FINAL PROJECT REPORT

CS 147 Autumn 2024

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I. VALUE PROPOSITION & TEAM

VALUE PROPOSITION

Lore facilitates the sharing and exploring life of stories in a chronological and spatial context

MISSION STATEMENT

Our mission is to create a space for sharing and exploring life stories within a chronological and spatial context, connecting older adults with untold experiences and younger generations who are eager to listen.

PROBLEM AND SOLUTION OVERVIEW

After our needfinding interviews, we found that older adults have untold stories, years of advice, and generally love being able to share their thoughts to others. Additionally, we found that many older adults may feel lonely or isolated, while younger individuals found it difficult to approach older adults, despite expressing wanting to help older adults, and being interested in the generational wisdom they had to share.

We aim to reduce loneliness and untold history by creating an accessible platform where older adults can easily share their memories in text, audio, or video formats, while offering younger generations unique, personal stories on topics of interest.

TEAM MEMBERS & ROLES

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UI/UX Designer,
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II. NEEDFINDING

INTERVIEW SUMMARY

Our first step to developing our app was brainstorming broad topics that we were interested in further exploring. One thing that was especially important to us was the intentional integration of both older and younger audiences on whatever product we ended up creating. We didn't want to make an app that only appealed to older adults, as we felt that could be isolating, rather than helpful. This led us to take an interest in intergenerational communication, and looking deeper into technological spaces which are interesting and accessible for a wide range of ages. We knew that older adults often struggle with learning new technology, so we wanted to find out what features we could implement to make our product not only accessible but intuitive for that audience. These broad ideas for what we wanted to work on helped guide our interview questions and allowed us to have deeper discussions with participants about what connections they felt were lacking in their lives, and what functionalities they did or did not find intuitive in the technologies they currently use.

We sourced interviews from Stanford University campus, downtown Sunnyvale, downtown Menlo Park, Palo Alto, Berkeley and remotely. Participants were informed of the estimated time and general topic of the interview, signed a consent form, and asked questions. We did not offer any sort of compensation for interviewees, monetary or otherwise.

We interviewed a total of ten individuals located in California across seven interviews. Of the people we interviewed, six participants were women and four were men. Ages ranged from 21 to 89, with the median age being 55 years old. Among the participants, three of the people we interviewed had one or more disabilities.

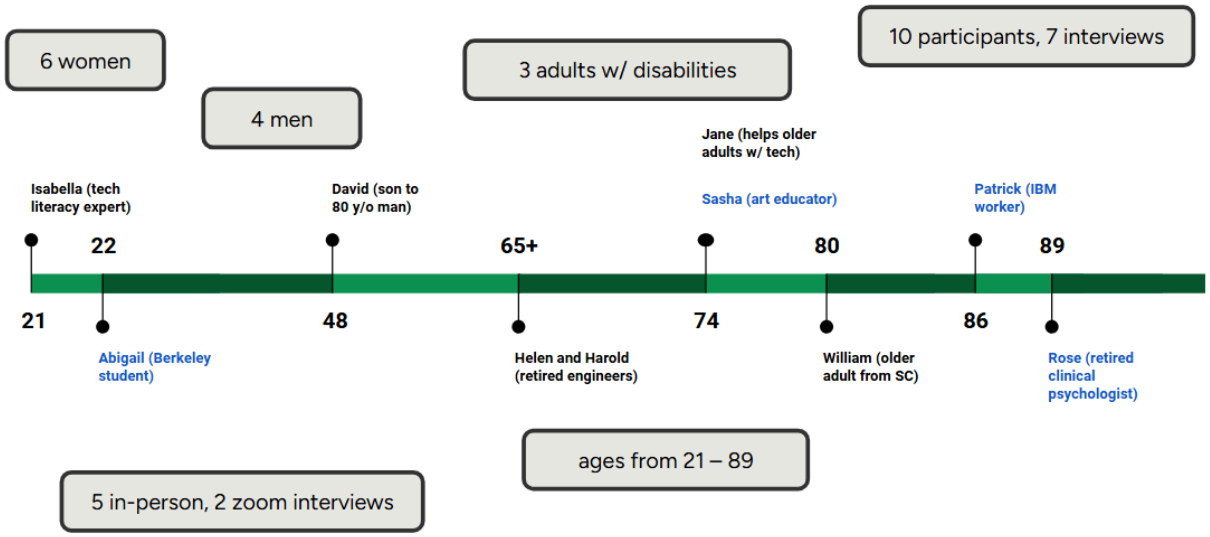


Fig 1. Summary overview of needfinding interviews displayed with age-distributions of participants

TABLE OF INTERVIEW FINDINGS

Table 1: Summary of interview participants and key findings from each interview

"Isabella" (avg. / non-user)

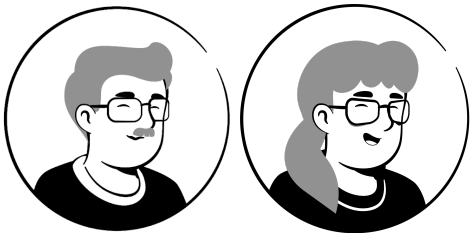
- **Age:** 21
- **Interview Location:** in-person
- **Position:** Tech literacy expert who does a tech literacy project @ the Veterans Affair (VA) Hospital

Key Findings

- Older adults have a lot of physical limitations that makes it harder for them to

interact with technology, even if they do understand it

- Older adults often don't know what symbols mean in a technological context - they don't have the same tech literacy background as younger users, so it is that much more difficult for them to interpret a confusing user interface
- Older adults tend to have more free time, which also means more time for loneliness and boredom, ailments that can be alleviated with technology if they know how to use it



"Harold" (extreme user) &
"Helen" (avg. user)

- **Age:** 65+
- **Interview Location:** in-person
- **Position:** Harold works in teaching; wears hearing aids and has vision problems. Helen is a retired engineer.

Key Findings

- User interfaces are getting more confusing, more tech literacy is assumed of the average user
- They feel that technology is not built for them, and trying to get help with a task sometimes takes more time and effort than it is worth
- Everyone is focused on designing new things, but sometimes the old ways are more intuitive and more efficient (ie phone calls)

“Jane” (avg. user)

- **Age:** 74
- **Interview Location:** in-person
- **Position:** Volunteer @ the United Effort Organization for Hope’s Corner

Key Findings

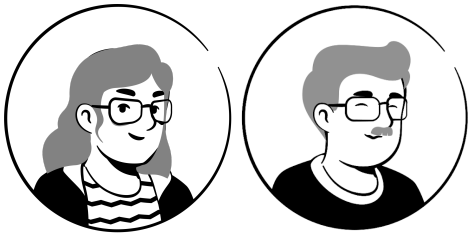
- Complex login flows are one of the biggest technological challenges for the older adults she knows and works with
- Feels that technology has made some things harder rather than easier - she would rather mail in a physical form than trying to fill it out online

“William” (avg. user) &
“David” (non-user)

- **Age:** 80 (William), 48 (David)
- **Interview Location:** in-person
- **Position:** William is a father visiting his son David from South Carolina

Key Findings

- Feel that clear instructions are important for older people using technology, but that their needs are generally met



“Daisy”(avg. user) &
Patrick” (avg. user)

- **Age:** 90 (Daisy), 86 (Patrick)
- **Interview Location:** virtual via Zoom
- **Position:** Daisy is a retired clinical psychologist, Patrick is a retired IBM Engineer. Live in a senior living community in Orange County.

Key Findings

- Finds that technology often does not behave the way they expect, and does not match up with their mental models, which is frustrating
- Nostalgic for times when it was easier to connect to people and interested in meeting younger people outside of the senior community
- Happy when asked for advice or mentorship and interested in being good role models for their children

“Abigail” (non-user)

- **Age:** 22
- **Interview Location:** in-person
- **Position:** First year bioengineering PhD at Berkeley

Key Findings

- She enjoyed talking to the older adults in her neighborhood, but didn't feel comfortable reaching out to them first
- She is curious and interested in learning more about her new neighborhood through the lived experiences of her neighbors

"Sasha" (avg. user)

- **Age:** 74
- **Interview Location:** virtual via Zoom
- **Position:** Art educator at public schools and Stanford

Key Findings

- Current apps felt too overbearing and digital content needs to be focused on a central goal
- Gets a sense of accomplishment from being able to successfully navigate technology
- Feels that technology has many good things to offer, but is also a potential source of privacy leaks

SYNTHESIS

In order to synthesize all of the information gained from our interviews, we created empathy maps for six of our seven interviews. The only interview we did not create an empathy map for was the one with William and David, which ended up being quite short due to their schedule. These empathy maps helped us to organize the thoughts the interviewees had shared with us, while also helping us look beyond the surface level and gain deeper insight into the participants' needs. Below is the empathy map we made for Helen, where we make notes about what she said and does during the interview, and what we think she thinks

and feels based on inference and expression (fig 2).

