech-savvy folks as well. However, we kept in mind the limitations of a low-fi discolored prototype. Some concerns, such as confusion regarding clickable areas, would be easily resolvable with med-fi tools like Figma.

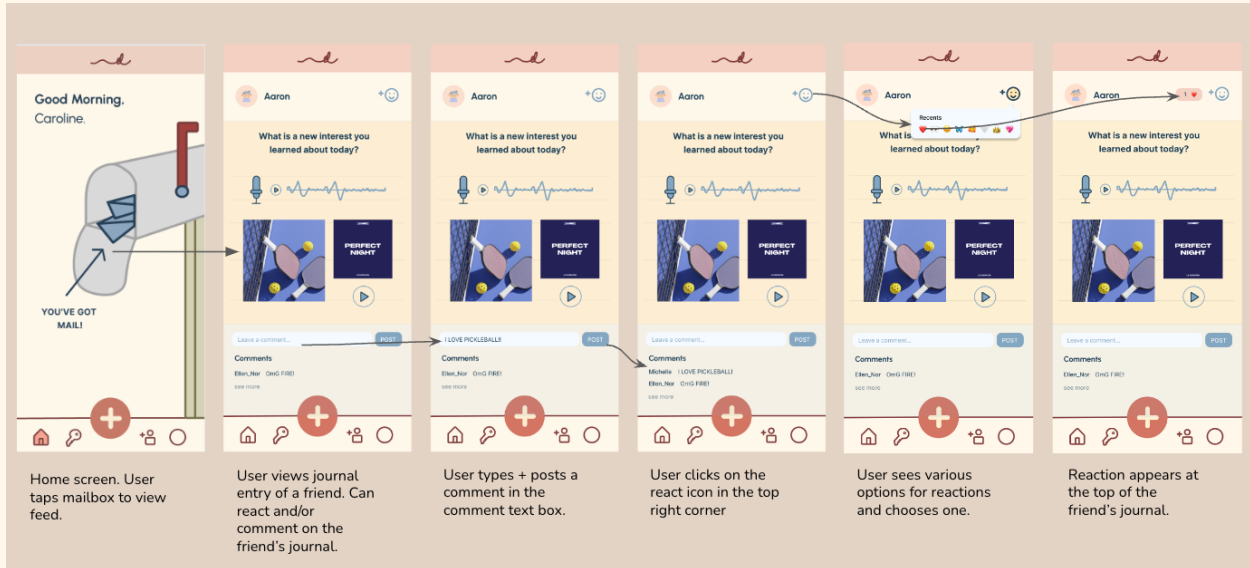
Med-Fi Prototype

Using Figma, we developed the following task flows with UI changes once assessing the key findings and critical incidents from our usability testing. Here is our simple task (reading and reacting to others' journal entries).

Key Changes from Low-Fi:

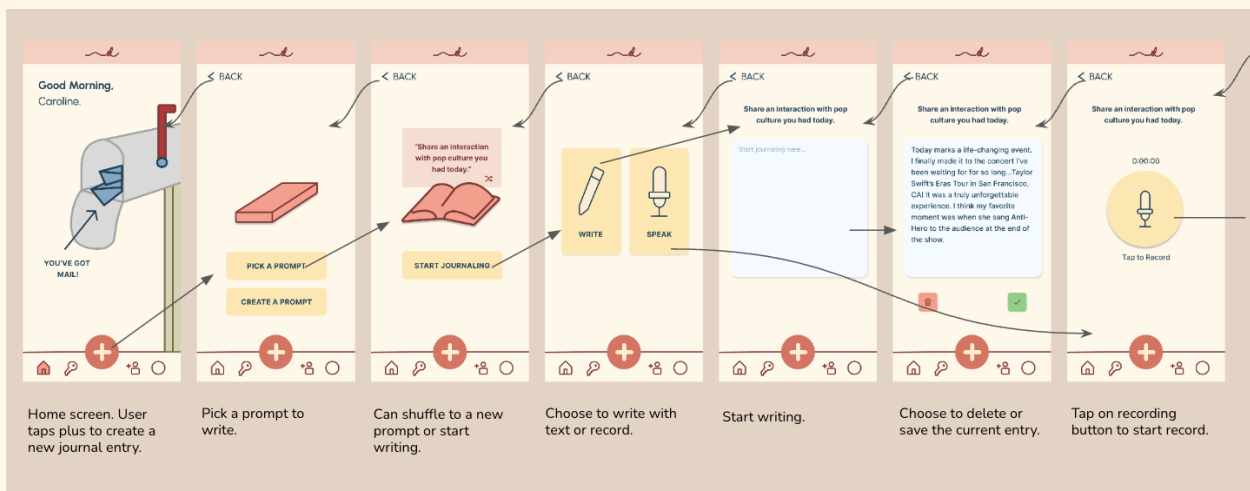
- Made the home button look like an actual house with a door so that there was no confusion with it being an upload button.