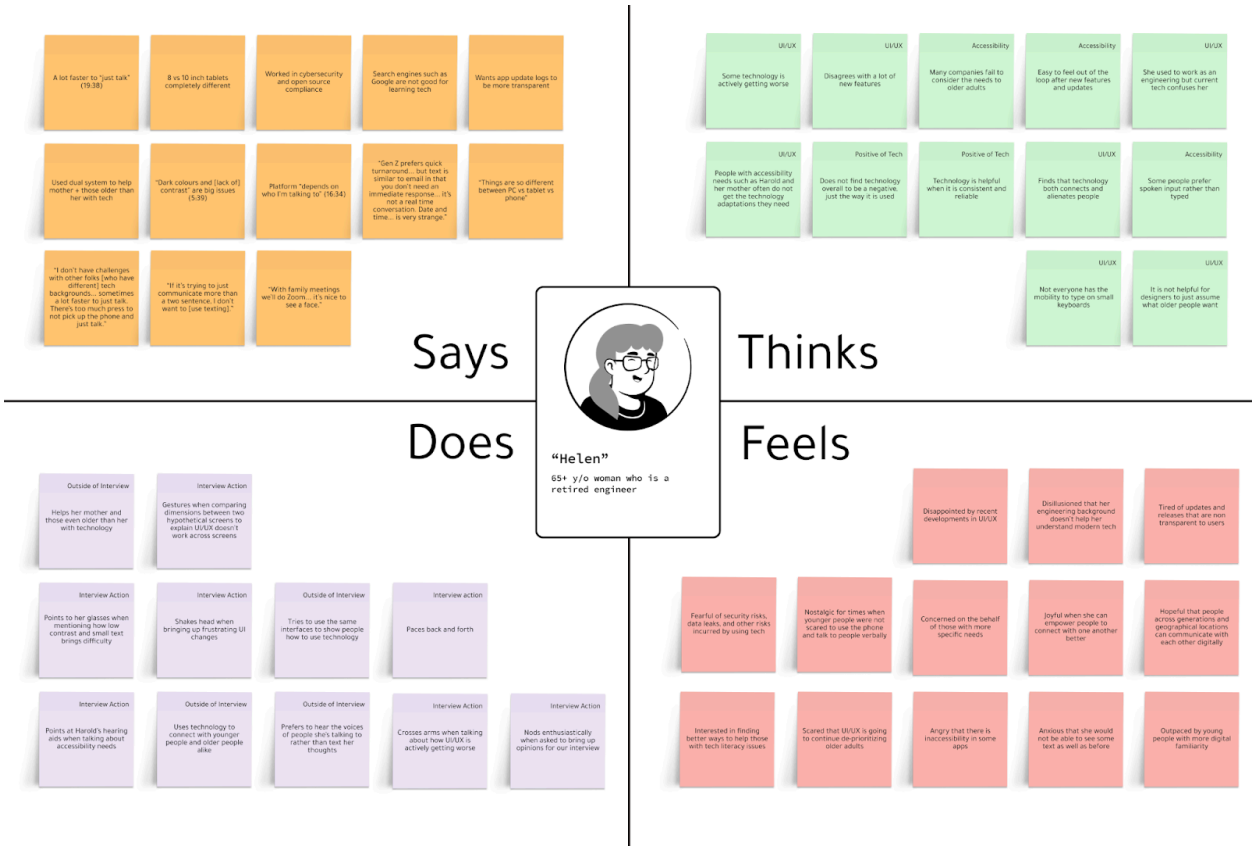


Fig 2. Empathy map example made for interviewee, Helen, a 65+ y/o retired engineer

Overall, what we found can be split into four main categories: technology for the older generation, accessibility, attitudes of older adults, and perceptions of younger people.

Technology for the older generation: Older adults we interviewed often had strong opinions about technology and oftentimes felt left behind by ever-changing features, norms, and updates. For older adults, apps should have a clear purpose, and content should be focused and catered to defined purposes.

Accessibility: Older adults with disabilities want to be heard and considered when technology is being designed. Furthermore, overly complex digital flows are difficult and exclusionary for older adults, especially for those who may not have

their own devices. Accessible UI should have features including but not limited to microphone options, bigger fonts, and less nested folders/less clicks to do a task.

Attitudes of older adults: Older adults felt disconnected from society even when they had strong social ties with other older adults, and wanted to hear from younger people. Furthermore, older adults like physicality – the physical presence of things – for not only human interactions, but also for things like papers and documents.

Perceptions of younger people: Young people expressed being open to learning more about their older neighbors, community members, and relatives. They were also curious about the stories of strangers and those they do not know well. However, several younger people expressed apprehension and uncertainty about approaching people from older generations. Uncertainty and intimidation were among the barriers of interaction young people cited.

III. POVs & EXPERIENCE PROTOTYPES

FINAL POVS

After creating our empathy maps, we constructed three point of view (POV) statements based on three of our interview subjects to try to gain a deeper insight into their core beliefs about technology and its role in their lives.

- **"Jane,"** a 74 y/o woman who volunteered at the United Effort Organization for Hope's Corner.
    - We met Jane, a retired lawyer whose volunteer work helping people navigate digital paperwork adds to her vibrant social life. We were surprised to notice that she texts older adults about in-person plans, so her phone helps fulfill social needs without social media. We wonder if this means that she sees digital connections as a means to physical connections because she feels that they are more meaningful. It would be game changing to facilitate creating new opportunities for meaningful physical connection.
- **"Helen,"** a 65+ y/o woman who was a retired engineer.
    - We met Helen, an older adult who used to be an engineer and had strong opinions about user interfaces. We were surprised to notice that she didn't like looking up things on Google, and felt that it was not a useful resource despite knowing how to use it. We wonder if this means she believes Google answers are unintuitive or hard to follow, and she would prefer a person to explain things to her. It would be game changing to give Helen a way to access a broad range of information while emphasizing human connection.
- **"Abigail,"** a 22 y/o first year Berkeley PhD
    - We met Abigail, a first gen student in the first year of her PhD in bioengineering at UC Berkeley. We were surprised to notice that she liked interacting with her older neighbors and thought it was

interesting talking to them, but would not initiate contact. We wonder if this means that she feels a social disconnect with people not of her generation, making her unsure how to approach them. It would be game changing to allow Abigail's interactions and meetings with older generations to feel more facilitated and structured.

HMWs

Building off of our POVs, we then brainstormed many "How might we?" (HMW) statements for, as a way to reframe the problems we had heard from our participants. For each of our POVs, we came up with as many HMW statements as we could. We have provided a sampling of these for each POV.

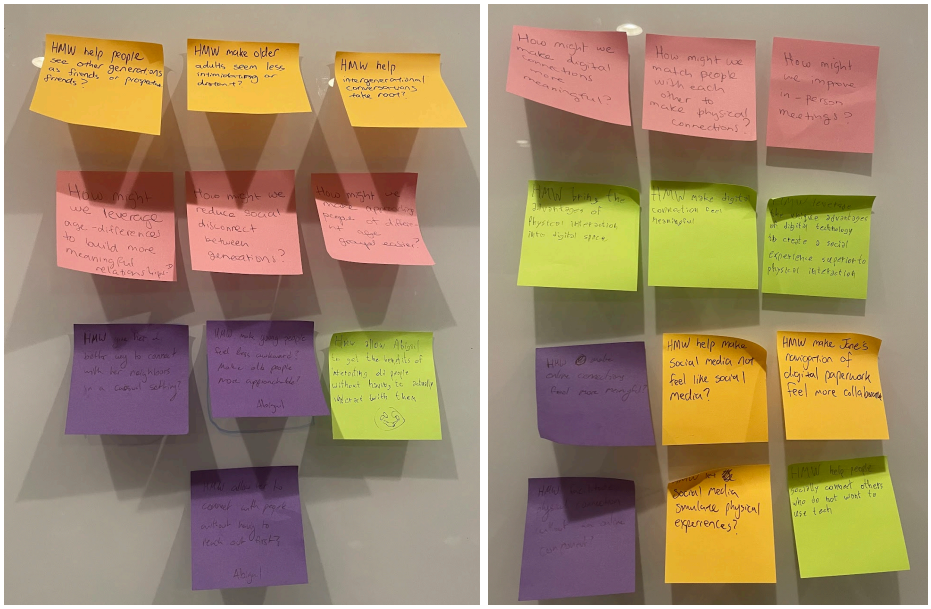


Fig 3. We drafted our HMWs on physical sticky notes in order to promote collaboration and visualization in-person

For "**Jane**", some of our ideas were:

- HMW make digital connections more meaningful?
- HMW match people with each other to make physical connections?

- HMW leverage the unique advantages of digital technology to create a social experience superior to physical interaction?
- HMW make Jane's navigating of digital paperwork feel more collaborative?
- HMW help people socially connect others who do not want to rely on technology?

For **"Helen"**, we had:

- HMW preempt her questions, providing information before she realizes she needed it?
- HMW make search results intuitive and easy to follow?
- HMW tap into the collective knowledge of people immediately around her?
- HMW leverage the knowledge of people who actively enjoy searching online for information?
- HMW make finding new information an exciting process rather than a frustrating one?

And finally for **"Abigail"**:

- HMW help people see other generations as friends or perspective friends?
- HMW reduce social disconnect between generations?
- HMW leverage age differences to build more meaningful relationships?
- HMW make older adults seem less intimidating or distant?
- HMW make young people feel less awkward? Make old people more approachable?

We then chose the three that we felt had the most potential for interesting and creative solutions, which are the following:

- HMW make older adults seem less intimidating or distant? (from "Abigail")
- HMW help people socially connect others who do not want to rely on technology? (from "Jane")

- HMW make digital connections more meaningful? (from “Jane”)

SOLUTIONS

After narrowing down our HMW statements to our top three, we then set about brainstorming creative solutions to the problems we had identified. We each came up with as many solutions as we could for each of our final HMWs in a ten minute period. Then, we went through all of the solutions, each voting on the ideas we liked the best and grouping together similar ideas. Ultimately, we were left three top solutions which we were interested in further exploring.

- **Storytelling:** A storytelling app where older adults can share their life, tips, and advice and also pairs older adults with younger ones via video for storytelling sessions
- **Pen Pals:** A pen pal matching app where users are digitally matched with someone to correspond via physical letters
- **Hobby-Based Matching:** Connect people with common interests like chess, cooking, gardening, etc. for in-person meetups.

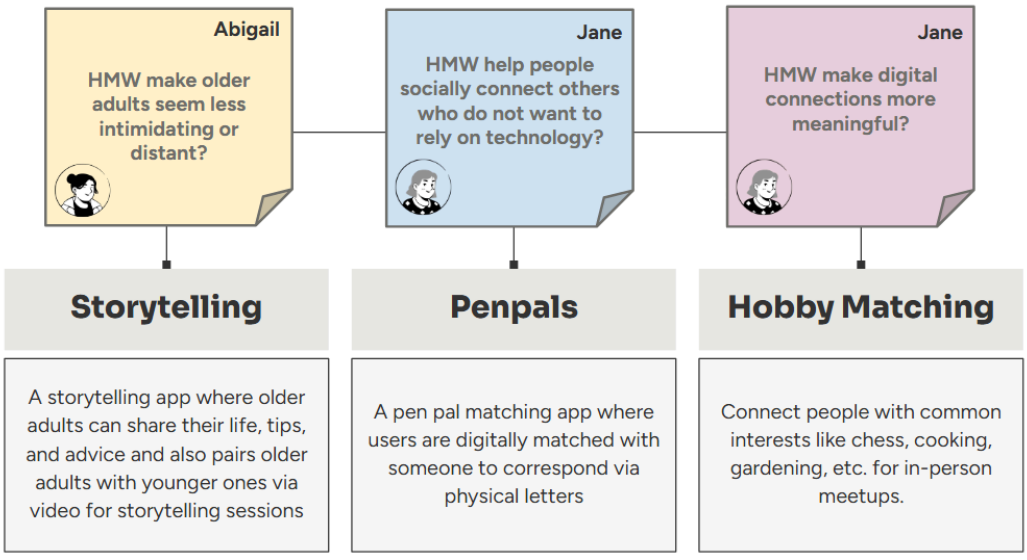


Fig 4. Our top 3 HMW statements and their corresponding top solution in a diagram

EXPERIENCE PROTOTYPES

We made three experience prototypes to test one core assumption for each of our solutions. These experience prototypes were designed to provide us more information about if our intended audience would be interested in the solutions we came up with, or if we had missed a vital nuance and assumed something incorrect about our audience. By testing out these assumptions with abstract and low detail experience prototypes, we were able to quickly gain valuable insight into how our audience would interact with and respond to the solutions we had come up with, and thus were able to gauge which one we thought had the most potential.

Solution 1: Storytelling

Assumption - Older adults want to share their personal life and experiences and younger people find value in listening to them.

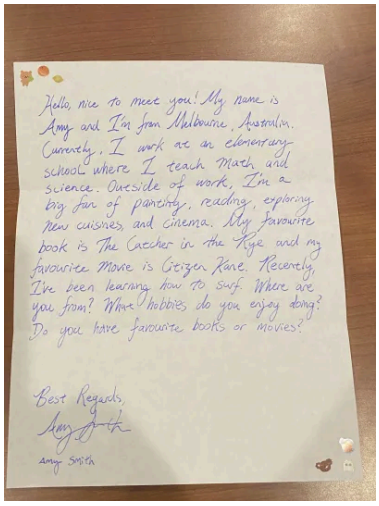
For the storytelling solution, we printed out a series of prompt cards that asked users to tell a story, then took a survey of user experiences afterwards. We wanted to find out if both older and younger users would want to tell and hear stories. Most of our users found the experience quite enjoyable, though a few had reservations about privacy or communication difficulties. Overall, we found our assumption proven.

Fig 5. Pictured are two participants reading over our story prompts in order to test out our storytelling solution

Solution 2: Pen Pals

Assumption - People of different generations find more depth to writing to a pen pal compared to digital emails or text messages.

For the pen pal solution, we had users read a handwritten letter and a digital letter, both directed at them from an imaginary pen-pal. We wanted to check our assumption that people preferred written letters to digital ones. Again, we had them answer questions about their experience with the prototype and desire to continue the communication. Some people enjoyed the process, but had concerns about letter-writing requiring a lot of money and time investment. Still, we believe our assumption was proven.



Hi, it's lovely to meet you! My name is Saskia and I'm from the Netherlands. I work as a veterinarian for cats and dogs. In terms of hobbies, I'm a big fan of traveling, drawing, cooking, and music. Recently, I've been trying to read more. My favourite book is Jane Eyre and my favourite musician is Pink Floyd. Where are you from? What hobbies do you enjoy doing? Do you have any book and movie recommendations?

Fig 6. Handwritten letter vs. digital letter with similar content

Solution 3: Hobby Matching:

Assumption - Common interests are a stronger motivator for people to meet new connections compared to age.

For the hobby-based matching solution, we had a lot of fun designing profile cards for 18 imaginary people of various ages with various hobbies, then had our users go through the cards and pick which ones they might like making friends with, after having them answer a few questions about their own hobbies. The goal here was to check our assumption that hobbies would be a stronger

motivator for forming friendships than age. Again, we asked users about their experience and what motivated their decisions. We found a strong aversion among younger users to connecting with older users compared to people closer to their age, disproving our assumption here.

Fig 7. Participants selected 3-5 people to befriend based on fake character profiles

IV. DESIGN EVOLUTION

FINAL SOLUTION

After conducting tests with our experience prototypes and assessing the users feedback, we chose one of our solutions to pursue further. The solution we chose was the storytelling app. We decided to expand on that idea, and create an app that would allow older adults to post stories about their lives in a variety of formats, including text, audio and video, and organize those stories in the chronological context of a timeline.

We ended up choosing this solution due to both the results of our experience prototypes and practical necessity. Overall, we had gotten very positive reactions to both the storytelling and the penpal experience prototypes, with older people being very willing to tell their stories, and also interested in responding to the letters we gave them. However, we wanted to focus on a tach based solution, and felt that letter writing didn't quite meet that criteria. Given this, we decided to focus on the storytelling app as our solution.

From our needfinding interviews, one of the points that we had heard brought up multiple times was that technology was easier for older adults to understand if it matched up with physical mental models that they were more accustomed to. Thus, we thought that a timeline would be an intuitive way to organize the stories, so our users could view them the way they remembered them. We also believe that this timeline feature brings novelty to our app, as it is a way to organize one's stories in a way we have not seen before.

TASKS

Throughout the 10-week development process, we had adjusted what our tasks were many times, however after reconsideration and feedback, we came to the conclusion of these three main tasks:

- **Simple Task:** Viewing a story. This should be the most commonly done task on our app, as we expect every story posted to have multiple people viewing it. This is also the main feature of the app, as it is meant to be a method of connecting people through stories.

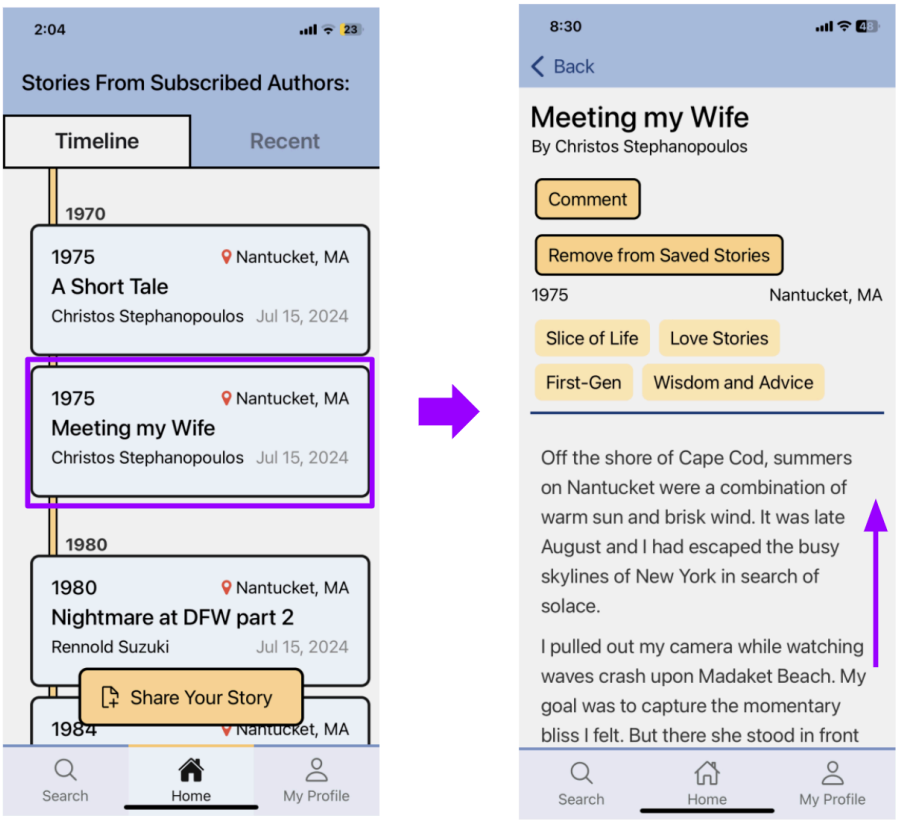


Fig 8: Simple task of viewing a story, in this case from the home page. Once viewing the story, you can scroll down to continue reading

- **Moderate Task:** Responding to a story. We want Lore to offer a way to connect with others, and to that end we want the stories shared to be a starting point for deeper and more meaningful conversations. Therefore, responding to a story is an important part of facilitating that human connection that we found people of all ages are searching for.