- Added helper captions, such as “you’ve got mail!” next to the mailbox, “tap to record” under the record button, and “press here to take a photo” on the camera page, to guide less tech-savvy users.
- Added an ‘edit’ button on the journal summary page before sharing to allow user flexibility.
- Determined a color palette for our interface that would facilitate enhancing intuitiveness and discoverability in terms of framing clickable areas.

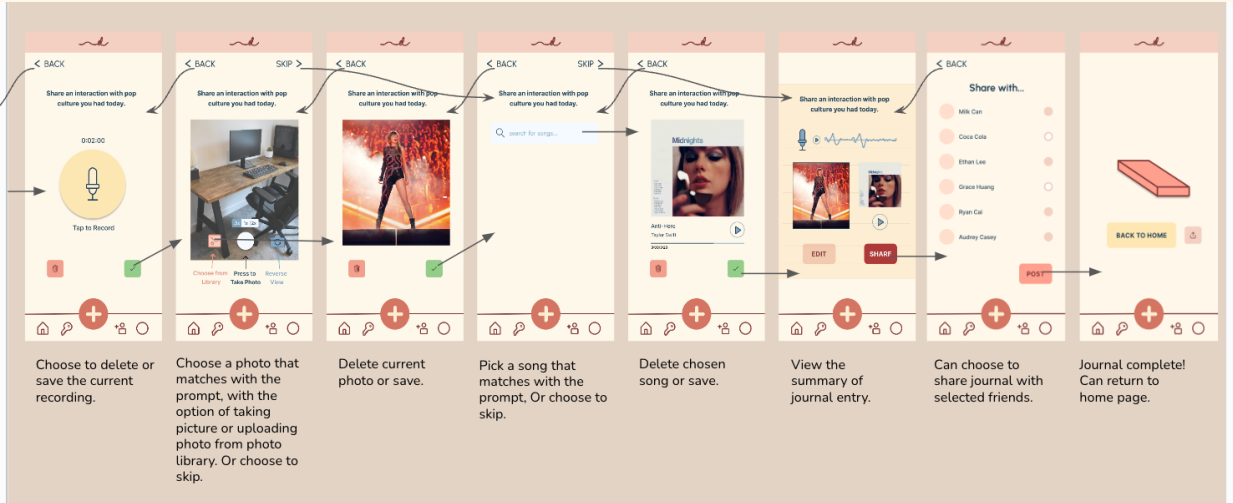


Simple Task (Med-Fi)

Below is the create journal entry task flow: we added a ‘create a prompt’ option in addition to ‘pick a prompt’ to allow user flexibility for when users start to feel more connected with their generational counterparts, and would like to think of their own prompts (i.e. a follow-up prompt to a previous entry a user read about).