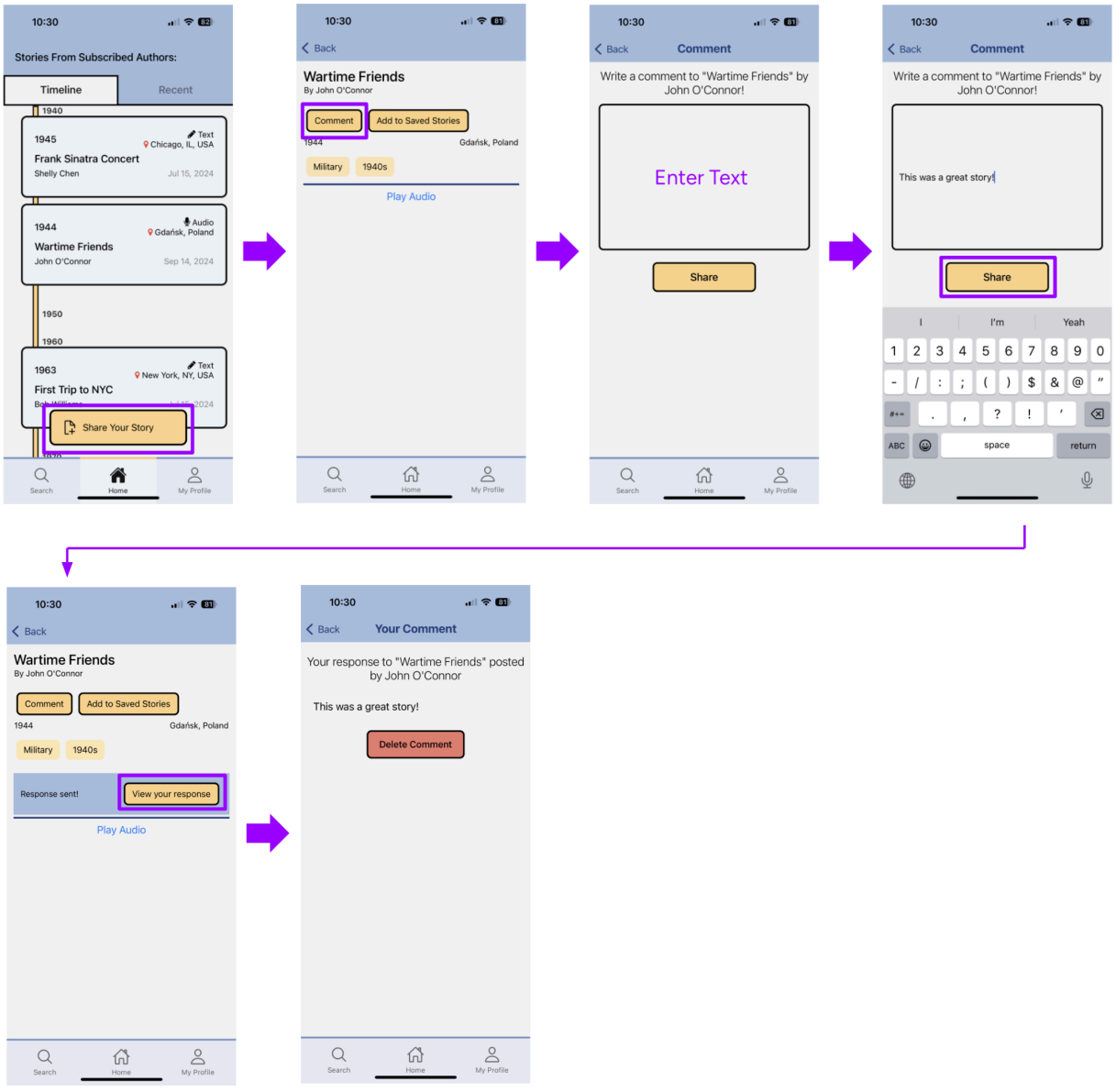


Fig 9: Moderate task of responding to story

- **Complex Task:** Posting a story. We expect this to be the least commonly done of our tasks, but still accessible to the average user. Without stories, there is no app, so our aim was to simplify this task flow as much as possible, while still giving the user lots of freedom on how they want to share their stories.

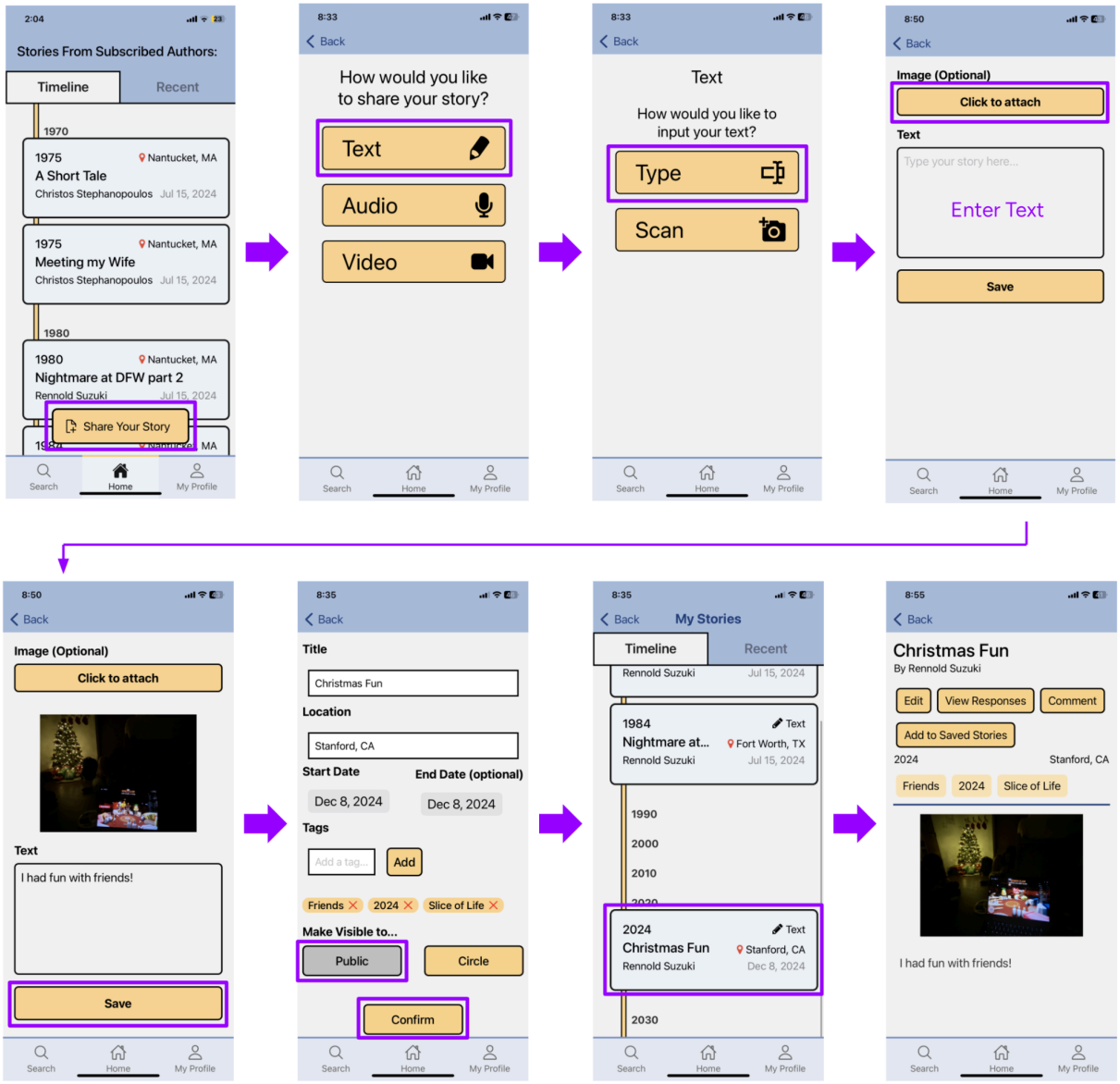


Fig 10: Complex task of posting a story, in this case a written story with an attached image

DESIGN EVOLUTION VISUALIZATION AND RATIONALE

Our user interface (UI) design process had three main stages: low, medium and high fidelities (lo-fi, med-fi and hi-fi). Having these three stages allowed us to design our app iteratively, making changes early and often.

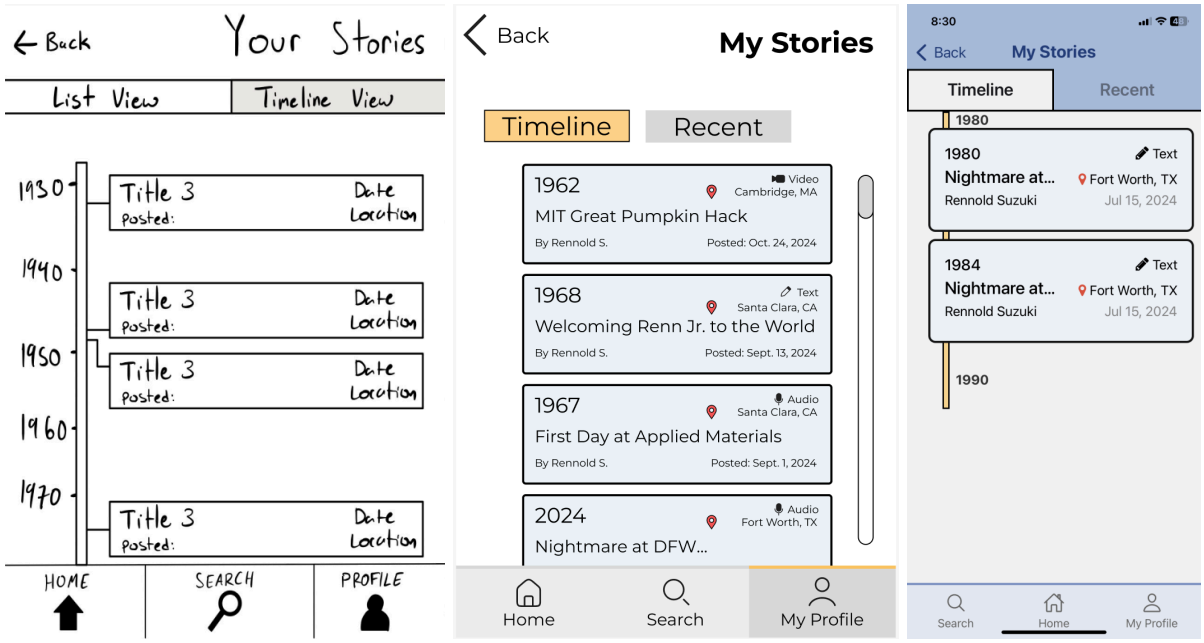


Fig 11: Evolution of the "My Stories" page across lo-fi (left), med-fi (middle) and hi-fi (right), also showing the transition to using tbs to differentiate the timeline and recent views rather than buttons

For the lo-fi prototype, we hand drew the key screens of our task flows on tablets, and then printed them out on paper. This allowed us to test how users would react to the interface with relatively low time investment on our part. We did this by finding volunteer test users and having them pretend as if they were using our app by interacting with the paper printed out screens. While they did this, we asked them to think aloud so that we could get a better idea of the friction points in our UI, in addition to what worked well. What we learned from this testing was that the language around our profile needed to be more clear, specifying that it is "My Profile", rather than just "Profile", as multiple of our test users were confused by that. The other pain point that we identified was switching the story organization mode from the timeline format to the most recently posted format.

Users seemed to find the wording there confusing, and were not sure how to switch between the two. To address this, we ended up formatting the two as tabs, so it was clear which view you were on and that you could switch to the other one.

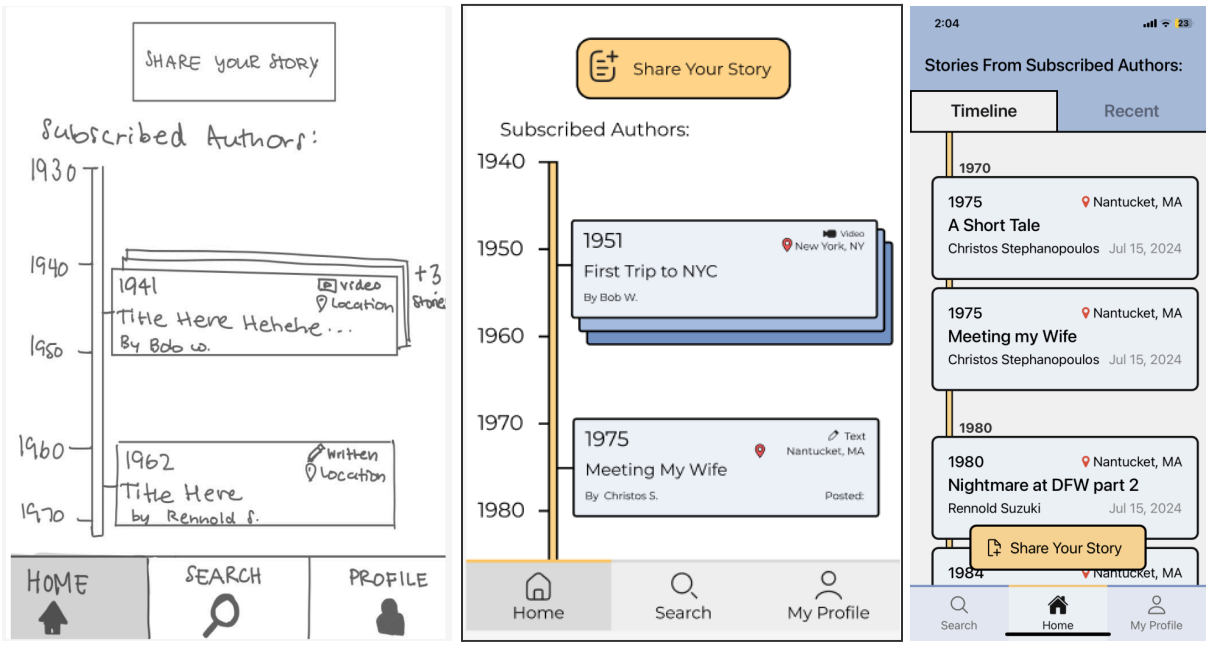


Fig 12: Evolution of the home page across lo-fi (left), med-fi (middle) and hi-fi (right)

Our med-fi prototype was made in Figma, to give us a better idea of what we wanted the final product to look like. This version of our UI was evaluated heuristically by our peers, and changes were made based on their feedback. The largest flaws found with our med-fi UI along with how we addressed them before moving onto our hi-fi are laid out in the table below. One of the major UI changes that came about after the heuristic evaluation was a reorganization of our homescreen. We followed feedback that it was unclear what the header was for that section, and thus moved the “Share Your Story” button to have a more logical flow to the screen. The hi-fi prototype is discussed more in the Final Prototype Implementation section.

Table 2: Summary of level 3 and 4 violations from peer heuristic evaluation and how they were addressed in the final prototype

Violation	Severity	Addressed	Justification
Simple task (share story) doesn't feel like the main focus of the home page.	4	Yes	This was addressed by changing "post a story" to the complex task, rather than the simple task.
Where do you go to see the saved stories?	4	Yes	Added a button for "Saved Stories" in the profile page
The user is unsure what task the home page timeline pertains to.	4	No	The homepage timeline is the main way of interacting with stories from your subscribed authors. Rather than relating to a specific task, it is more focused on basic app functionality.
No error checking or confirmation for public or circle only selection.	3	Yes	We plan to add some sort of pop-up asking a user to confirm that they would like to post their story to whichever group they have selected.
There is no option to add a location when posting a story.	3	Yes	This was an oversight, we will be adding a selection to choose a location.
On the "Take a clear photo of your written story" page, there is no way to retake the photo.	3	Yes	Rather than have people take a photo in the app to scan documents, we will have them upload photos from their device.

Violation	Severity	Addressed	Justification
When viewing the timeline (1950-1958) of "Subscribed Authors" closer, no way to return to main timeline.	3	Yes	Due to Figma limitations, we planned to make our timeline more intractable when making the hi-fi prototype (pinch in/out to zoom timeline, scrollable).
In My Profile, the posted stories do not indicate whether it is shared to the public or the user's circle.	3	Yes	We plan to add some sort of icon or label to easily show who the story is shared with.
Feature to expand the timeline is unclear.	3	Yes	See above.
There is no "view profile" button when looking at another user's post- the only way to navigate to the screen is by clicking the profile picture.	3	Yes	We have added a “View Profile” button to the story header.
It is confusing as to what the "Subscribed authors" tag is there for on the home page.	3	Yes	We have changed this to be more descriptive - “Unviewed stories from subscribed authors”

VALUES IN DESIGN

Our values when designing our solution were accessibility and respect for generational wisdom. These values are intrinsically linked with each other and our desire to make a product that can be used regardless of tech literacy. We want people of all ages to be able to share stories about their lives on Lore, which is how we get generational wisdom. In order for this to happen, our app must be accessible especially to older adults, who often face additional challenges to utilizing technology effectively.

When designing our app, one thing we were hyper conscious of is the physical limitations that come with age. We know that 40% of US residents ages 65+ who have at least one disability, and that many more have reduced hearing, eyesight and fine motor skills as they get older.We feared that a lack of accessibility on our app could prevent stories from being shared, so accessible design was on the forefront of our minds during the design process.

We incorporated this value into our design by having large buttons, large text sizes, easy to read fonts, and high contrast color. Additionally, we planned to have all our audio and video stories be auto-transcribed, so that users with hearing impairments could still interact with that content. We also avoided any pop up windows that may be difficult for screen readers to parse, trying instead to keep relevant information all on the same screen. To address the possible low tech literacy of our users, we made sure to label any symbols we used, such as the back or home buttons, as that was one piece of feedback we had heard repeated in many of our needfinding interviews. One value tension that arose from this was the trade off between having larger font size and more explanatory but smaller text. We tried to strike a balance between these two to maximize user comprehension.

The other value we kept in mind during our design process was respect for generational wisdom. The original motivation behind our app was to store and record generational wisdom. We want older adults to feel that their experiences

are valuable and worth sharing, and to encourage them to post their stories. In order for this to happen, the older generations posting the stories must also feel some satisfaction from sharing their stories. Our design addresses this through personalized timelines, multimedia support for sharing, and the ability for readers to respond directly to the poster after reading or listening to the stroy, The hope is that this makes sharing generational wisdom feel both easy and appreciated, and that Lore is an overall positive experience. One tension here is that our app also needs to appeal to a younger audience, as the ones receiving the generational wisdom. Making the UI clearer for older adults may make it feel clunky and outdated for the younger users. One way in which we addressed this is by having multiple ways to get to the different tasks on our screens, so people with different levels of tech literacy can find what works for them. For example, sharing a story is always an option from the home page, but can also be done right from the “My Stories” page, if someone wanted to post a few stories in a row.

V. FINAL PROTOTYPE IMPLEMENTATION

TOOLS USED

The high fidelity prototype of Lore is created using the React Native framework and accessible through Expo Go. We also used Git/GitHub for version control and collaboration, as well as yarn as a package management tool. Below is a more detailed description of the libraries we utilized and their role in our project.

Core Libraries

1. **React**: The core library for building the user interface.
2. **React Native**: Used to build the native mobile components of the application.
3. **Expo**: A framework and platform for universal React applications that simplifies development with React Native.