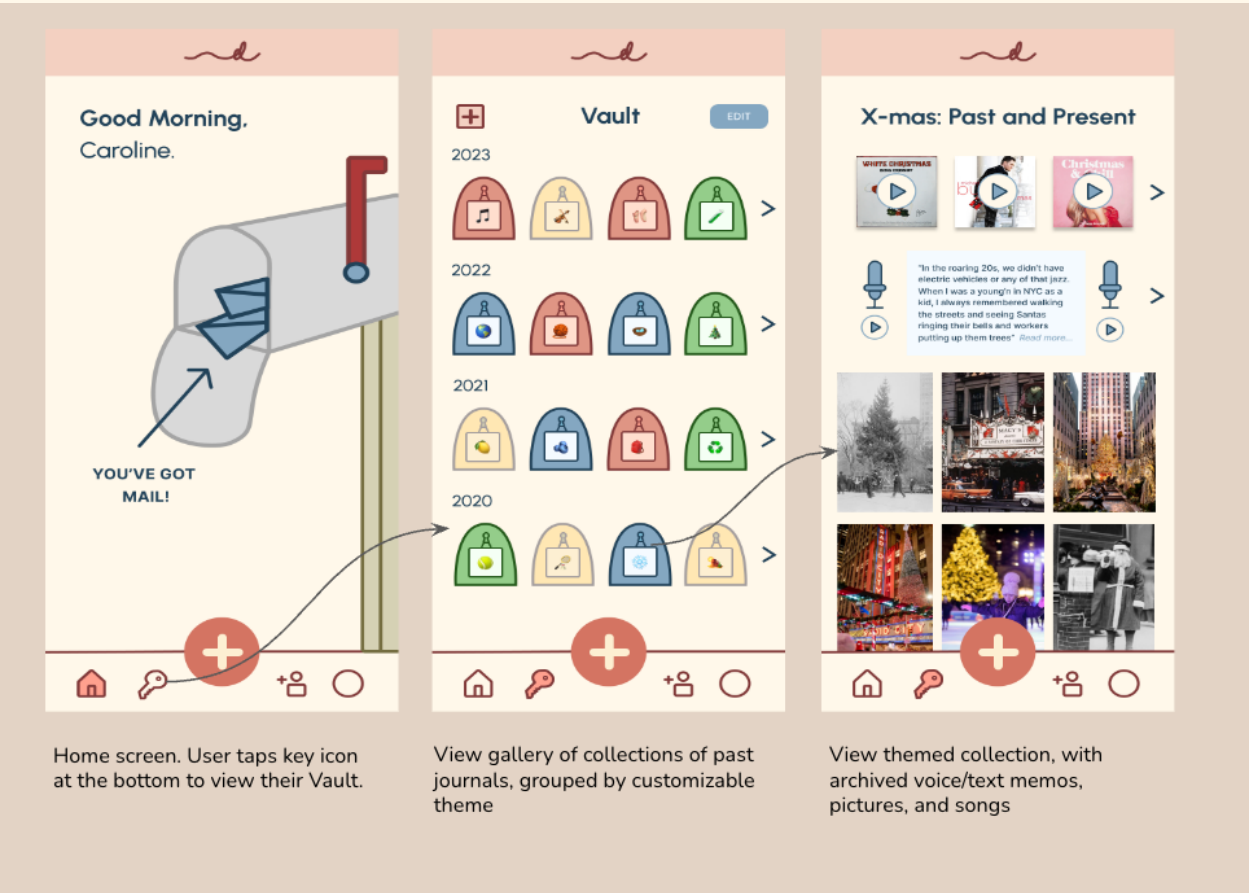


Moderate Task pt. 1 (Med-Fi)



Moderate Task pt. 2 (Med-Fi)

Our complex task at this med-fi stage was vastly revised from the low-fi stage, from an archived calendar view to a new vault idea. To align with the value of our app, we looked into incorporating a feature where users can customize memory vaults with past content that can be easily revisited.



Complex Task (Med-Fi)

Med-Fi Prototype Heuristic Evaluation Summary

Before moving onto our high-fi stage, it was crucial for us to take into consideration the various heuristic violations throughout our app and address them, or have a viable explanation as to why we would not address them. In saying so, our unaddressed violations were mainly due to limitations at the med-fi stage that would be implemented via React Native at the high-fi stage by default, or because we believe the violation was misjudged and the corresponding suggested fix would go against our value proposition.

We saw these unaddressed instances most commonly in categories **H1-Visibility of System Status** and **H7-Flexibility & Efficiency of Use**. Furthermore, our most common areas of violations were found amongst **H4-Consistency & Standards**, **H3-User Control**, and **H1-Visibility of System Status**. In total, DiarWe's heuristic evaluators spotted a total of **78 violations**, where **33** were **severity 3** and **5** were **severity 4**.