Navigation

1. **@react-navigation/native**: The core library for navigation in React Native apps.
2. **@react-navigation/native-stack**: Provides a stack navigator for navigation.
3. **@react-navigation/elements**: Offers UI elements for React Navigation.
4. **@react-navigation/material-top-tabs**: Used for implementing Material Design top tabs.

Asynchronous Storage

1. **@react-native-async-storage/async-storage**: For local data persistence in the app.

Date and Time

1. **@react-native-community/datetimepicker**: A component for selecting dates and times.
2. **date-fns**: A library for working with dates and times in JavaScript.

Media and Camera

1. **expo-av**: For handling audio and video functionality.
2. **expo-camera**: Access to the device's camera.

3. **expo-image-picker**: Allows image and video picking from the gallery or camera.
4. **expo-media-library**: For managing and interacting with media files.

Navigation and Routing

1. **expo-router**: A library for routing in Expo apps, supporting file-based routing.

Gestures and Animations

1. **react-native-gesture-handler**: Adds gesture capabilities to the app.
2. **react-native-pager-view**: Implements a pager view for navigation or content swiping.

UI and Safe Area Handling

1. **react-native-safe-area-context**: Manages safe area padding for iOS and Android.
2. **react-native-screens**: Optimizes navigation performance by controlling screen rendering.

Utilities

1. **react-native-url-polyfill**: Polyfills URL-related APIs in React Native.
2. **react-native-uuid** and **uuid**: Libraries for generating unique identifiers.

Web Support

1. **react-native-web**: Allows React Native components to run on web platforms.
2. **react-dom**: Enables React's DOM rendering in web environments.

Development

1. **@babel/core**: Babel compiler for JavaScript, used in transpiling modern JavaScript for compatibility.

WIZARD OF OZ TECHNIQUES

There were limitations to a high fidelity prototype, so several features were emulated using “Wizard of Oz” techniques.

1) **Database storage:** without an existing beta user base, we found it more efficient to emulate data storage and story posting using session-based variable storage as opposed to deploying via Supabase or other databases.
2) **Authentication flow:** as signing into an account existed outside of our main task flows, we had a mock authentication in place of a robust authentication process, allowing for users to test the app with placeholder login information.

HARD-CODED TECHNIQUES

We hard-coded some elements of Lore in order to simulate features that would be difficult to accomplish without an active user base:

1) **Search recommendations:** we did not write an algorithm to recommend searches based on user preferences, as there would not be pre existing data to draw from. Instead, we took a selection of possible searches to recommend to the user that reflected potential search options—time, location, demographic topics, historical events, sources of wisdom, and general interest.
2) **Subscribed users:** our home page showed the stories from subscribed users. However, the list of subscribed users has been hardcoded in order to give the user an idea of what a feed may look like on Lore.
3) **Existing stories:** as we did not deploy the app to a user base, we hard-coded a selection of existing stories for users to explore. We aimed to show varying story topics, lengths, and formats.

VI. REFLECTION & NEXT STEPS

MAIN LEARNINGS

Overall, it appeared that Lore's format allows for people to create and share stories in an accessible manner. Varying generations are able to use Lore to explore and share stories digitally. However, there are still constraints to the app and its overall design.

It should be noted that Lore is unable to replace in-person connection or the effect of mentorship. Due to the story-centric nature of the platform, Lore is able to help people organize their stories and share them with a broader audience. However, our use case does not fully encompass some forms of intergenerational interaction. Lore acts as a supplement rather than a replacement for connecting with others across generations.

Throughout this quarter, our team was able to build and design in the lens of the "Designing AI for Older Adults" studio. To summarize our main learnings, we reflected as a team, and came up with some main ideas:

- **User-Centered Flexibility:** We learned that we should prioritize breaking conventions when necessary to serve the unique challenges and preferences of older adults effectively. In other words, sometimes it is okay to break some common design conventions in order to make your app accessible to your audience.
- **Utilizing Fitts's Law to Our Advantage:** We learned that it is important to consider HCI principles when designing for older adults. For example, we ensured our buttons were large, such that it would be easy and fast for older adults to navigate our app.
- **Empathy-Driven Design:** We learned it is important to emphasize empathy in the design process, because it ensures solutions resonate emotionally with older adults by considering their lived experiences and daily routines.

- **Iterative Feedback Loops:** We learned that actively involving older adults in usability testing at every stage of development can help surface unforeseen challenges and refine features to align more closely with their expectations. Through all of the value we got out of our experience prototype testing, and lo-fi paper prototype testing, we saw first-hand how important it is to get quick feedback throughout the entire design process.

FUTURE ADDITIONS

One big feature that we think would be interesting to explore if we had more time is the ability to overlay two or more people's timelines. This would allow you and a friend or loved one to see how your stories interact and weave together over the years. We think that this feature would make the app feel more personalizable and provide unique functionality. It could even be further expanded upon by allowing for the creation of groups with a shared timeline, and people could choose to post stories to that group. This could be highly personal groups, such as a family or group of friends, or more public groups, such as the history of a neighborhood or an institution. We came up with this idea in the last week of the quarter and did not have much time to explore it, but we think that it would add another layer of depth to our app and allow our users to better contextualize their lore.

VII. APPENDIX

WORKING LINKS

Website -

1. https://web.stanford.edu/class/cs147/projects/Designing-AI-for-Older-Adults/Lore/
2. https://hci.stanford.edu/courses/cs147/2024/au/projects/Designing-AI-for-Older-Adults/Lore

Hi-Fi -

1. GitHub Repo: https://github.com/rrsu2026/lore-highfi
2. Hi-Fi README: https://docs.google.com/document/d/1y9TcUTXNxw7t1VN7HRITdMiSbAX1t3X1yviwNMMem8M/edit?usp=sharing

Lo-Fi / Med-Fi -

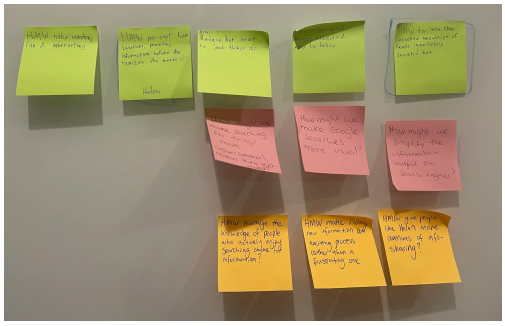
1. Figma: https://www.figma.com/design/e2OZbbybQWyPgrNOMIO437/Prototypes?node-id=1-2&t=3hkWWIN2zedF9sWt-1
2. Med-Fi README: https://web.stanford.edu/class/cs147/projects/Designing-AI-for-Older-Adults/Lore/static/pdf/med-fi-readme.pdf

Empathy Maps Figma -

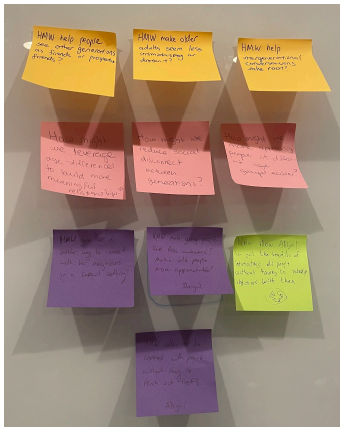
1. Figma: https://www.figma.com/design/oSCtmtTebNl4zSxPniylwx/Empathy-Maps?node-id=0-1&t=ewSEIp2zURG3p6t3-1

HMWs

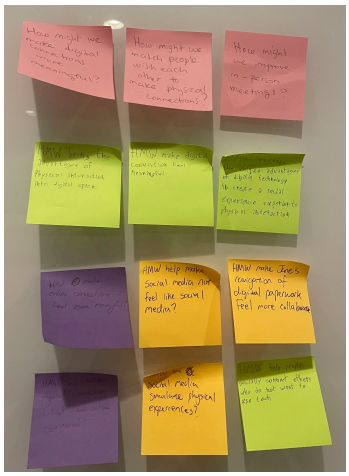
HMWs for Helen



HMWs for Abigail



HMWs for Jane



SOLUTION BRAINSTORMS

ELIZA

- **HMW make older adults seem less intimidating or distant?**
  - Have them reach out first
  - Find a common hobby for people to bond over 😼 👎
  - Specifically screen for people who want to meet new people
  - Make the setting more casual - no pressure to host or be the one facilitating
- **HMW help people socially connect others who do not want to use tech?**
  - Host in person events - parties, meet and greets, etc 👎
  - Bring back letter writing/ pen pals 😼 🧢
  - Have someone else manage the tech for them and set up meetings (... is that a pimp?) 😼
  - Have people connect through a common interest or activity 🧢
- **HMW make digital connections more meaningful?**
  - get people to open up more - friendship is often based on mutual trust and knowing someone on a deeper level. Helping people go deeper while online 😼
  - Mix physical and digital connections - calling family still feels meaningful because they mean something to you outside of the digital space. 👎

NGOC

- **HMW make older adults seem less intimidating or distant?**
  - **A storytelling app** where older adults can share their life, tips, and advice (reddit, but more older adult-mentor friendly?) 🦫 👎 😼 🧢
  - **Intergenerational storytelling platform:** an app that pairs older adults with younger people for storytelling sessions 👎 🦫 😼 🧢
  - **Skills Exchange Network:** A platform where older adults can mentor or exchange skills with younger people 😼 🧢
  - **"Life Lessons" Platform:** a platform where older adults post short videos, voice notes, or written reflections, categorized by topics. The app could include interaction through comments or live Q&A sessions 👎
  - **Interactive Memoir Creation Tool:** an app that helps older adults create memoirs or life books in small snippets. Younger users can subscribe to individual stories, ask questions, and learn from these stories 👎 🧢 🦫
- **HMW helps people socially connect others who do not want to use tech?**
  - **Interest-based Connections:** A map-based app that connects people to local fairs, workshops, libraries, skill-based events 🦫 😼
  - **Tech-Free Pen Pal App:** A physical mail-based pen pal system where users send handwritten or printed letters. The system would facilitate connection between people and manage mailing. 👎 🧢 🦫 😼
- **HMW makes digital connections more meaningful?**
  - **Collaborative Projects Platform:** an app where friends, families, or colleagues work on long-term digital projects (like a photo album, family tree, or collaborative artwork) over time 👎 🧢 😼 🦫
  - **Locket-style app** that shows up on your phone, but keeps you updated with relatives, neighbors, and more? (I feel like I don't interact with some family enough) 👎
  - **Be-Real** for old people?
  - **Game-based application** (streaks with old people) where more interaction is rewarded 👎 🧢 😼

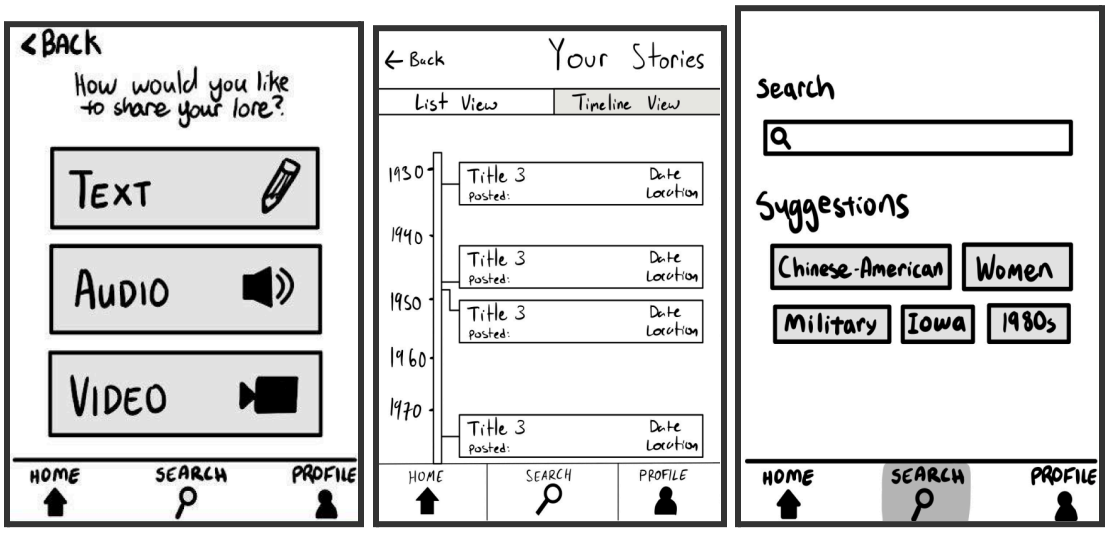
HERA

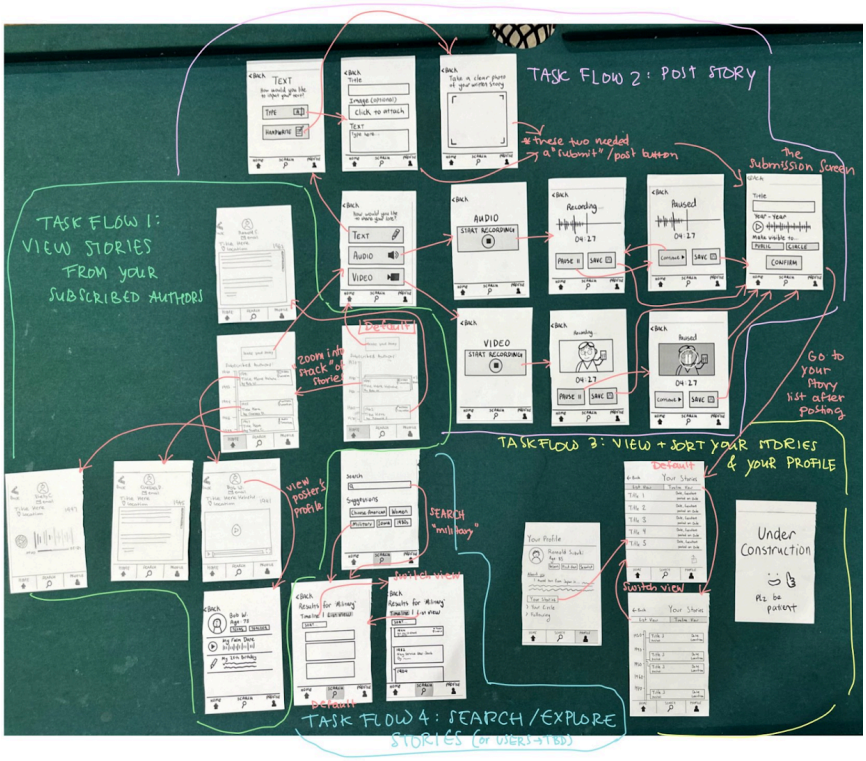
- **HMW make older adults seem less intimidating or distant?**
  - AR app that puts groucho marx glasses on them
    
  - Profiles that require you to publicly share an embarrassing fact about yourself
  - Age-blind meetup app
    - With strict moderation
  - App for educating people about the life conditions of recent generations and psychology of aging so we can understand them better
- **HMW helps people socially connect others who do not want to use tech?**
  - App that gives instructions and printable posters for organizing in-person meetups in your neighborhood
  - Quit-drinking-style streak tracking app that gamifies keeping up your "social streak"
  - Put in your impressions of other people in your life and an algorithm will match them up and prompt you to arrange meetings between them irl. The more meetings you successfully arrange, the more credits you get to add more people to the pot
  - App that takes your location and searches for events near you on a bunch of different event aggregating platforms, then spams you with reminders to go to the event
  - App that takes your personal data and shares it publicly online so random people can approach you knowing everything about you
    - I cannot think of any way this could go wrong
- **HMW makes digital connections more meaningful?**
  - Make them higher-stakes: give the app a "buy-in" cost that can be earned back through engagement

RENN

- **HMW make older adults seem less intimidating or distant?**
  - **Oral Tradition/Storytelling:** older adults humanize themselves and share fun facts and stories about themselves
  - **Skill-based matchmaking:** for common interests like chess, cooking, gardening, etc.
  - **Learn from Me:** platform of older people providing knowledge and expertise to younger generations, ranging from homemade recipes to living through historical events
  - **Shared photobook:** people share photos of their valuable memories with one another
- **HMW helps people socially connect others who do not want to use tech?**
  - **In Person Facilitator:** A tool that allows people to find others who prioritize in-person friendships to meet each other initially
  - **Penpal Listings:** A minimum tech tool that helps people find pen pals and facilitates physical writing
  - **Newspaper Ad Listings:** Old fashioned newspaper-ad style way of trying to find people with the relevant interests and hobbies
- **HMW makes digital connections more meaningful?**
  - **A neighborhood connection app:** that allows people to find and host events, happenings, meetups etc. in their immediate area.
  - **Learning while Teaching:** A tool that helps people trade knowledge based on what they can provide and the new things they want to learn.