Severity 3 & 4 Violations

H1: Visibility of System Status

- Journals and vaults don't have an indication of time and location
- Unclear purpose of play button
- No indication of a user's online status
- No confirmation after successfully posting a journal entry or completing a vault entry

H2: Match Between System & the Real World

- Placement of "+" button on the vault page (upper left) is not intuitive, and users cannot add a vault entry.
- Profile tab on the navigation bar looks like a camera shutter
- Vault icons looked too much like tombstones (negative connotations)
- Journal drawings looked too much like erasers (not clear what exactly the pictures meant)

H3: User Control & Freedom

- Missing back button after a user looks at their own post
- Missing back button once the user views their friends list, a friend's profile, or a friend's post
- Feeling "trapped" throughout the moderate task

H4: Consistency & Standards

- Inconsistent back buttons throughout the moderate task
- Edit/delete buttons share too similar color-fills
- Inconsistencies with “share” and “post”
- Unclear where mailbox leads to
- Reactions are unintuitive

H5: Error Prevention

- The “+” button for creating a journal entry is too large and blocks other functionality

H6: Recognition Rather than Recall

- The vault page relies on recalling

H8: Aesthetic and Minimalist Design

- Profile icons are represented by icons and not photos, making the app feel less personal
- The two “+” buttons on the vault page are confusing

H11: Accessible Design

- Font issues
- Read more text is small and has low contrast
- Buttons don't have great contrast

High-Fi Prototype

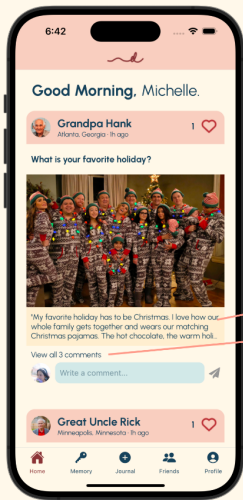
One of our most major changes at the high-fi stage was completely taking away our opening screen with the mailbox. Even after implementing the screen with color and helper captions, evaluators still expressed confusion as to the purpose of this opening screen, an indication of decreased accessibility. We wanted users to have immediate access to the simple task in our app, and thought that the mailbox was too high of a barrier to entry.

Additionally, we took out the adding song option, as it assumed our users would already have Spotify accounts, which older generations may not. This change also decreased the length of our moderate task, which addressed some evaluators' concerns about feeling “trapped” for too long in the journal creation flow.

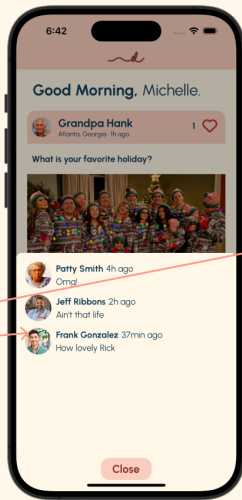
Many of our key changes fell under the umbrella of learnability and discoverability, intuitiveness, delightfulness, and error prevention.

Key Changes:

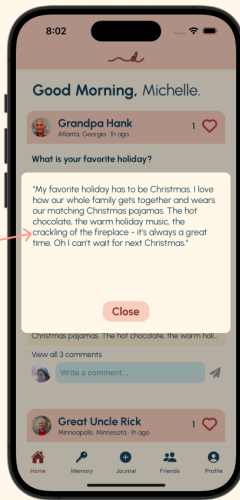
- Made the “add” button smaller and aligned with the rest of the navigation tabs to prevent functionality disruptions
 - Rationale: We wanted to prevent user error and not disrupt users navigating through the various tasks in our app.
- Only allow a “heart” reaction to entries to enhance simplicity.
 - Rationale: We wanted users to access our simple task as easily as possible, which includes reacting to journal entries in an accessible and delightful way.
- Added time and location to each post as well as a time corresponding to each vault entry.
 - Rationale: we wanted users to be able to remember when and where they posted journal entries when they revisit them as part of the simple and complex tasks.
- Removed “mic” images next to play buttons and removed delete buttons across interface (previously confused with edit button)
 - Rationale: we wanted users to be able to easily learn how to use the app and revisit functionality in the same ways, again and again.
- Updated images of closed/completed journals
 - Rationale: we wanted to match the real world and make it clear to users that they are starting a new journal entry.
- Overhauled UI of entire vault page/added add vault functionality
 - Rationale: we wanted the vault page to remember when users created memories, as well as look clean and decluttered.
- Made all buttons more readable, made all text more readable, expandable text for journal entries.
 - Rationale: we wanted to ensure that older generations and younger generations alike could use the app intuitively.
- Added more user freedom via back buttons
 - Rationale: we wanted users to feel comfortable, not trapped, while navigating through the app.
- Replaced generic icons with actual user photos
 - Rationale: we wanted users to feel more welcomed, and the app to feel more personal, so that they would keep coming back to it.



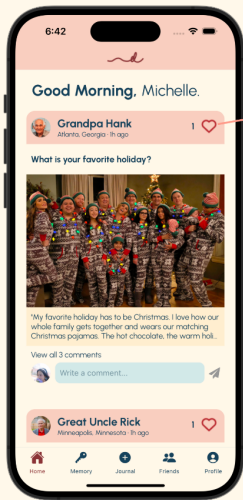
Scroll to view personalized feed



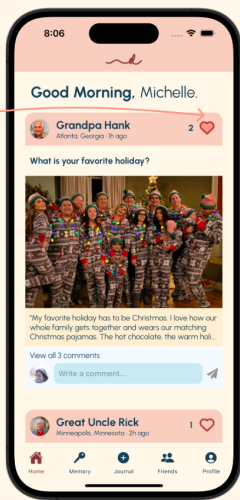
View all comments



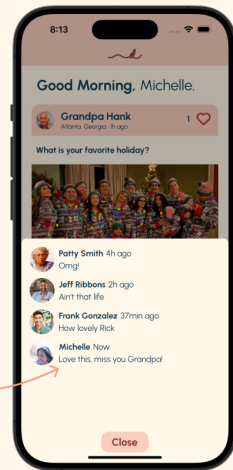
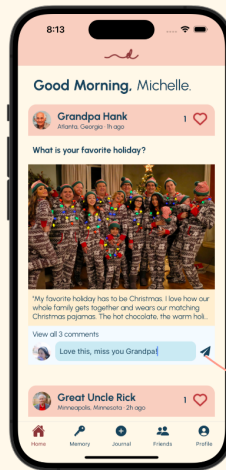
View expanded journal text entry



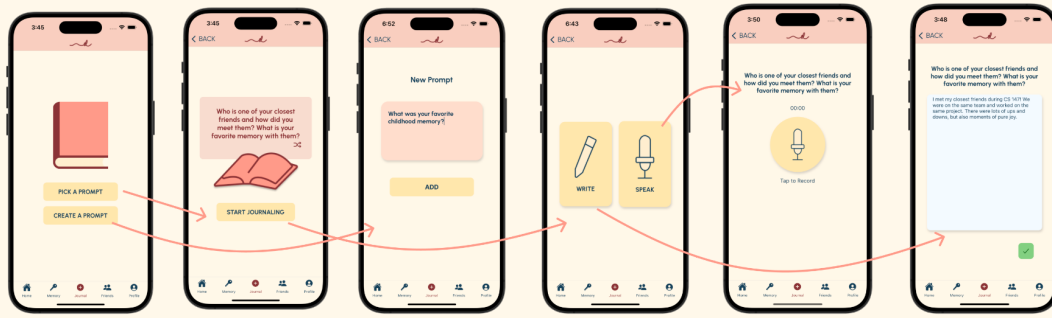
Tap on heart icon to like a journal



Comment on other's posts



Simple Task (High-Fi)

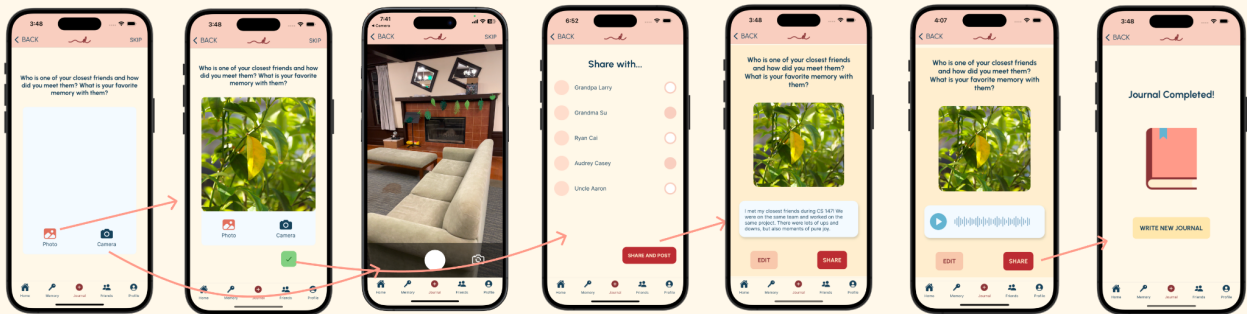


Pick or add a prompt to start journaling.

Choose to write or record journal.

Tap microphone to start recording.

Write journal.



Pick photo from library or take picture with camera.

Select friends to share the journal with.

View summary of the journal (written version vs recording version)

Moderate Task (High-Fi)

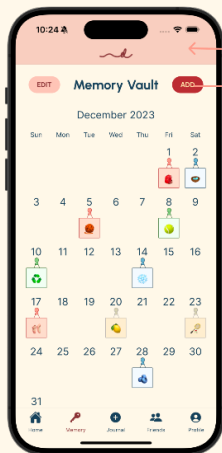


View memory vault

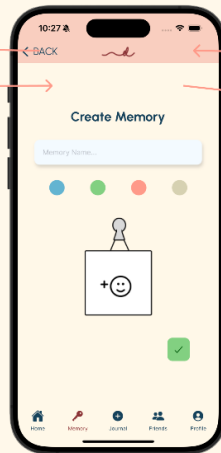
View a single memory, with date beneath title, all journal entries, and images

Toggle between multiple journal entries

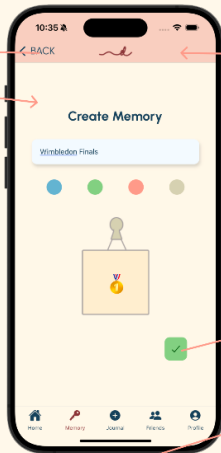
Expand written journal entries in memory



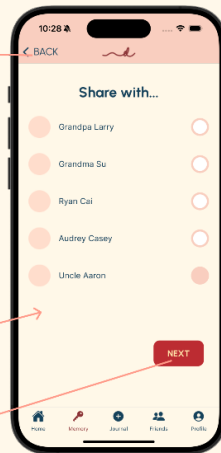
View memory vault



Start create a new memory flow



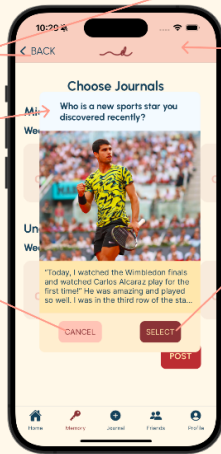
Choose theme for memory (title, color scheme, and emoji)



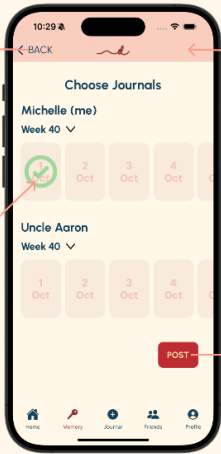
Share memory with friends who have shared journals with you



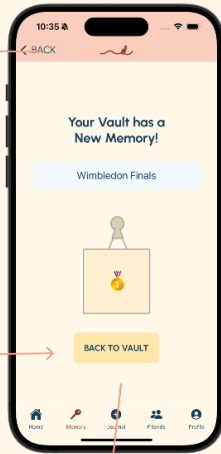
Choose journals your selected friends have shared with you (and the journals you have shared with all of them)



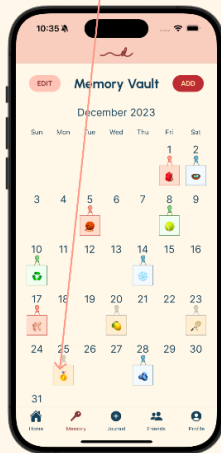
Preview a journal entry, with option to select it or cancel preview



Selected journal entry now shows a green checkmark



Completed memory confirmation page showing title, color scheme, and emoji corresponding to memory.



Memory vault now shows a new memory!

Complex Task (High-Fi)

Values in Design

Throughout the process of designing DiarWe, we wanted to be intentional about our design values. As designers, we have the responsibility to embed good social values, as any decision could influence our users and community. We've identified three core values that informed our design decisions, ensuring our app is accessible across all generations.

1. Human Connection

Human connection is a core value of DiarWe—we aim to empower stronger relationships and facilitate a sense of intimacy between distant generations. This is achieved through the sharing of journals, where users can share and send entries with interactive features such as recordings and photos with friends. Once their friends post new journals, they could comment and react to others' journals to increase interaction.

2. Intuitiveness

As we target users across all generations, we intentionally created a simple interface with self-explanatory navigation to facilitate smooth task flows. Specifically, we aim to reduce the technological barrier for older generations when connecting with younger generations. We've incorporated several details in the app, such as a simple navigation bar and helper captions to help clarify the purpose of various icons.

3. Privacy

For a journaling app with social elements, we aim to put our user's privacy at the forefront. In our design, users have the flexibility to skip over sharing a photo, write or record as much or as little as they wish to each prompt, and who they would like to restrict/share their entries with. With the removal of the song plug-in, we've mitigated privacy concerns with regard to externally connecting to third-party apps.

While we recognize that there is a value tension between human connection and privacy, we want to emphasize that this app is rooted in facilitating interactive experiences between intergenerational users. As such, DiarWe certainly has a heavy focus on human connection, and through the various flexible settings we've described in the privacy value blurb, we have incorporated ways for users to feel comfortable, yet connected, on this platform.

Final Prototype Implementation

Tools Used

We built our high-fidelity prototype using React Native and Expo, and tested it under Apple Xcode simulator.

Wizard of Oz Techniques

The social aspect of the app is implemented using Wizard of Oz techniques. Namely, users can see existing friends and their journals when logged in to the app. In the current version, we provide users a sign-in account to access the app without providing an actual sign-up flow.

The default user of the application is designated as "Michelle," a custom profile specifically crafted for testing purposes. Upon accessing the homepage, users are presented with Michelle's personalized feed, featuring journals generated from a curated dataset stored in our backend. Further insights into Michelle's profile, such as her friend count, journal tally, and favorite journals, are also retrieved from our backend database. Michelle's memory vault memories are also retrieved from the backend database. In addition, to simulate real-time updating/responsiveness of the app, when the user goes through the create memory flow, the entry on 2023-12-25 will be updated in real-time with the new title, color scheme, and emoji that the users choose.

Hard-Coded Elements

Since there are no other users using the app, we hard-coded the friends in the "Select Friends" and the "Add Friends" page. Ideally, we'd like to incorporate the user's friends.

The online status icon found on the user's profile picture in the "Profile" tab is hardcoded. Ideally, this icon would appear conditionally based on whether the user is online or not.

Inside the create memory flow, the journals corresponding to each friend are hardcoded. Ideally, we'd want these journals to be populated by users themselves. The preview view of one of Michelle's journals is also hardcoded.

Reflection and Next Steps

This quarter has been a wild ride with team DiarWe. It feels like just yesterday that our team had our initial meeting, during which we explored domains of interest that captured our attention. Since then, to put it briefly, we've conducted and unpacked numerous needfinding interviews, brainstormed a variety of solutions, and iterated designs until we arrived at our final product. We have now proudly presented to you DiarWe.

Here are a few key learnings from the design thinking process:

The importance of needfinding

The cornerstone of our project rested on the foundation of the problem we aimed to address. Reflecting on our journey, we recognize the significance of engaging in needfinding – venturing into the real world, actively listening to the personal stories of potential users. We not only sought a diverse range of interviewees from various backgrounds but also delved deeply into each conversation, meticulously unpacking the nuances of what we heard and observed. Identifying common threads of need among diverse users served as the catalyst for our solution exploration, ultimately paving the way for the development of DiarWe.

Narrowing down the most impactful solutions with experience prototyping

Employing multiple experience prototypes proved immensely beneficial in the process of testing and discerning the optimal solution to advance through design iterations. The ability to elicit on-demand feedback and glean insights from domain experts significantly steered our decision-making. We now recognize the value of experience prototyping as an invaluable method for gaining a nuanced understanding of our solution options within the dynamic and fast-paced iteration environment.

Be hungry for feedback

Asking for and receiving feedback became a crucial element in the refinement of DiarWe throughout the design thinking process. Usability testing brought to the forefront substantial gaps in our initial prototype iterations. While the heuristic evaluation of our medium-fidelity prototype might have been a tad overwhelming and brutally honest to digest, it played a pivotal role in propelling our app to a more sophisticated high-fidelity version. Both usability testing and heuristic evaluations served as illuminating mirrors, revealing the shortcomings of our

prototype and providing the essential insights that enabled us to present a high-fidelity prototype of which we can genuinely be proud.

In regards to the development of DiarWe within our studio theme, Unlocking Lifelong Learning, here are a few key takeaways:

Intergenerational Disconnect:

Throughout the needfinding interview process, a pervasive theme emerged among the majority of our interviewees – a distinct sense of disconnection when attempting to engage in conversations across different generations. This prevalent sentiment highlighted a notable challenge in communication dynamics that begged for exploration and resolution.

Curiosity as a Driving Force:

Delving deeper into the experiences of those who expressed a generational disconnect, a compelling commonality surfaced. All of these individuals not only acknowledged the existence of this disconnect but also exhibited a curiosity and yearning to bridge the gap. While they could articulate the "what" – the existence of a communication barrier – the elusive "how" remained an unanswered question, highlighting a shared desire for meaningful connection.

Engaging Learning Desires:

Expanding our investigation into understanding more about people across different generations, a distinct pattern emerged. Our interviewees not only sought to bridge the intergenerational gap but also desired a unique approach to learning about other generations. They expressed a need for an engaging, interactive learning experience that would facilitate smoother and more meaningful intergenerational conversations. This desire emphasized the importance of creating educational avenues that transcend traditional boundaries and foster connection.

If we had a bit more time we would have loved to add a satisfying animation to our "like" button, allow users to expand the image on the journal feed, transcribe speech to text for accessibility, generate even more prompts via generative AI, as well as updating the journal entries in real-time. We would also have liked to flesh out the edit functionality for comments, favorite journals, and vaults, and implement robust choose journal and add memory functionality (perhaps creating memories for multiple days at a time).

Final Remarks & Parting Words

It was not easy. DiarWe came with long restless nights, frequently feeling overwhelmed, and scrambling to meet deadlines. But it also came with moments of pure joy, whether it be hysterical laughter with the group, connecting with interviewees and listening to their unique life experiences, or sprinkling baby powder on Aaron's hair so he could play the role of "Grandpa" for our concept video.

Despite the ups and downs, looking back at all we learned through the design thinking process and seeing our ideas come to life, we can all say that the countless hours were entirely worth it.

Looking forward, who knows, maybe you'll see DiarWe in the App Store. If we polish the app a bit and run through a couple more iterations of our prototype, we think it's a genuine possibility.

Thank you for following us through this design journey. To view additional details on our design process and test out our final prototype, you can visit our website at <https://web.stanford.edu/class/cs147/projects/UnlockingLifelongLearning/DiarWe/>. We would also like to give a very special thanks to Professor James Landay and our Course Assistant Tiffany Lee for their unwavering expertise, guidance, and support throughout the entire process.

We hope you've enjoyed learning about the prototype lifecycle of DiarWe.

Signing off,
DiarWe
Aaron Cho, Katie Liu, Eleanor Peng, Emma Su