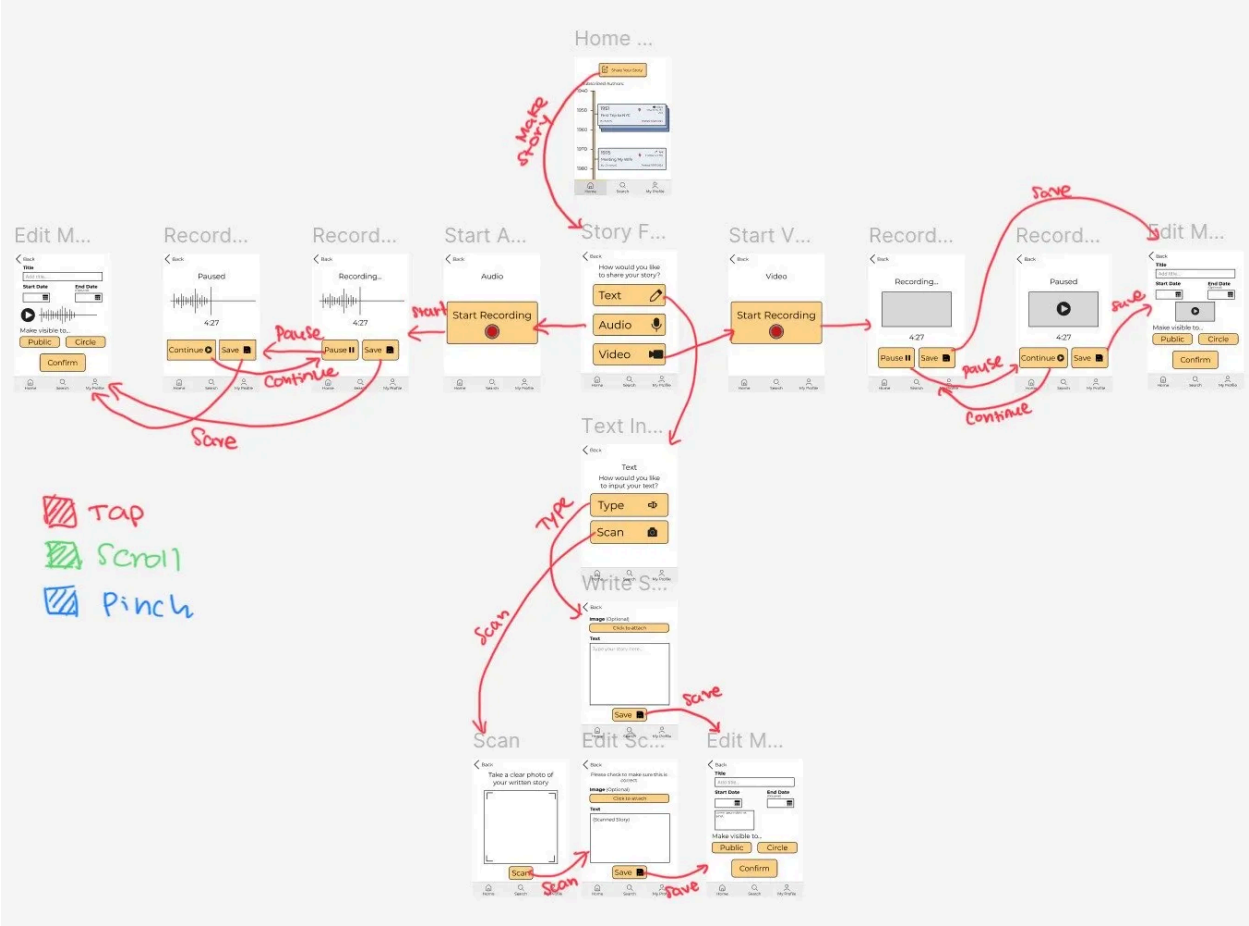
LO-FI


BACK
How would you like to share your lore?
TEXT
AUDIO
VIDEO
HOME
SEARCH
PROFILE
Back
Your Stories
List View
Timeline View
1930
1940
1950
1960
1970
Title 3
Posted:
Date
Location
Search
Suggestions
Chinese-American
Women
Military
Iowa
1980s

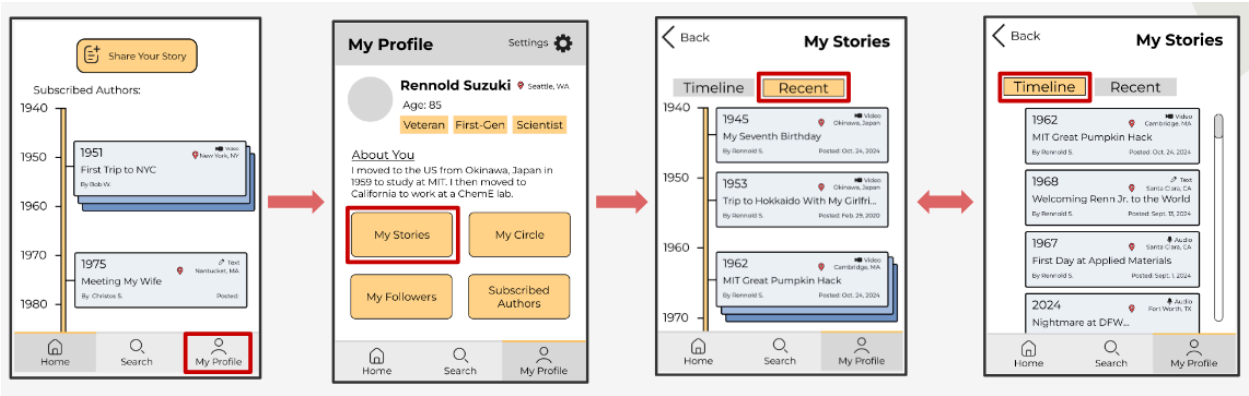

TASK FLOW 1: VIEW STORIES FROM YOUR SUBSCRIBED AUTHORS
TASK FLOW 2: POST STORY
TASKFLOW 3: VIEW + SORT YOUR STORIES & YOUR PROFILE
TASK FLOW 4: SEARCH/EXPLORE
Under Construction

MED-FI

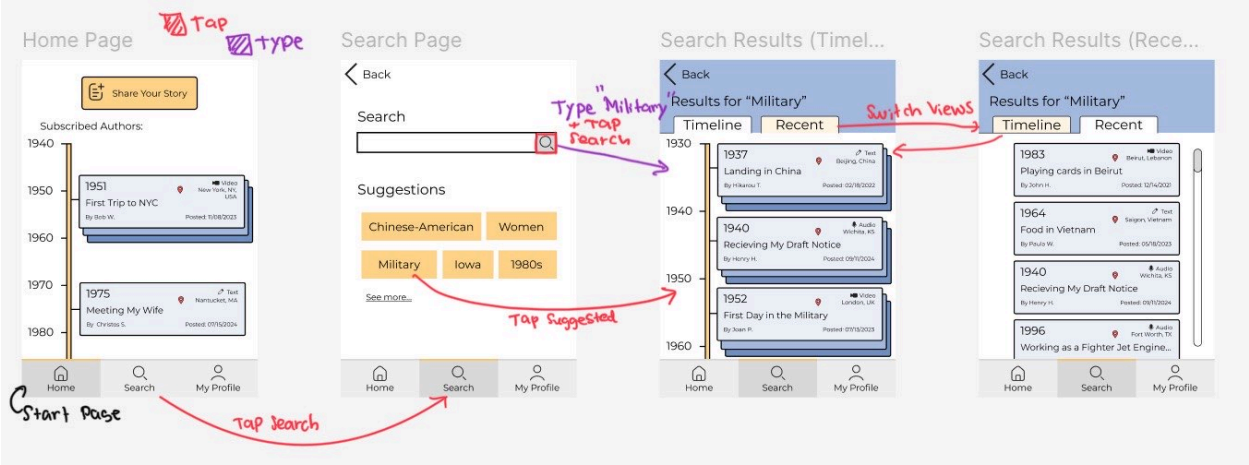
Med-Fi - Posting a story



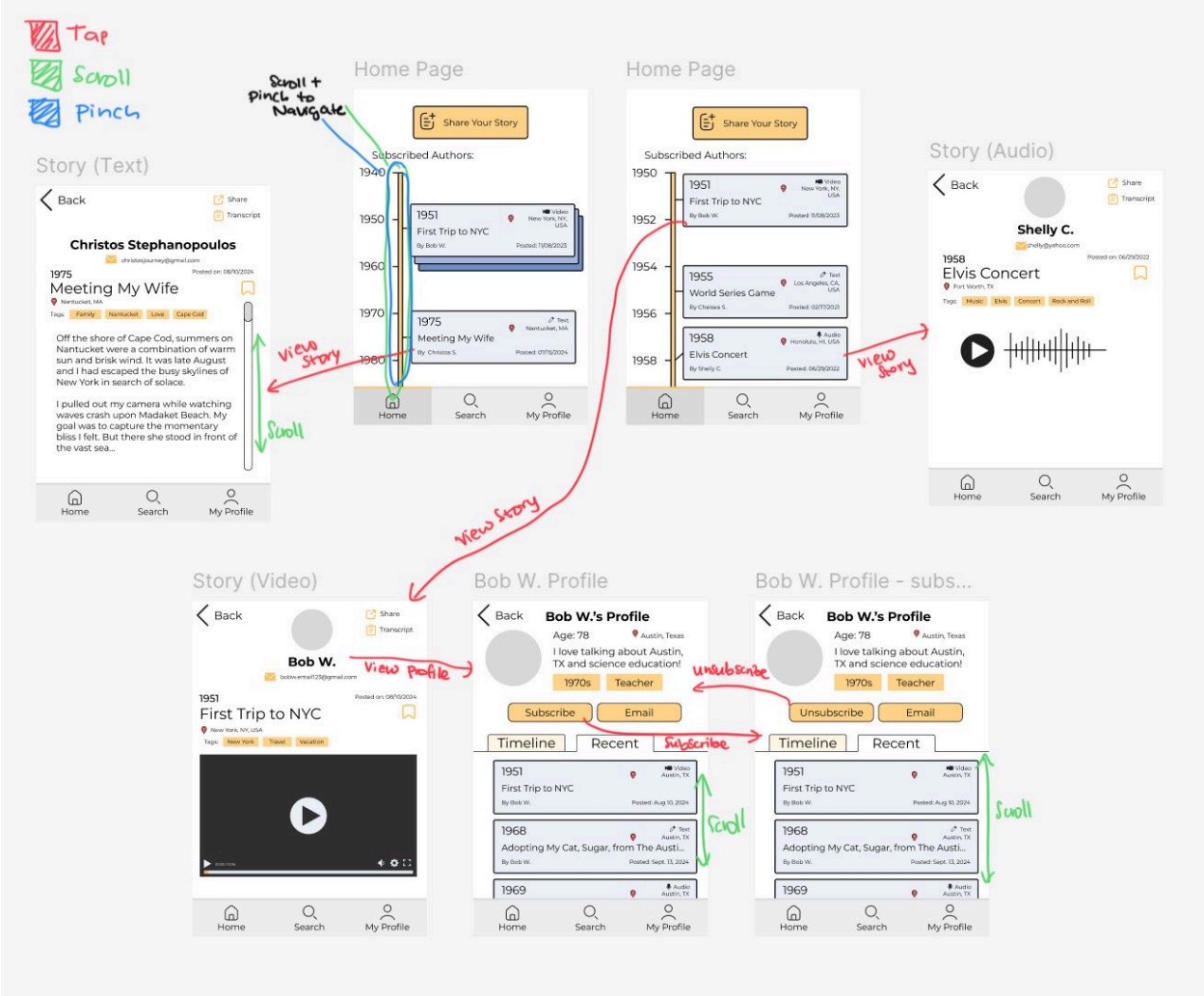
Med-Fi - View your stories



Med-Fi - Search for stories



Med-Fi - View an author



ADDITIONAL DIAGRAMS

Lore Pitch Slide for Project Expo:

Lore Poster for Expo: