



StoryJar

Preserve your family legacy

Tingwei Chang

| Kai-Ting Huang

| Catherine Jou

| Yitao Wang

Capstone 2016

Sponsor



Table of Contents

The Team	04	4. Concept Refinement	18
Executive Summary	05	4.1 Design principles	
1. Introduction	06	4.2 Design inspirations	
1.1 Problem		4.3 Prototyping - 1st round	
1.2 Project goal		4.4 Prototyping - 2nd round	
1.3 Process		4.5 Design modifications	
2. Research	08	5. Introducing StoryJar	26
2.1 Research question / goal		5.1 Product description	
2.2 Research methods		5.2 System diagram	
2.3 Key themes		5.3 User flow	
2.4 Key findings		5.4 Feature specifications	
2.5 Design implications		6. Final Outcome	42
3. Ideation	12	6.1 Conclusion	
3.1 Ideation prompts		6.2 Video prototype	
3.2 Ideas		6.3 Final presentation	
3.3 Idea selection		6.4 Reflection	
		References	52



Ting-Wei Chang

A thinker and a communicator. I bring a user-centered and business perspective to solve problems and create useful and meaningful experiences for people. Prior to entering the MHCI+D program, I had 7 years of work experience in the video surveillance and consumer electronics industry. From a sales representative to a solution trainer, from a product manager to a digital marketing strategist, I enjoyed collaborating with interdisciplinary teams and have learned how to see things from a broad perspective to address both user and business needs. I come to this program to sharpen my user-centered design skills. My goal is to help design and ship user-friendly products and services.



Kai-Ting Huang

Born and raised in Taiwan with great zeal for exploring the world, I have been crafting digital experiences in the Netherlands and the U.S. since 2011. As a self-motivated individual, I keep pursuing cutting-edge design techniques while reflecting on the fundamental human nature. I appreciate designs that demonstrate simplicity, clarity and profoundness.



Catherine Jou

My interests in technology, design, and social psychology are what shaped and evolved my education and professional career. I hold a Bachelor's degree in Biology from Northwestern University as well as Bachelor's degree in Computer Science from the University of Maryland. While I was at Maryland, I became fascinated with the field of HCI since it was a perfect crossroads of my interests. I joined the MCHI+D program in order to build a foundation in design thinking, as well as to hone my skills in prototyping and building new technologies and interactive experiences.



Yitao Wang

I hold a Bachelor degree in Information Management & Information System from Sun Yat-sen University in China. During my internship as a product manager in a startup, I found I was always interested in creating a better user experience. Driven by a curiosity to explore all the skillsets necessary for UX design, I joined MHCID program and am constantly gaining new insights into user research, prototyping and the overall design process. I'm passionate about interaction design, motion design and mixed reality.



Executive Summary

Since digital products and services have become omnipresent in our day-to-day life, we knowingly or unknowingly save lots of life stories as intangible data in local drives or in the cloud. As a result, digital legacy is getting more and more relevant for both people and their loved ones.

This project aims at finding a solution to help people curate and pass on their digital legacy. In our primary and secondary research, we found out that life values and guidance are the most meaningful types of legacy compared to other physical or digital possessions. In addition to that, important life events, such as having a newborn or experiencing the loss of family, are the key triggers for people to start their legacy planning.

With those key findings in mind, we explored possible solutions through several rounds of ideation and user testing. Finally, we arrived at the final design, StoryJar, a storytelling platform that allows multi-generational people to connect and share life stories. The system covers different steps in the storytelling process, including prompts, capture, curation, and consumption. Unlike other storytelling platforms that focus on sharing everyday moments with the public, StoryJar aims at helping people to pass down valuable life lessons to a custom group of people.



1. Introduction

1. Introduction

1.1 Problem

It is generally acknowledged that nobody can avoid the fate of mortality. Before slipping away from this world, it's a common desire for people to pass on their life values to help the next generation or loved ones. However, their busy lives often prevent them from doing so until it's too late, which leads to unresolved issues or regrets.

1.2. Project Goal

To tackle the problem, we explore the following question:

“How might we design something to help people curate and pass on their life stories to their loved ones?”

1.3. Process

First, we conducted primary and secondary research to understand people's attitudes toward their own mortality, what they want to pass down, and what kind of legacy is meaningful to them. Next, based on the findings from the research, we did several rounds of ideation and user testing to explore the possible solutions. Finally, we came up with the final solution, StoryJar, which is a storytelling platform that allows you and your loved ones connect and share life stories.

“How might we design something to help people curate and pass on their life stories to their loved ones?”

Change in Attitude

Change in Behavior

Regret: had a fight w/ loved one
andrea

Changes: Accept loved ones death better
andrea

Regret: what could have done, be more understandable
andrea

Changes: Be positive

changes: became peaceful calm.
andrea

People feel regret about the unawareness of the last moment
susan

Value long-term insurance more
left

Changes: Express appreciation to loved ones
Changes: Keep things neat

Will: No will: The person who's closest to the deceased needs the most care
Who to things

Changes: Spend more time with loved or
kareem andrea teresa

Life insurance
left teresa

Changes: Don't hold grudges
susan

Will: Plan funeral/ grave/body disposal
susan andrea

Prepare: Life Insurance
Visit the loved one more. when you know
teresa

Will: Write it for loved ones
Death exp. Reflect on teach people their own lives to plan his
teresa

Financial arrangement for loved ones
susan

2. Research

2. Research

2.1 Research Question / Goal

At the beginning of our research, our goal was to understand the psychological and logistical factors that affect how people handle their physical, digital, and intangible assets in preparation for and after a loss of life.

Design question: *How can we help people be more prepared for their own or their loved one's potential death by facilitating the interactions between each other?*

We started out addressing the following four domains: end-of-life, mourning, remembrance, and legacy. However, we later pivoted away from the space of mourning, because we wanted to focus on solutions that dealt with preparation for death rather than its aftermath.

We ended up focusing on the following questions:

End-of-life: *How do people and their family prepare for death financially, emotionally and spiritually?*

Remembrance: *How people curate their life stories and how do they want to be remembered?*

Legacy: *What/How do people inherit and pass on things?*

In the latter half of our research, we further narrowed our focus to legacy and honed in on one final question:

How do we help people pass on their life lessons and values to their loved ones?

2.2 Research Methods

Literature Review: Academic & popular media articles

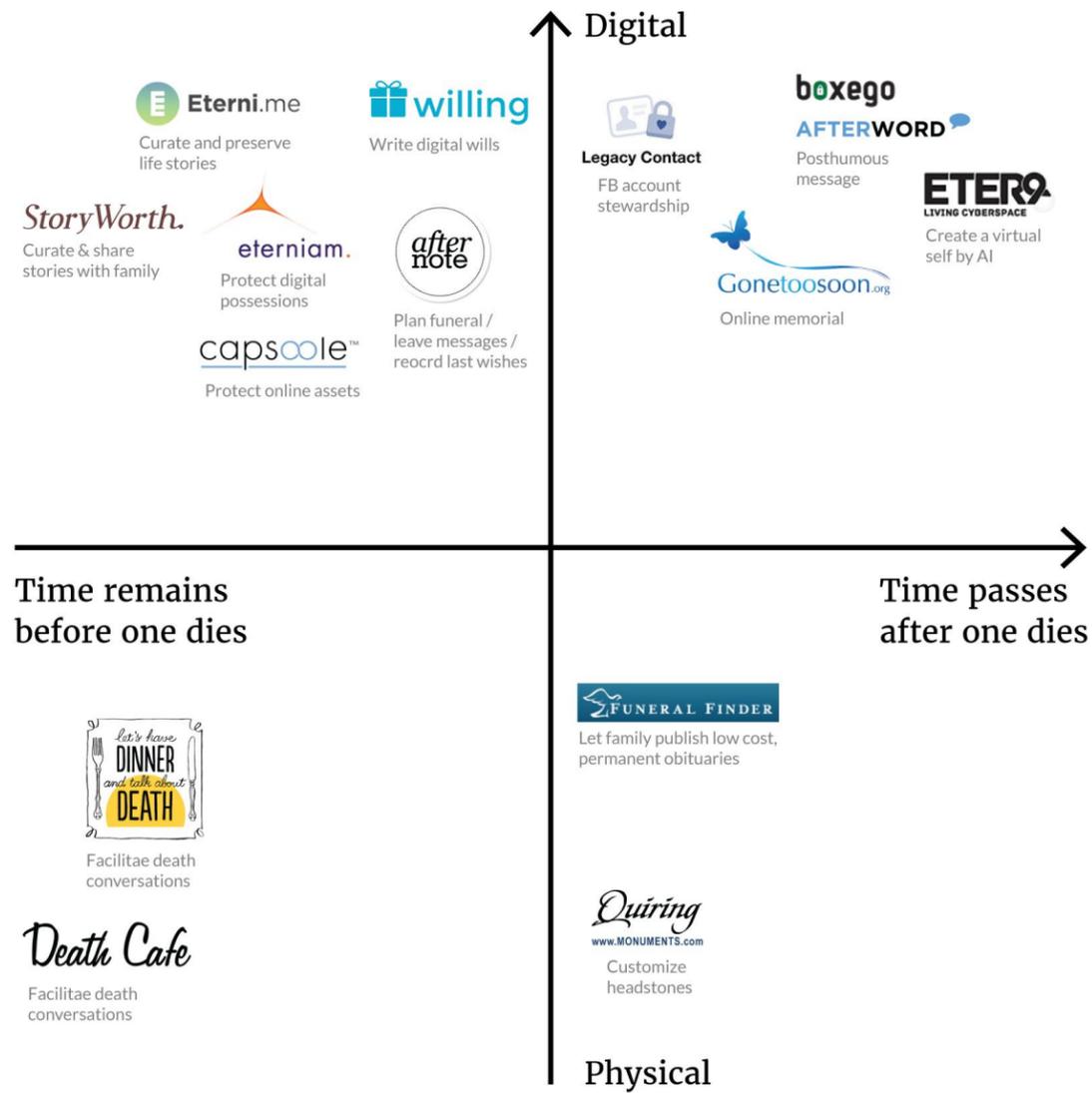
Competitive Analysis: Existing products/services in the digital legacy, memorialization, and storytelling domains.

Expert Interview: Interviews with 8 experts in the following domains: digital legacies, law & estate planning, social & policy sciences, hospice care, grief counseling, psychotherapy, and historical reenactment. We also talked to the PM for the Facebook Legacy Contacts feature.

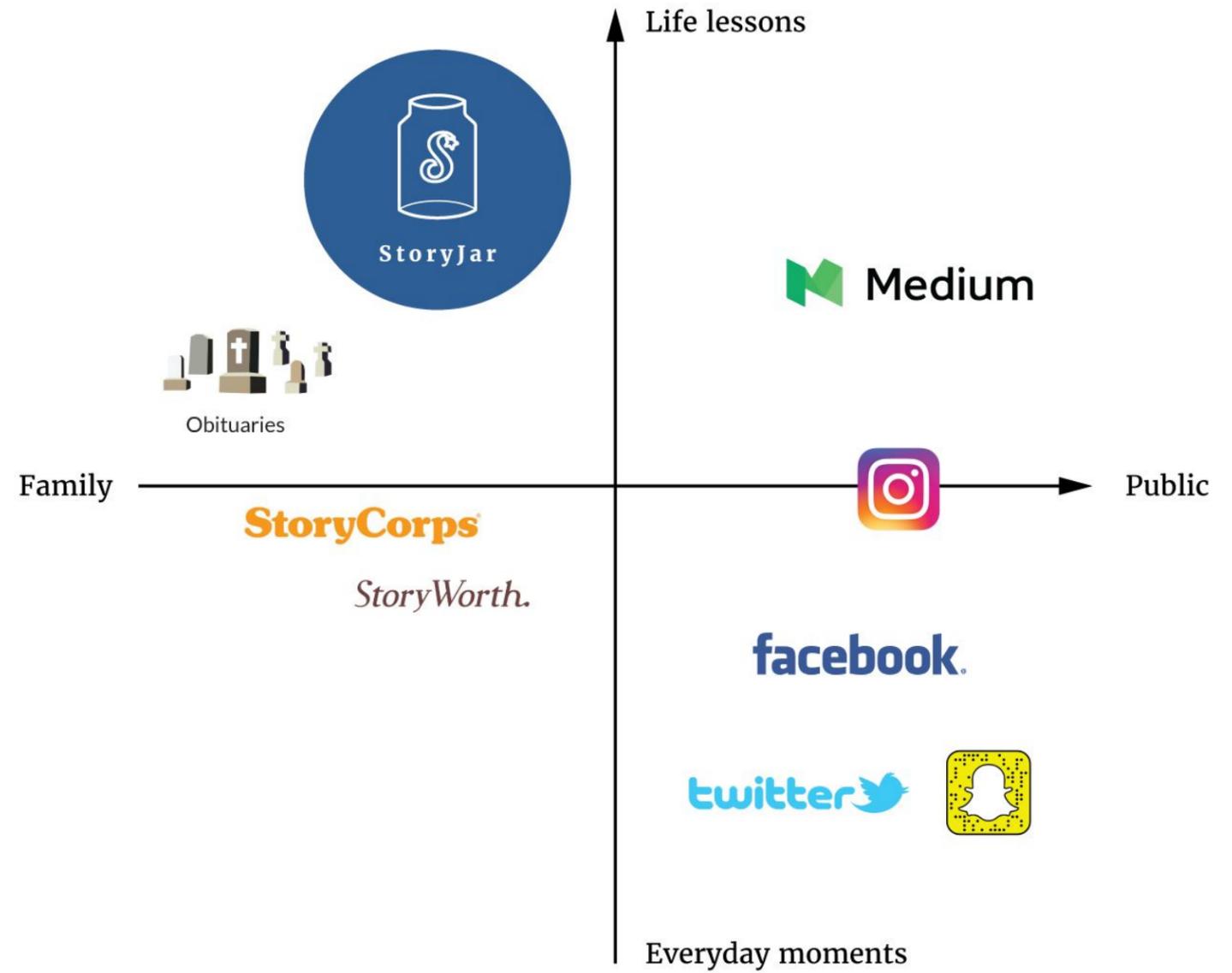
Participatory Observation: We attended a Death Cafe gathering hosted by a local chaplain. The Death Cafe is a meetup where people to engage in open discussion about death to “increase awareness of death with a view to helping people make the most of their (finite) lives”.

Focus Group: We conducted two focus groups, with 6 individuals in total, to learn about what kinds of legacy are considered meaningful by the bereaved. The first activity was a card-sorting exercise where participants identified themes around which pieces of legacy left behind were the most meaningful to them. The second activity was a scenario discussion which had each participant design their own theoretical end-of-life celebration and think about what things they wanted to do and/or leave behind.

Semi-Structured Interview: We interviewed 10 participants, ages 22-60, to try to understand how attitudes of mortality and death evolve over time, and also what is meaningful for curation and remembrance.



Competitive landscape:
The digital legacy domain.



Competitive landscape:
The storytelling domain.

2.3 Key Themes

Overall, we identified the following themes, which we used as a basis for our ideation process:

1. Evolving awareness of death: Participants generally started thinking/planning about their own death after the loss of a loved one or the addition of new loved ones.

“My husband and I had our first will written 15 years ago after our two twin boys were born.”– Participant S, Interview

2. Conversation about death: People don’t want to be constantly reminded of their own death, or make others uncomfortable by talking about their death.

3. Preparation for death: Being aware of death doesn’t necessarily translate to taking actions to prepare, because the lack of urgency of death.

4. Closure: Participants with loved ones wanted to express appreciation toward their loved ones. People feel regret if the last conversation is not well said.

5. Bequest and redress: Knowing the loved ones are following the life values of the dying can make the dying feel fulfilled.

“Spiritual values are definitely more important than the physical things. Things are just things, but you can’t take them with you.”– Participant J, Interview

2.4 Key Findings

Key findings that helped inform our final design:

1. Life events are key triggers for legacy planning.

Death and legacy planning are not everyday topics. Although people recognize the importance of legacy planning, lack of awareness or urgency delays people from taking action. People generally do not take action until certain life events happen, such as the loss of a loved one, or the birth of a newborn.

2. Life values & guidance are meaningful types of legacy.

When we invited participants to talk about the legacy from their deceased loved ones, a common theme that we found was that life values and guidance are considered the most important and meaningful types of legacy.

3. People want to help the next generation to succeed.

We also found that when people have kids or a younger generation they care about, they are more likely to think about passing on their life experiences. They want their next generation to succeed.

4. Remembering a deceased loved one’s life values can help a person reflect on their own life.

When we asked our participants how they felt after talking about their deceased loved ones and their stories, they told us that they felt positive and inspired.

2.5 Design Implications

Our design should:

- Help initiate and prompt the conversation about death in a not obtrusive way and at the right timing.
- Motivate people to take actions if they are aware of their mortality.
- Help people to bequeath rich life stories and personal values.
- Inform the importance of and guide people through a closure conversation.
- Respect the deceased’s opinion on how they would like to be remembered.
- Consider people of all, because crafting legacy is a continuous process throughout one’s life.

Our design should not:

- Constantly remind people that they will die in an annoying way.
- Discourage people’s hope on life when asking for actions.
- Generalize people’s values, because they are different for different individuals.
- Assume that certain life events only happen at a certain age, because everyone goes through a different timeline in life.

3. Ideation



3. Ideation

Following the design implications we came up with in our research phase, we conducted three rounds of ideation to generate as many potential ideas as possible.

3.1 Ideation Prompts

We came up with a set of design prompts to help inspire creative ideas during our brainstorming sessions. Some of these prompts include:

- What would it look like if talking about death is as easy as talking about travel experience?
- How can we take advantage of natural intervention points to get a person to take action to plan for their death?
- Are there any metaphors that we can use to help facilitate conversation about death?
- How can we make talking about death an entertaining and/or widely social experience?

Ideation Methods / Process

Thumbnail Sketching

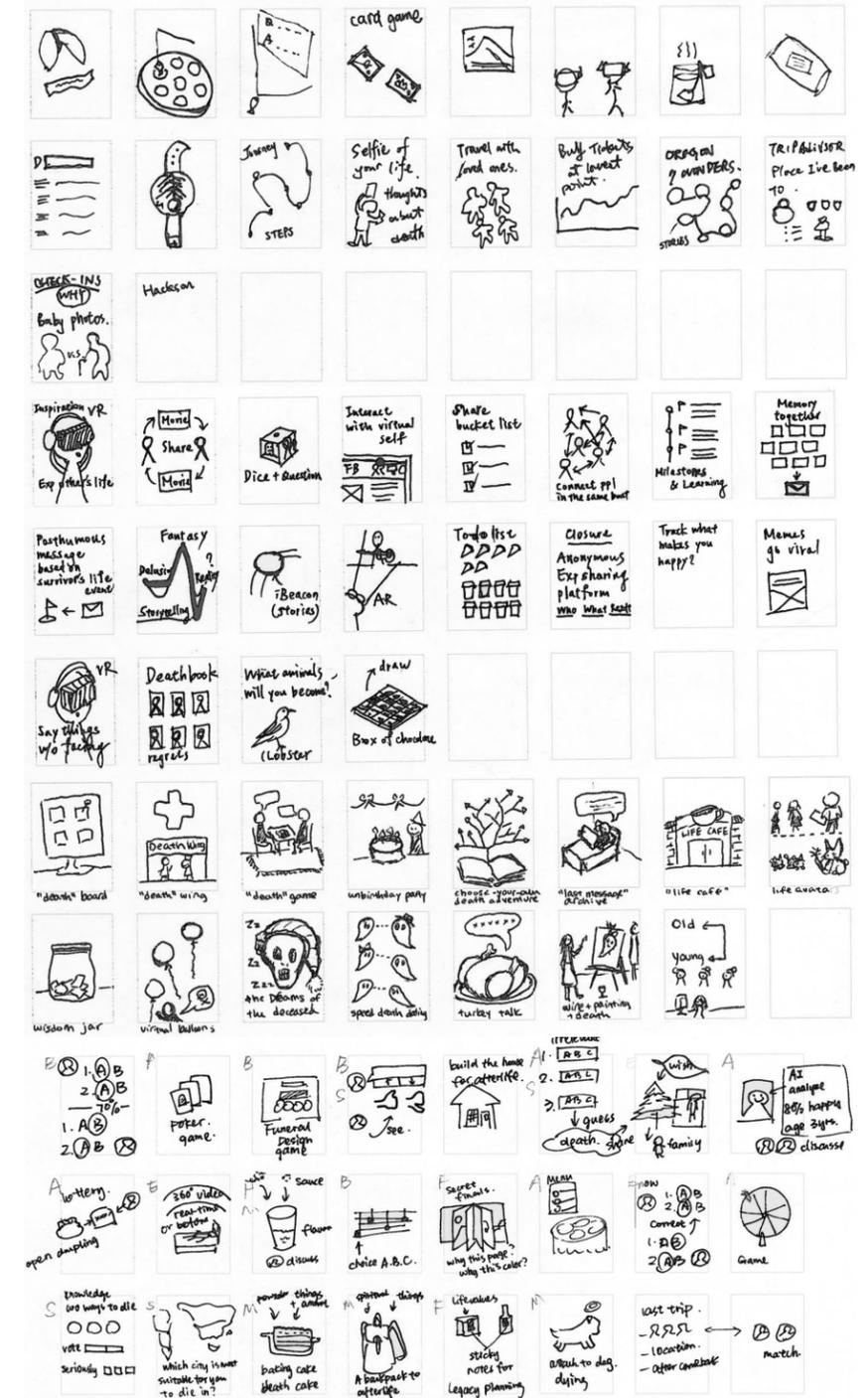
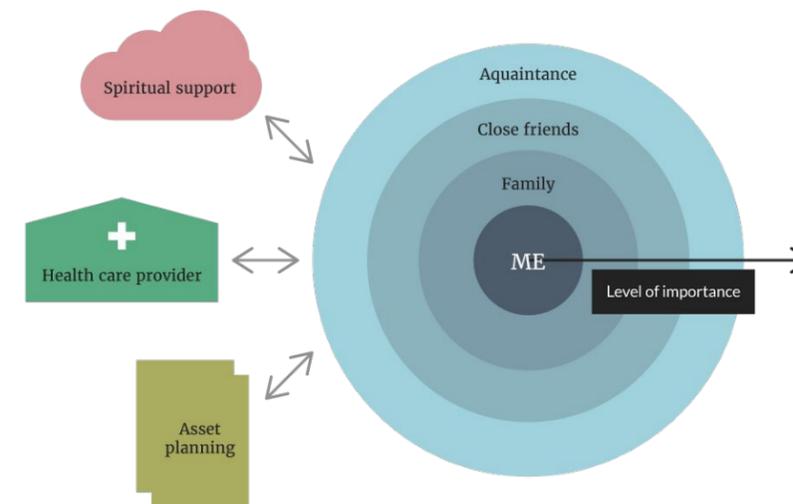
Our group had an hour of individual ideation through thumbnail sketching, based on our initial design prompts

Brainwalking

Our group voted the 76 original ideas down to a top 8, which we put on large sheets of paper. Each of us took turns sketching/writing on one sheet, rotating the sheets around. Using this method, we were able to focus on one question at a time, and do a hybrid of individual and collaborative work.

Stakeholder Map

We created a map of key stakeholders in our system in order to better envision possible users/interactions involved in the space of death, legacy, and memorialization.

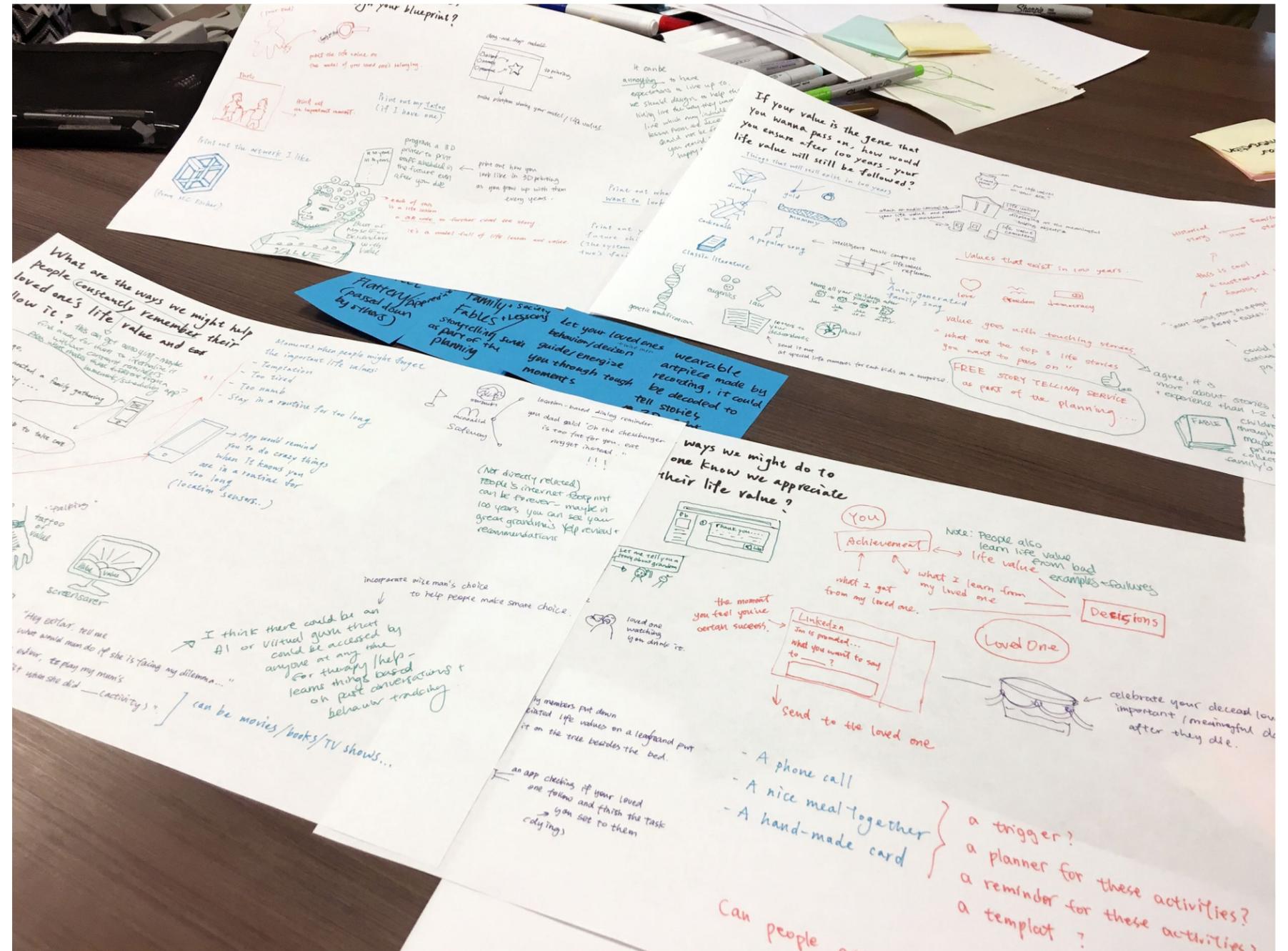


3.2 Ideas

These were the top nine ideas that came out of our ideation:

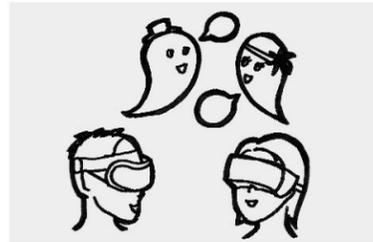
1. **Stress Free Talk:** a VR conversation/journey about death using avatars and environments in a guided and comfortable and/or entertaining set-up.
2. **Game of Life & Death:** prompt conversation through a card or adventure/story game
3. **Life is a Miracle Cookie:** Fortune cookie that contains questions regarding life values and death wishes/plans
4. **Travel Backpack:** The analogy of packing a backpack to carry the important things in your life
5. **Your Visualized Life:** A dream/wishes bucket list that will help an individual live a life without regrets
6. **Family Fables:** Provide a platform for family members to record their personal stories that relay their most important morals and values, to share with their loved ones and descendants.
7. **Storyteller Service:** A platform that matches the talented storytellers and people who have life stories to share or document
8. **Meaningful Aesthetic Artifact:** An aesthetic artifact encoded with life values/stories that survivors can scan to decode (could be 3D printed, wearable)
9. **Intelligent Guidance:** An AI system that guides users through the tough times by presenting the deceased's life stories/behaviors when prompted with keywords

After arriving at these top nine ideas, our group did another round of brainwalking in order to flesh out the ideas even more fully, where we incorporated feedback from class into our ideas. We also created storyboards for each of the ideas, in order to put the ideas into the context of a possible scenario.



01 Stress Free Talk

Create a comfortable environment with VR to facilitate death conversations



PROBLEM
It's hard to preserve and pass on life values

TARGET USERS
General public and their loved ones

SOLUTION

- VR
- Customized avatars
- Voice changer
- Default scenes & scenarios



1. Three family members, each with an elephant avatar.



2. Families in the forest and want to cross a river.



3. The father help each family to cross the river.



4. The son expresses the appreciation with elephant sound.

04 Travel Backpack

A website/app that takes people on a journey to trace back meaningful memories or dig out life values.



PROBLEM
It's hard to preserve and pass on life values

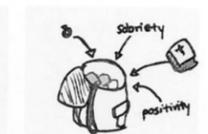
TARGET USERS
General public and their loved ones

SOLUTION

- The 'journey' has key stopping points at important moments in their life and prompts them to add items/thoughts of importance to the backpack.
- The 'journey' continues on past their present into the future and the afterlife.



1. A user starts a journey with a backpack.



2. A prompt appears that asks them to pack what is important to them that they would take into their afterlife



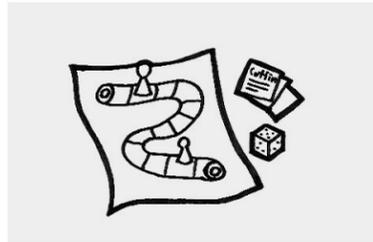
3. The user packs some life values in the backpack



4. The user continues on into the afterlife.

02 Game of Life & Death

Card games or board games that prompt users to answer life and death-related questions



PROBLEM
Some conversations with loved ones are awkward and uneasy to initiate.

TARGET USERS
General public and their loved ones

SOLUTION

- Board/Card Game
- Played in a group
- Prompts emerge that ask users about their life stories and attitudes and plans towards life/death



1. A girl wants to learn about her father's views on death and life, but doesn't know how to bring up such a serious topic.



2. She brings out a board game after dinner



3. The family is playing the game. A card asks, "what was the most important day of your life?"



4. The father begins talking about his life.

05 Your Visualized Life

A website that measures your life based on events and activities.



PROBLEM
- People near death may regret not having done certain things during their lifetime.

TARGET USERS
General public

SOLUTION

- Help users understand their current life status by measuring their life visually by habits and events.
- Help users plan and prioritize, and set reminders.
- Help users connect to find a bucket list buddy.



1. A woman checks her FB feed and sees an interesting visualization post.



2. She clicks on it and answers the question "How often you called your mom in the past year" and "How often you had your favorite cuisine?"



3. The system generates an appealing visual graph indicating how many times she can still do these activities before she dies.



4. She realizes the fact and actively plans the upcoming events.

03 Life is a Miracle Cookie

Fortune Cookies that randomly and surprisingly prompt users to think about life/death topics



PROBLEM
Some conversations with loved ones are awkward and uneasy to initiate.

TARGET USERS
General public and their loved ones

SOLUTION

- Sweet & yummy cookie
- Contain messages about death and life
- Work with restaurants in/near the hospital or places where customer may face life/death issues and anxiety



1. A worrying daughter walking out from the patient room who has a ill 80 year old father



2. She goes to grab food in the hospital food court



3. She eats the cookie and sees the message



4. She goes back to the room and share what she got with her father

06 Family Fables

A digital collection of fables centered around family members' most important morals and values.



PROBLEM
- How can you pass down your most important life values to your descendants?

TARGET USERS
Families

SOLUTION

- Children learn morals at a young age from fables.
- Provide a platform for family members to collect and share their own stories that hold important values, to share with their loved ones and descendants.



1. Child asks grandma for a bedtime story



2. Grandma opens the Family Fables app which has a list of 'Grandma's Fables'



3. Grandma begins telling the story, "Once upon a time, when Grandma was young..."



4. Grandma finishes telling the story, "And the moral of this story is..."

07 Storyteller Service

A platform that matches the talented storytellers and people who have life stories to share or document



PROBLEM

- Writing an autobiography is a daunting task.

TARGET USERS

- People who want to document their life
- People who are good at telling stories

SOLUTION

- Many talented writers or storytellers want more income and hope their work to be seen. The platform will provide a easy way for the client to find a proper storyteller for their story.



1. A man posts his case on the platform. One story about how he met his wife. Another story about his first succeed in career.



2. A college student studying literature creates her profile and her interest is writing family story.



3. They have a Skype call to tell the stories.



4. The man and his family can listen to the story in a VR scene with a narrated story.

08 Meaningful Aesthetic Artifact

An aesthetic artifact encoded with life values/stories that survivors can decode



PROBLEM

It's hard to preserve and pass on life values

TARGET USERS

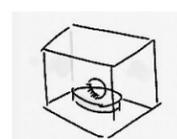
General public and their loved ones

SOLUTION

- Encode stories that are stored online.
- Generate artifact (e.g. 3D printing) with story encodings (e.g. QR codes) physically embedded in it.
- The artifact can be reproduced from the 3D model so it can be widely distributed or replaced when lost.



1. Grandma records her stories into the system



2. The system analyzes and generates an artifact based on the story it heard



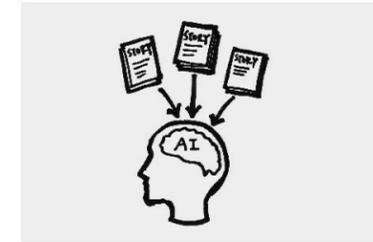
3. The survivor wears the artifact



4. the survivor decodes the stories

09 Intelligent Guidance/Storyteller

A system guides users through the tough times by presenting the deceased's life stories/behaviors



PROBLEM

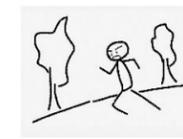
AI counselor that collects people's stories + outcomes and provides advice based on other people's stories to those that seek help.

TARGET USERS

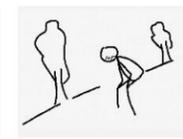
General public and their loved ones

SOLUTION

- Emotion detector
- Conversation-based assistant
- Life stories/behavior database & curation



1. A man feels demotivated while running.



2. "Let me ask the AI assistant what my deceased father would have done."



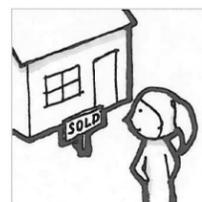
3. The system says "Your father ran 5 miles everyday."



4. "Wow, so admirable." the man started running again

Revised Storyboards

In-house Stories



1. A woman has sold her house and is about to move out to live with her new husband.



2. She builds a 3D house by the app, so that she can come back and revisit the house in the future.



3. She tags meaningful objects in the house with video & and stories will display in the virtual space in the app.



4. She tags her sister in a story, and her sister who lives in another country comes and checks out the house.

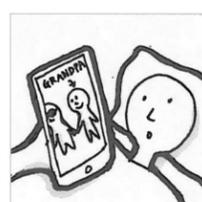
Family Fables



1. A mom telling a story from Aesop's fables about a fox



2. Mom says next story is about your grandpa



3. Play a video saying Grandpa was vision impaired but worked very hard to help blind people to learn



4. The little son feels proud of his grandpa and feel ready to go to bed

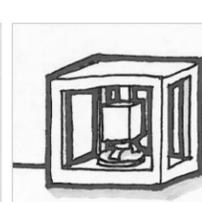
Meaningful Aesthetic Artifact



1. A guy's grandpa's watch contains meaningful stories



2. A guy 3D scans and put the story in the system



3. The system reproduces the watch by 3D printing & stores the story in the watch.



4. They guy gave this watch to his son.

3.3 Idea Selection

Based on feedback, we came up with three criteria that we felt were the most important values of this project:

1. Pass on life values to descendants
2. Create an engaging and fun experience
3. Curate stories to sharing with loved ones

We evaluated the 9 concepts based on these criteria with a matrix (shown right).

Eventually, we decided to go for the concepts that situate above the x-axis, because we want to focus on preserving life stories which makes sense to be used among family or loved ones. In addition to that, we dropped out the “Intelligent storyteller” concept because the AI solution would take too long to adapt.

As a result, we arrived at a top three final directions:

1. **In-house stories:** A VR tool that helps families capture and share stories in houses they have ever lived in.
2. **Family Fables:** A service that facilitates family to curate, tell, and pass down family stories.
3. **Meaningful Aesthetic Artifact:** A system that allows users to preserve stories in physical objects.

Ultimately, we decided to drop the In-house Stories and Meaningful Aesthetic Artifact ideas because we found through peer feedback that people’s most important stories are not necessarily attached to objects in a house, and that virtual or physical copies of an object were less valuable and meaningful to the user than the original.

That helped us hone in on our final idea direction: **Family Fables**.





4. Concept Refinement

4. Concept Refinement

4.1 Design Principles

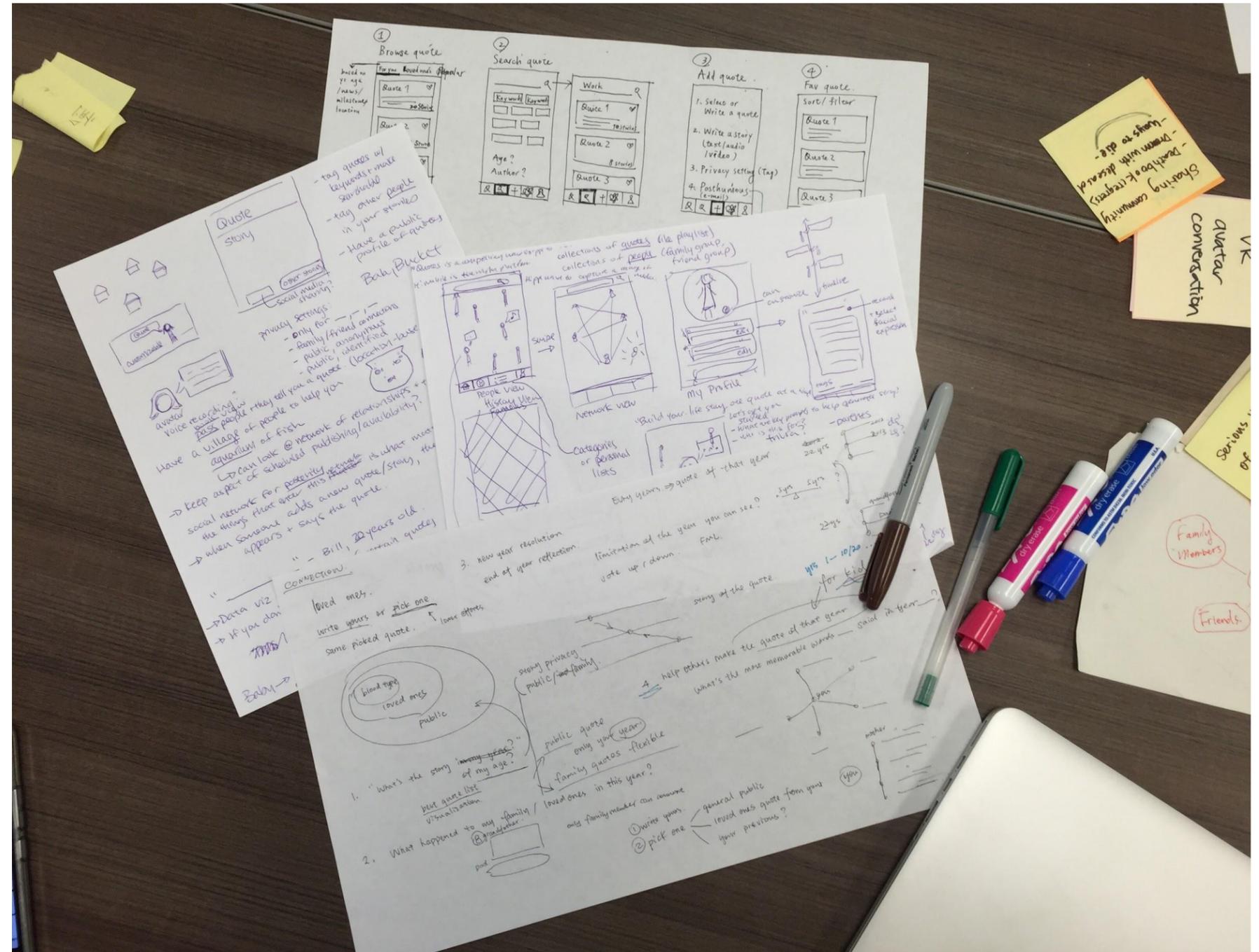
After arriving at the final concept Family Fables, we looked back at our previous design principles to further flesh out the concept. Here are the four related design principles that our final concept is based on.

1. Use life events as the major trigger point to bring people to prepare their life legacy.
2. Instead of documenting trivial life events, help people focus on telling stories with life values.
3. Our design needs to be inclusive and appealing to cross-generational users.
4. Provide a space where people can easily consume the life story of their deceased loved ones.

4.2 Design Inspirations

To set our final concept apart from the existing platforms, we dug more into our research findings and social media resources regarding storytelling. The following are some key inspirations that led to the prototype design.

- Inspired by a TED talk [“Wisdom from great writers on every year of life”](#) by Joshua Prager, we realized that using quotes to summarize life stories is an insightful way to help curators reflect on their lives deeply, as well as to help readers to consume in an engaging and profound way.
- We recalled in our research that the survivors have deep emotional connections with the voice recordings of their deceased loved ones.



- We learned from our research that starting a life story can be a daunting task, so we should prompt users to have an initial idea of the story they can start with.

4.3 Prototyping - 1st Round

Prototype

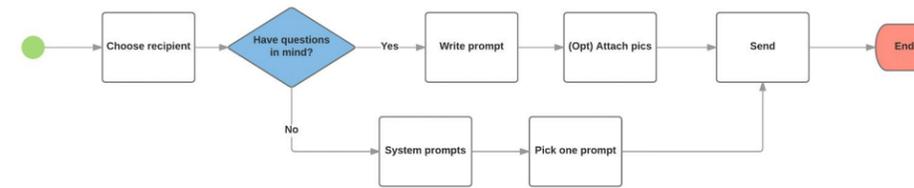
We started building our first prototype as a mobile app covering the following features:

1. Prompting - Prompts include system-generated prompts such as quotes, photos and questions or direct story requests from a loved one who is interested in hearing a story.
2. Composing - The composing flow includes attaching multimedia content, summarizing a key takeaway, recording the quote title, tagging the story, and choosing specific recipients.
3. Searching for stories
4. Message box
5. Personal profile, family tree

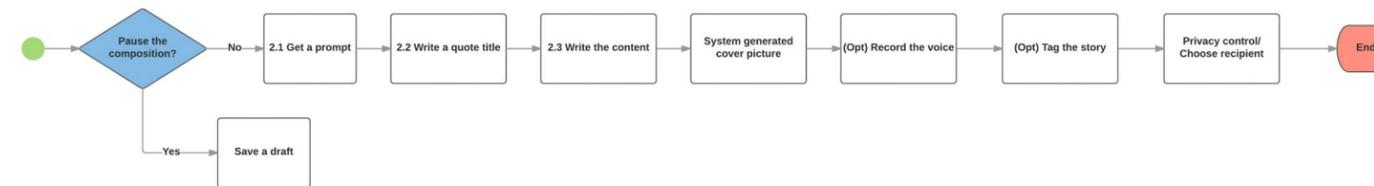
We mapped out the key interaction flows included in the first prototype (shown right). Prior to making the digital prototype, we also sketched out screens on paper (shown on the previous page).

The interactive prototype can be viewed at the link <https://marvelapp.com/3c374ae#14000945>.

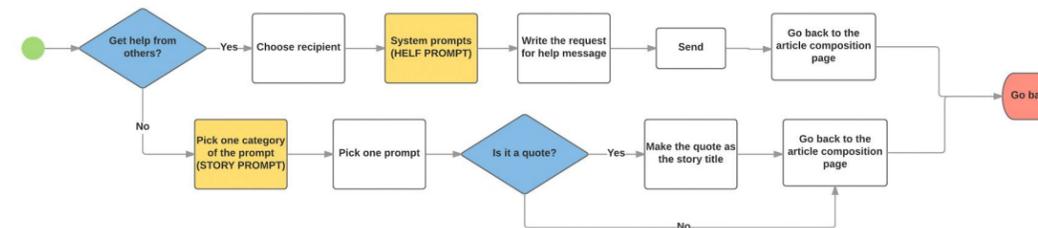
1. Request for story



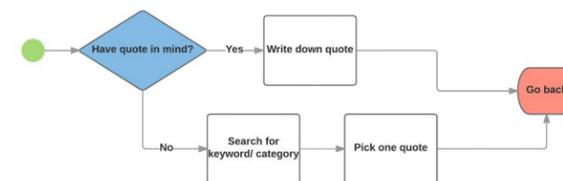
2. Write a story



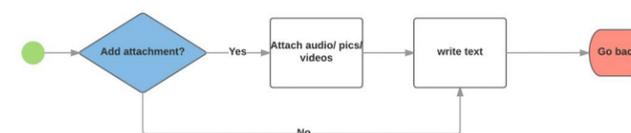
2.1 Get a prompt



2.2 Write a quote title



2.3 Write the content



Initial user flow

User testing

We divided our user testing into two parts. The first part focused on the prompts design, while the second part focused on the usability testing of our first prototype.

Research questions for **prompts design**:

1. What kind of questions, quotes, and photos are more effective to help people tell insightful stories that they want to pass on?
2. Does the topic or content of the insightful story change because of the target audience (family vs non-family)?
3. Does a newborn or loss of family member motivate people to share insights or write stories for the newborn or deceased?

To address research question 1, we prepared 40 questions pulled from StoryWorth. We coded these questions into 5 categories based on the content. We defined the effectiveness of the prompts by the total times that they have been chosen by the participants to start a story. Specifically, what we asked our participants to do was:

1. Choose 3 questions from the list of questions that they most wanted to tell a life story about
2. Choose 3 quotes that are personally meaningful to them and can be related to a story in their life
3. Choose 3 photos that are personally meaningful to them and are related to a story in their life

Research questions for **usability testing**:

1. When composing a story, do the writing flow and the inspiration feature make sense to the user?
2. Can the user find stories responding to a specific question?
3. Can the user manage to add an immediate family member to the family?

To make sure that the testing plan would work, we conducted a pilot round of the user testing with one participant (shown below). The video walkthrough of the first prototype and snapshot of the pilot testing can be seen at <https://vimeo.com/175606577>.



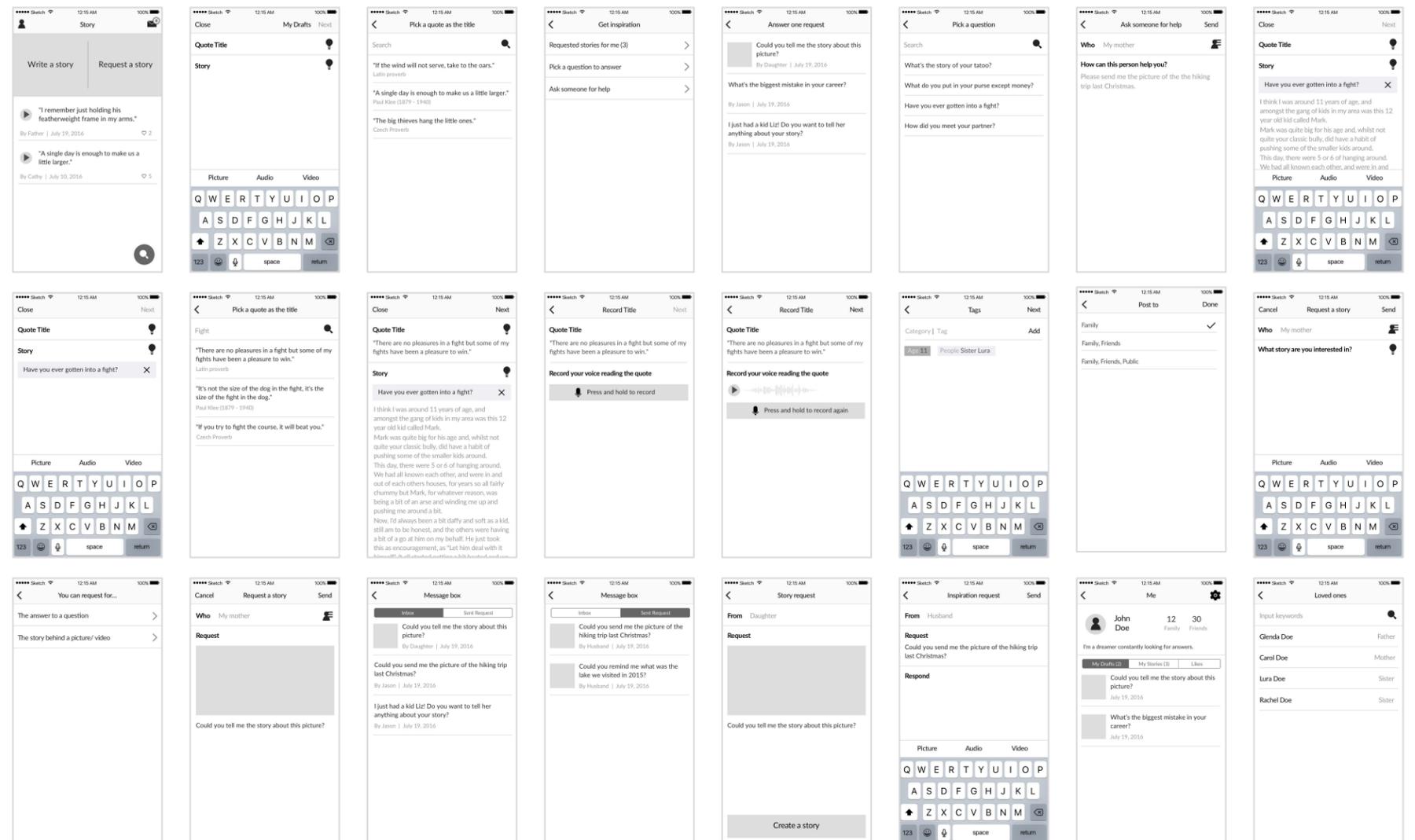
Findings

We invited three participants in the first round of user testing, with ages of 22, 40, and 60 years old. One of the three participants was married and had two kids. They all have at least 1 year of smartphone using experience. Testings were audio and video recorded. (Photos shown on the previous page)

The findings for the prompts design will be mentioned in the findings of the second round, when more data had been collected.

The findings for the usability testings were addressed given the urgency of the issues and the resource we had at that time. The following are the findings that required actions:

- Navigating through multiple steps of composing a story on phone is not convenient enough. We designed another story composing flow for A/B testing in the second round of testing.
- Participants had hard time figuring out the purpose of finding a story responding to a specific question.
- To update the family tree, the scenario of updating the status of a non-immediate family member should be considered, such as adding a newborn kid for the user's sister.
- Inspirations for story inside the composing flow is not necessary.



1st round of prototyping

4.4 Prototyping - 2nd Round

Prototype

Based on the findings we got from the 1st round of user testing, we tweaked our design in the following ways.

1. We designed another story composing flow with fewer pages and steps required.
2. The user is able to update the status of a non-immediate family member.
3. We moved the feature of story inspirations out to the home screen.
4. We removed the feature of searching stories by question.

For the second round, the prototype with the composing flow A is at <https://marvelapp.com/1463db8>. The composing flow B can be seen at <https://marvelapp.com/1463db8>.

User testing

For the design prompts, the research questions remained the same to quantify the result. For the usability testing, we modified the research questions in response to the tweaks of the features.

The research questions in the second round were:

1. When composing a story, do the writing flow and the inspiration feature make sense to the user? Which composing flow makes more sense to the user?
2. Can the user find stories responding to a specific topic?
3. Can the user manage to add a non-immediate family member?
4. Is the user able to successfully update the living status of the grandma?

Findings

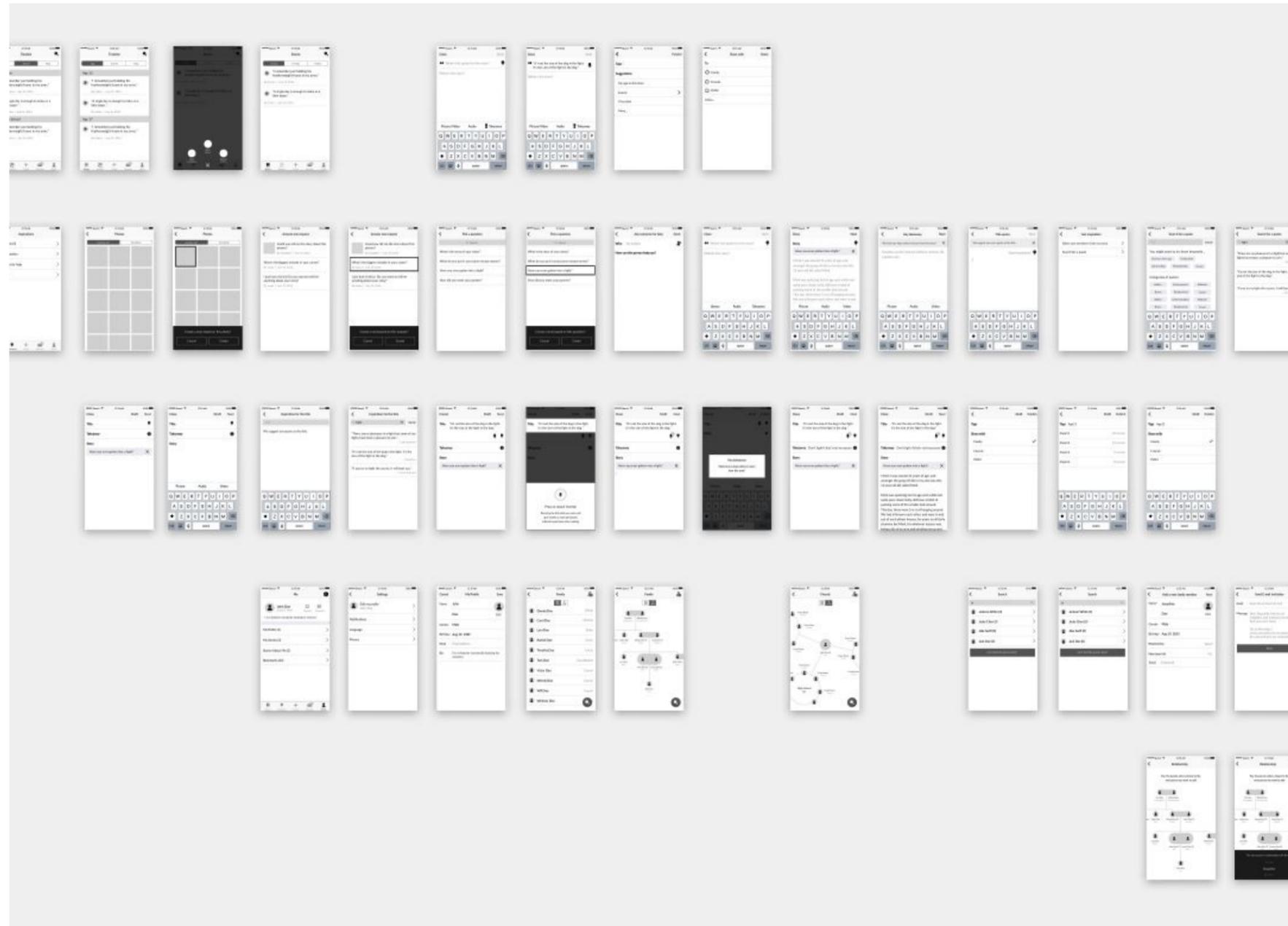
We conducted the second user testing with two participants with ages 23 and 35 years old. One of them was married and has one kid. They all have at least 1 year of smartphone using experience. Testings were audio and video recorded. (shown on the next page)

For the **prompts design**, our findings are:

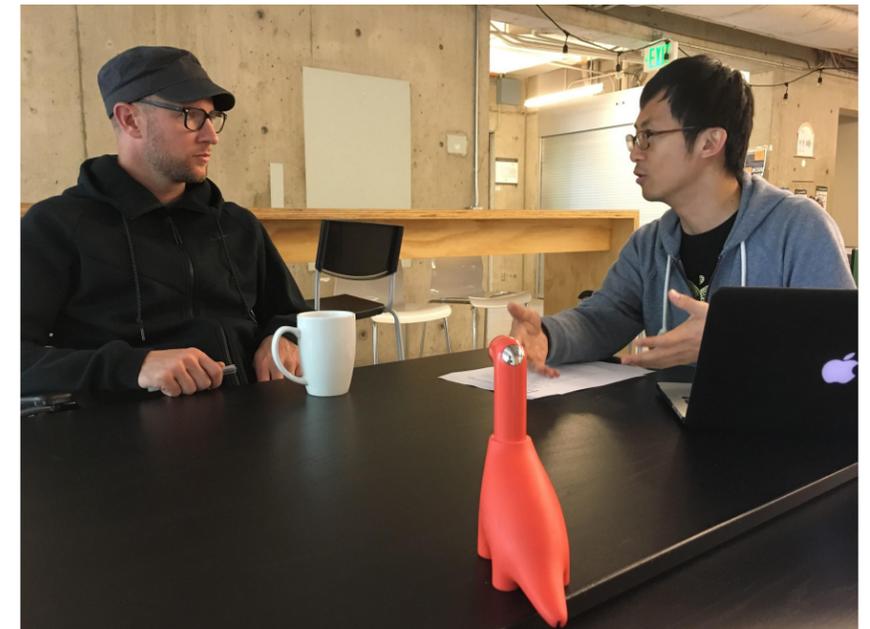
- Participants mostly wanted to share positive stories about themselves and others.
- People want to share specific stories to specific circles of people.
- Participants were more likely to share stories containing values that they wanted to pass down to future generations when responding to personally generated/selected quotes.
- Photos tended to be used as illustrations for pre-selected stories, rather than inspiration.

For the **usability testing**, key usability issues that participants surfaced are:

- On a mobile phone, having fewer steps to finish composing a story still makes more sense than only one step each page.
- To compose a story, a mobile application is good to start or capture story on the go, but laptop or tablet should also be considered to facilitate the composing flow.
- To find relevant stories, participant didn't see "search" as the direct entry point, they went to "inspiration" or "request for story" to find the story.
- The feature named "inspirations" on the home screen is confusing.



2nd round of prototyping



2nd round of user testings

4.5 Design Modifications

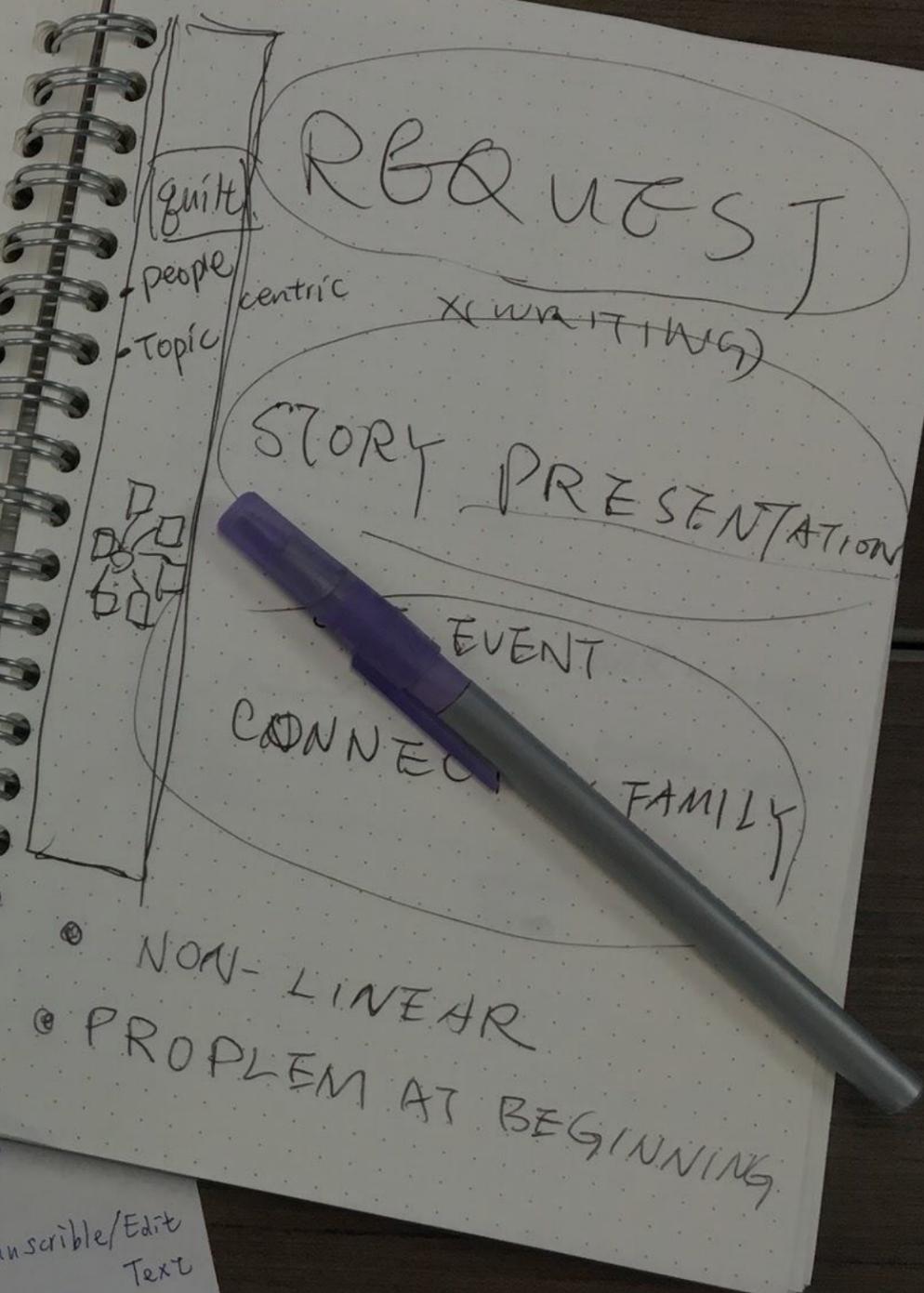
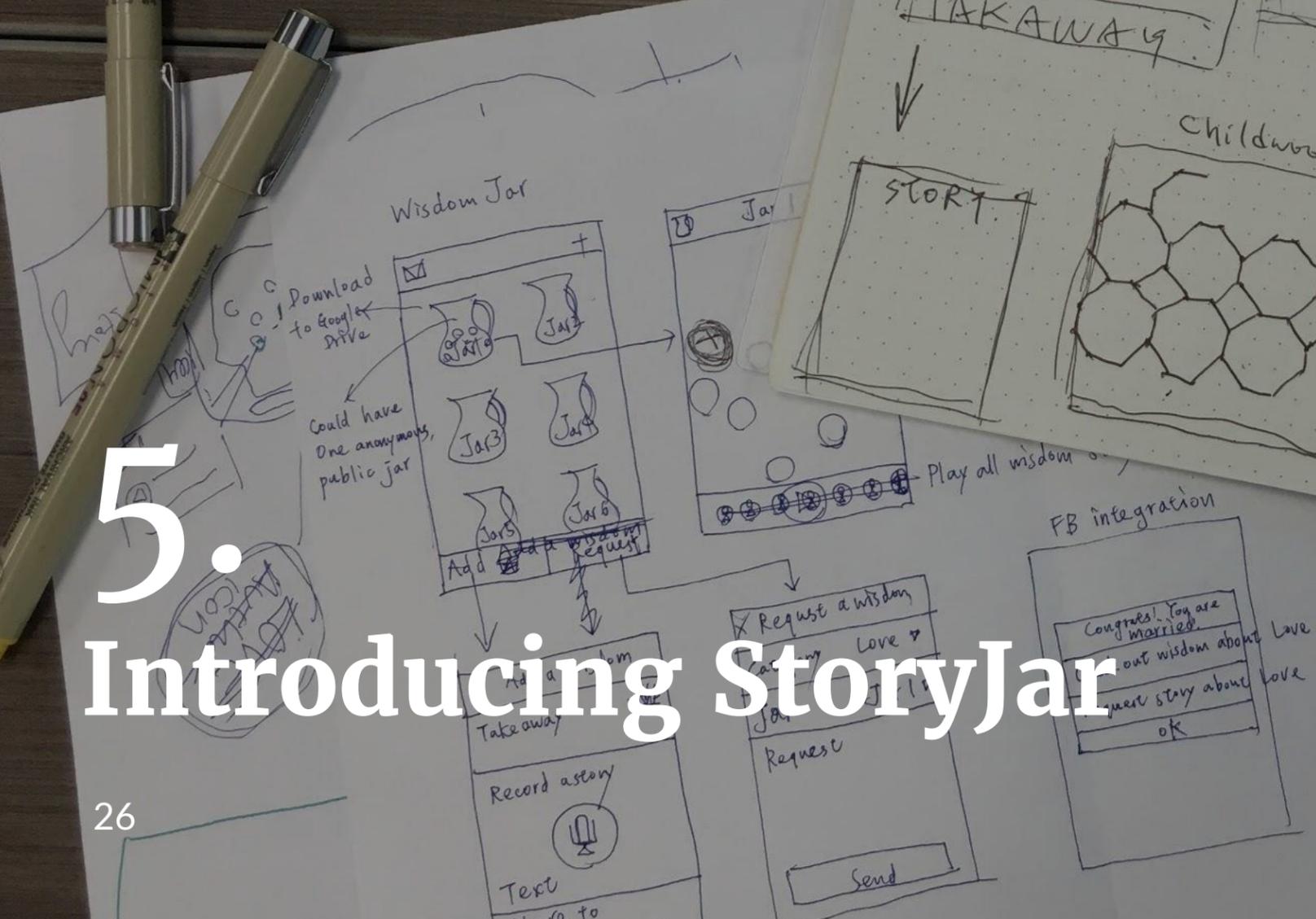
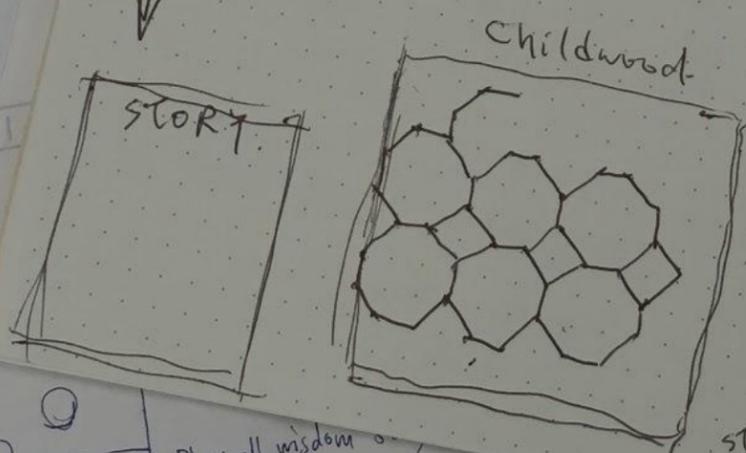
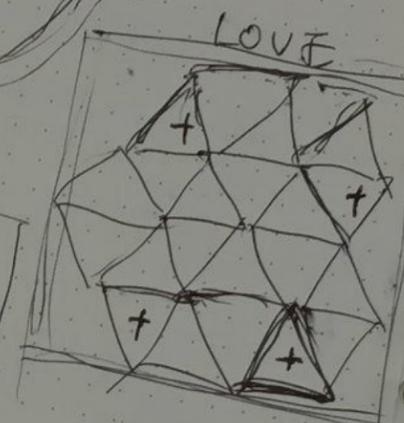
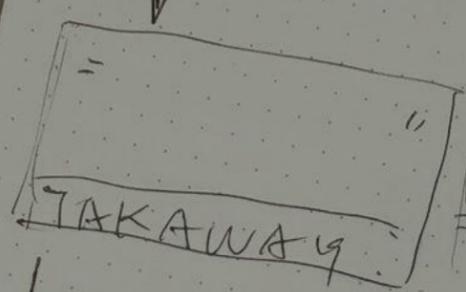
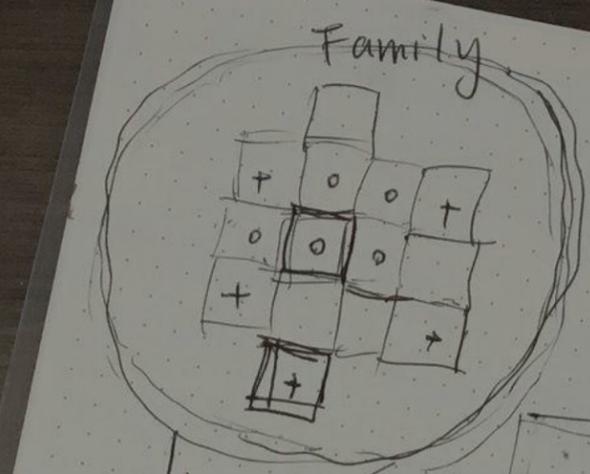
Based on the findings we got from two rounds of user testing, we made major modifications to our initial design.

- We realized that to create a comfortable and focused space for people to write a life story, our product should exist on **multiple platforms**, since phone and tablet are good for story consumption and laptop is easier to compose story. We added tablet and laptop in our final design.
- After realizing the “**inspirations**” on the home screen confused people, we wanted to make the inspirations feel less obtrusive and natural to users, so we include it into the reading consumption experience.
- The findings we got from the prompts design led us to remove the photos as prompts. We added **Facebook life events** and highlights of the user’s and the user’s loved ones as one kind of story prompt. This aligned with our research finding that life events is a trigger for people to start thinking about what to pass on.
- During user testing, participants got confused when the search feature was the only entry point for them to find relevant story. To **create a better consumption experience**, we decided to group stories by categories to help readers find relevant stories.
- Other than limiting people's choices to only family or friends, we allow users to set up a circle of people that they can share stories with.
- To make the life story composing experience less daunting after people have already started a story draft, we allow user to **reach out for help** during writing.

- To evoke stronger emotional connections with the life stories, we connected the concept of story categories and circle of people to an existing metaphor of “**wisdom jar**”.



5. Introducing StoryJar

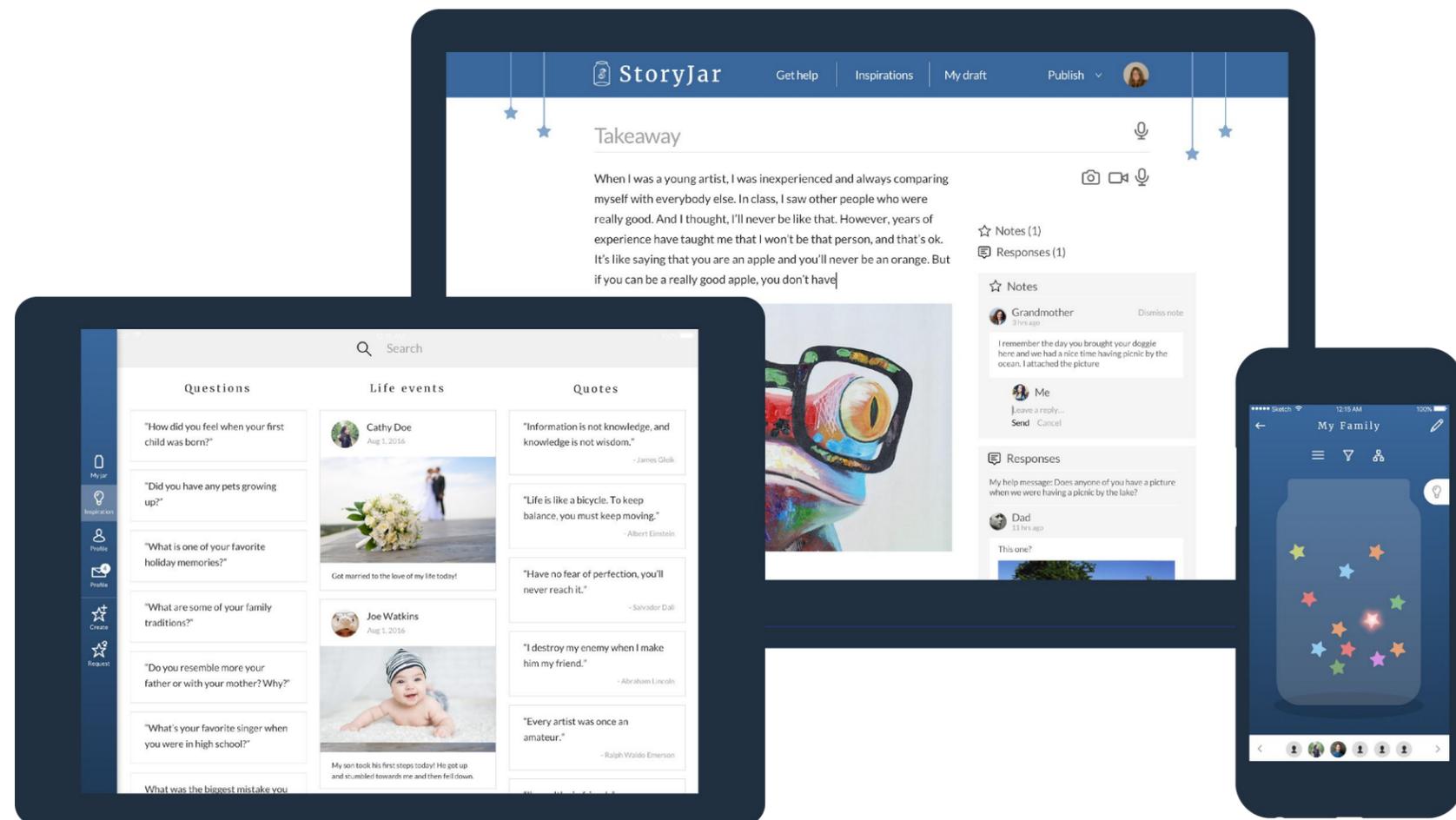
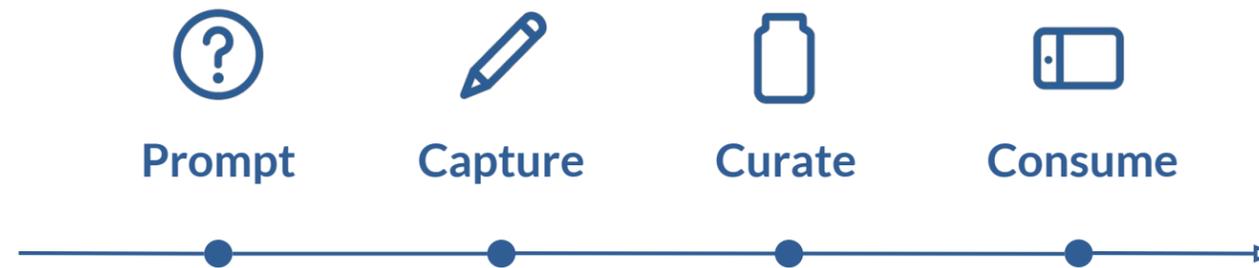


5. Introducing StoryJar

5.1 Product Description

StoryJar is a storytelling platform that helps capture, preserve and share your life stories and values with your loved ones and future generations.

The platform includes these four key actions: prompt a user to start a story, capture stories, curate and organize stories, and present stories in a way that can be easily consumed.



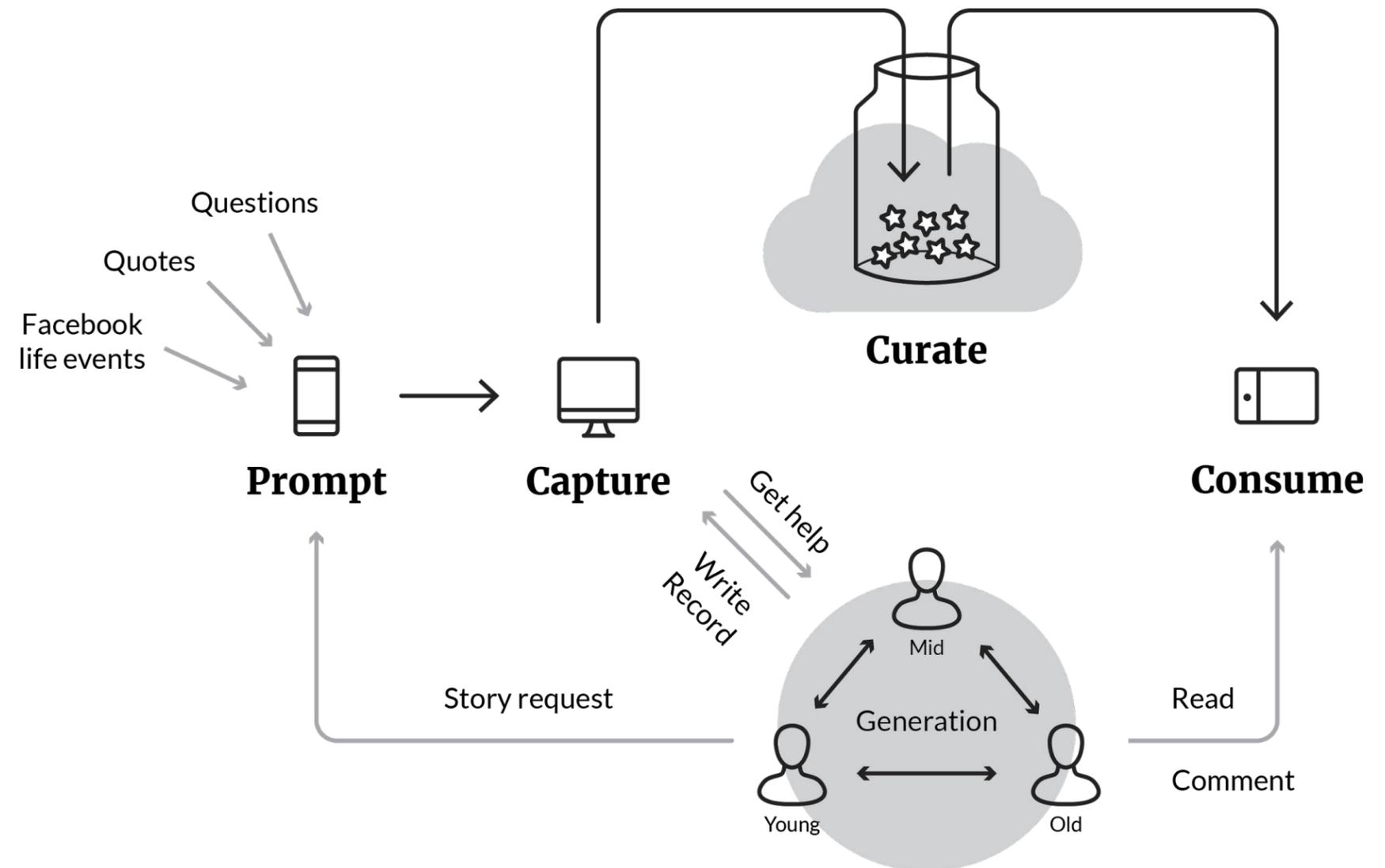
5.2 System Diagram

There are four key actions involved during the user experience - prompt the idea of a life story, capture the story with multimedia content, curate and organize stories, and present stories in an easily consumable way.

StoryJar is for cross-generational users.

Request sent out from the loved ones could serve as a prompt for life stories. Other types of prompts include system-generated quotes, questions and facebook life events or highlights.

Users can reach out for help when composing the story. The system will curate the story by circle of people or the category of the story it belongs to. Finally, to help future generation to consume, concise takeaway with the storyteller's voice recorded are provided.



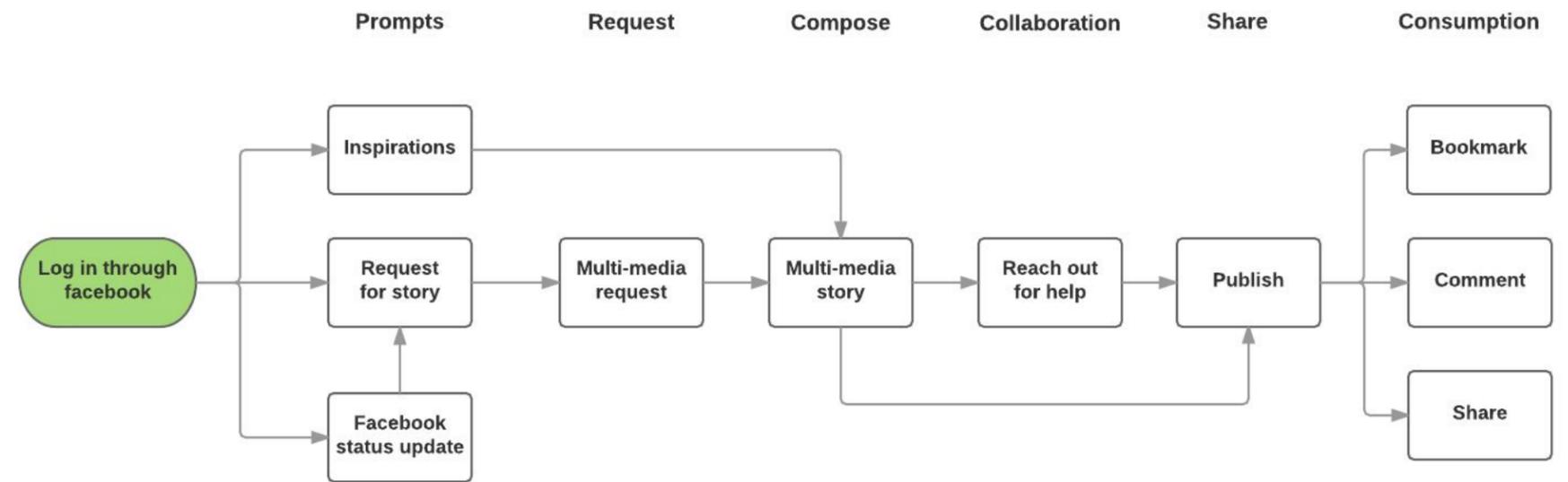
System map

5.3 User Flow

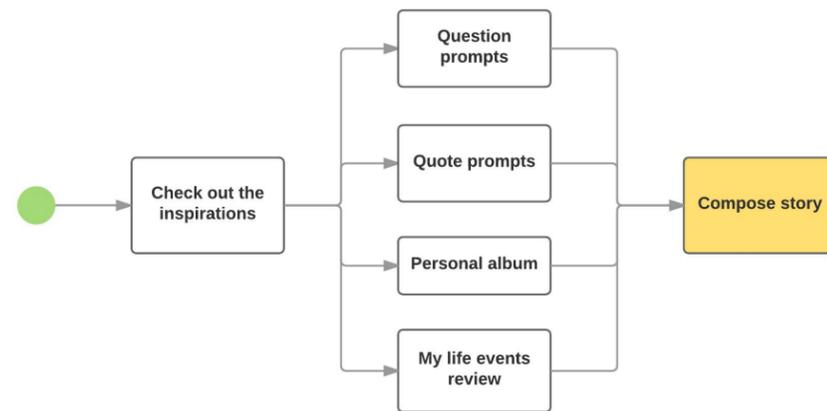
To dissect the functionalities of StoryJar, we refined the user flows into an overview interaction model (shown right) and the user flows for every feature. (shown below and on the next two pages)

Detailed level of the user flows include:

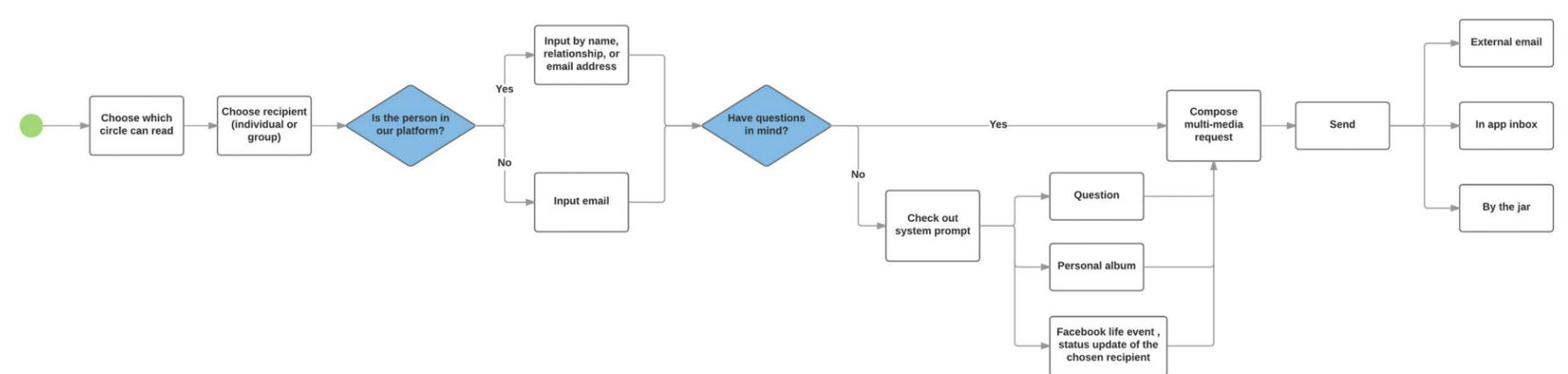
1. Inspirations
2. Request for story
3. Facebook life event triggers
4. Compose a story
5. Reach out for help
6. Consumption
7. Add a new circle



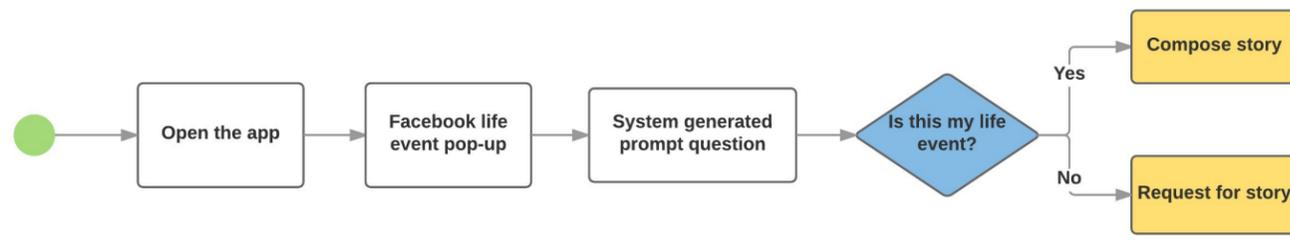
Overview interaction model



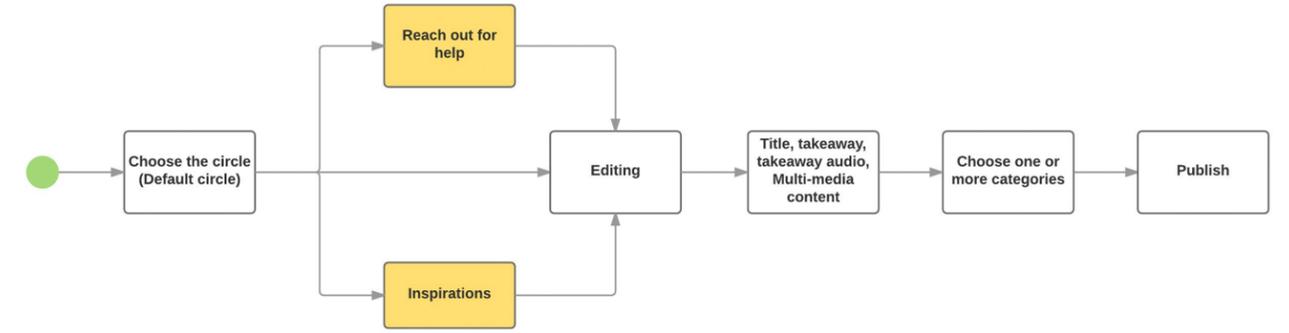
Inspirations



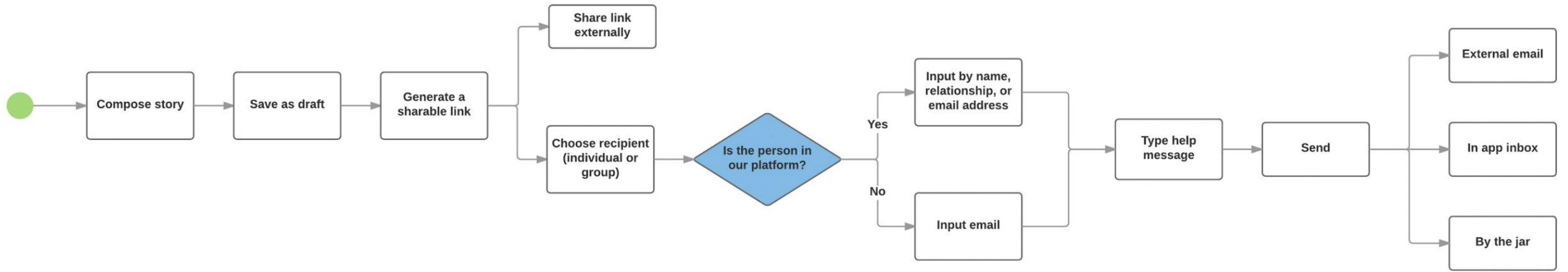
Request for story



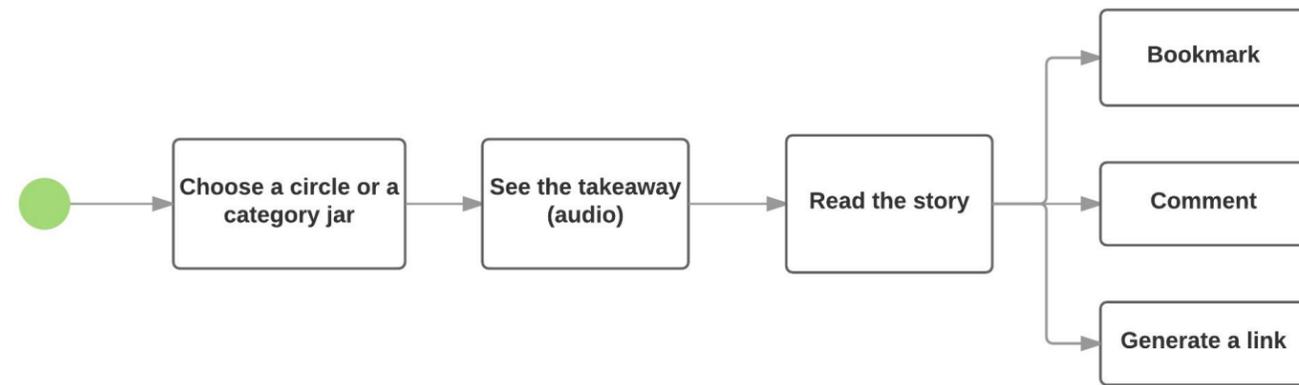
Facebook life event triggers



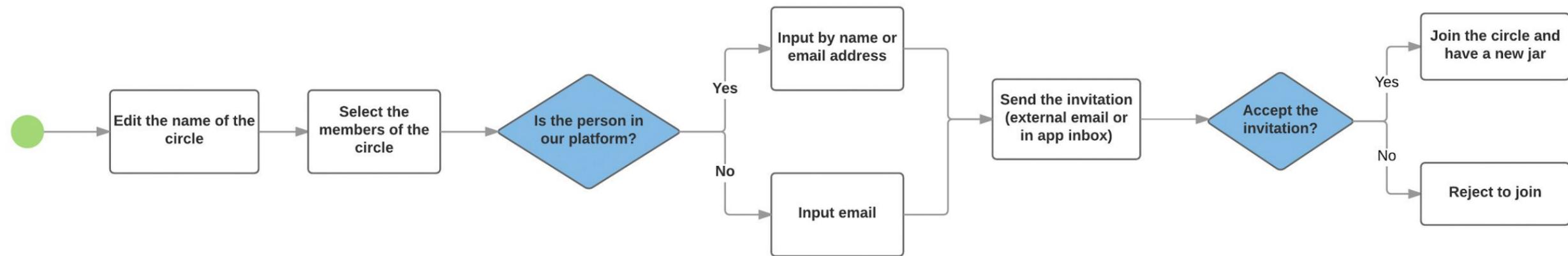
Compose a story



Reach out for help



Story consumption



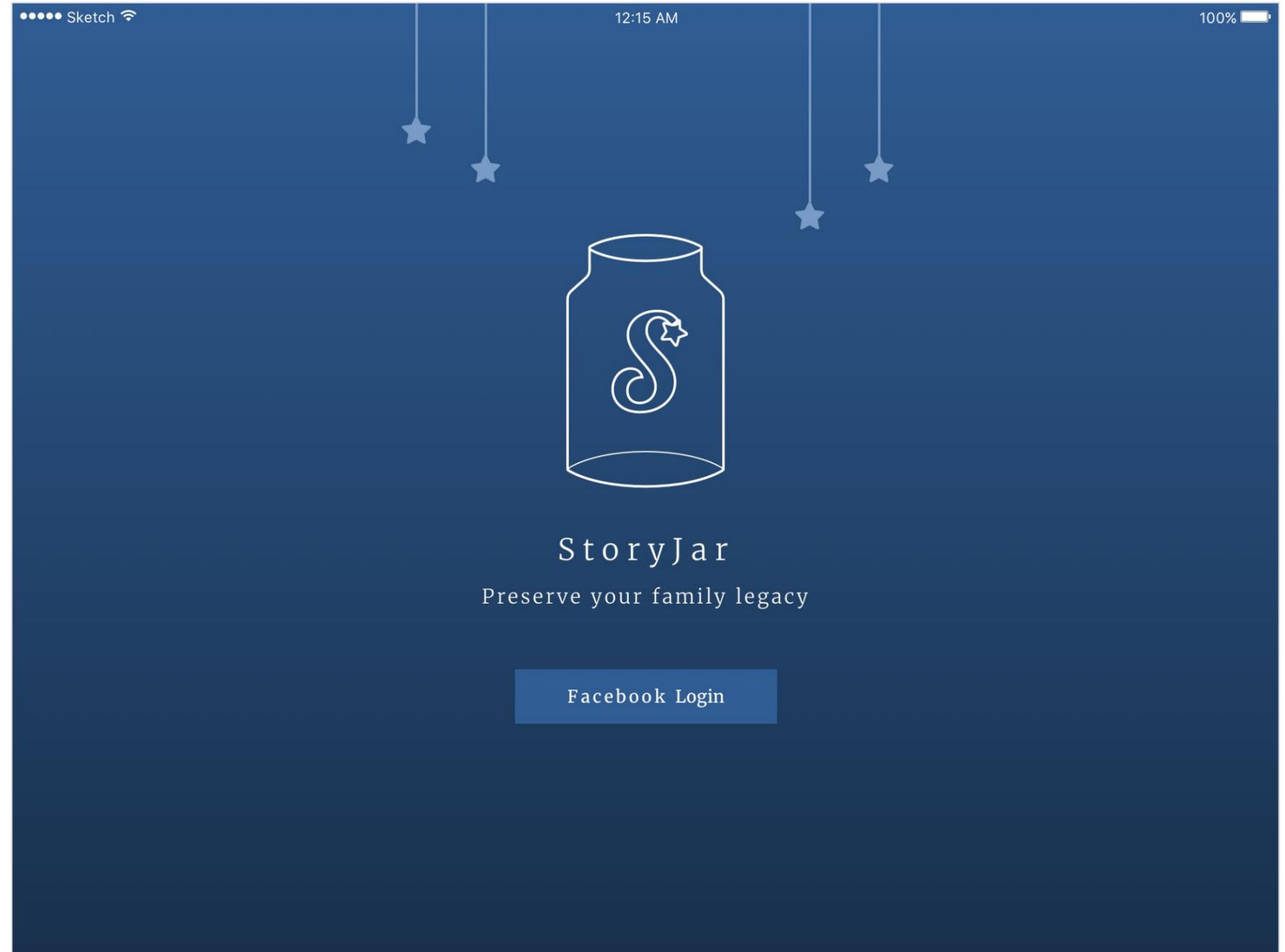
Add a new circle of people

5.4 Feature Specifications

Sign-in page

StoryJar recommends users log in with their Facebook account to speed up the login process and to obtain the user's permission to import life event posts and existing Facebook posts as one resource of story prompts.

StoryJar can be an affiliate app of Facebook app that helps people share and preserve important life stories privately. In such a case, Facebook login will be the only option to start using the app.

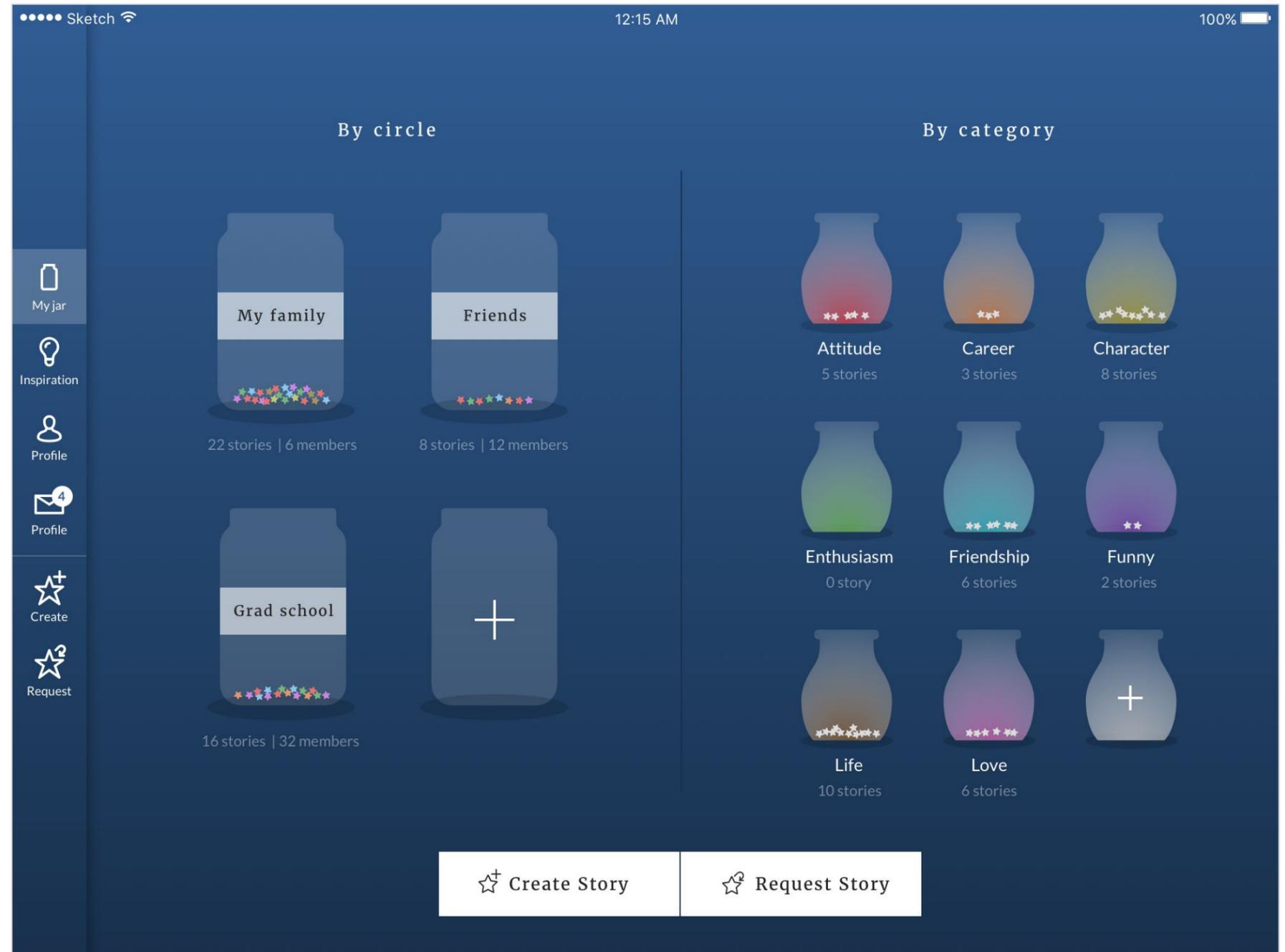


Homepage - my jar

"I'd like to share with my immediate family and friends, some may be targeted to share with other people, but I'd like to select." – Participant A, User testing

One of our main findings during prototype testing was that people want to share specific stories to specific circles of people. We took this feedback and designed a platform where stories are collected within jars. Each jar is shared by a circle of your loved ones.

Our platform also allows you browse stories by category. The system has default categories. The author of each story decides what categories each stories belong to.



Inspiration - prompt to begin a story

Lots of people use social media in their everyday lives. But while posting a status update may be easy, our research found that for many, sitting down to write an important story can be a daunting task.

Our system takes advantage of users' existing life logging behaviors and pulls in a feed of Facebook life events to help prompt people to recall key touch points in their life. These prompts include user's and user's loved one's life events, which could be marriage, newborn, important milestone. User's posts are also imported as prompts as potential material to start a good life story.

Our system also provides contextually relevant questions and quotes to help spark stories. Based on the user profile, the system shows the questions that are frequently used by people with similar profile. For example, people with kids or a next generation are more likely to feel resonant with questions about their kids.

In addition, quotes hold wisdom and more profound life lessons that potentially can evoke people who have stories that may be related to or summarized by such a quote.

The screenshot displays a mobile application interface with a dark blue sidebar on the left containing navigation icons: My jar, Inspiration, Profile, Profile (with a notification badge), Create, and Request. The main content area is divided into three columns: Questions, Life events, and Quotes. The Questions column lists prompts such as "How did you feel when your first child was born?" and "What is one of your favorite holiday memories?". The Life events column shows a feed of user posts, including a wedding post by Cathy Williams and a newborn post by Micheal Smith. The Quotes column features various inspirational quotes, such as "Information is not knowledge, and knowledge is not wisdom." by James Gleik and "Life is like a bicycle. To keep balance, you must keep moving." by Albert Einstein.

12:15 AM 100%

Search

Questions

"How did you feel when your first child was born?"

"Did you have any pets growing up?"

"What is one of your favorite holiday memories?"

"What are some of your family traditions?"

"Do you resemble more your father or with your mother? Why?"

"What's your favorite singer when you were in high school?"

What was the biggest mistake you

Life events

 Cathy Williams
Aug 1, 2016



Got married to the love of my life today!

 Micheal Smith
Aug 1, 2016



My son took his first steps today! He got up and stumbled towards me and then fell down.

Quotes

"Information is not knowledge, and knowledge is not wisdom."
- James Gleik

"Life is like a bicycle. To keep balance, you must keep moving."
- Albert Einstein

"Have no fear of perfection, you'll never reach it."
- Salvador Dali

"I destroy my enemy when I make him my friend."
- Abraham Lincoln

"Every artist was once an amateur."
- Ralph Waldo Emerson

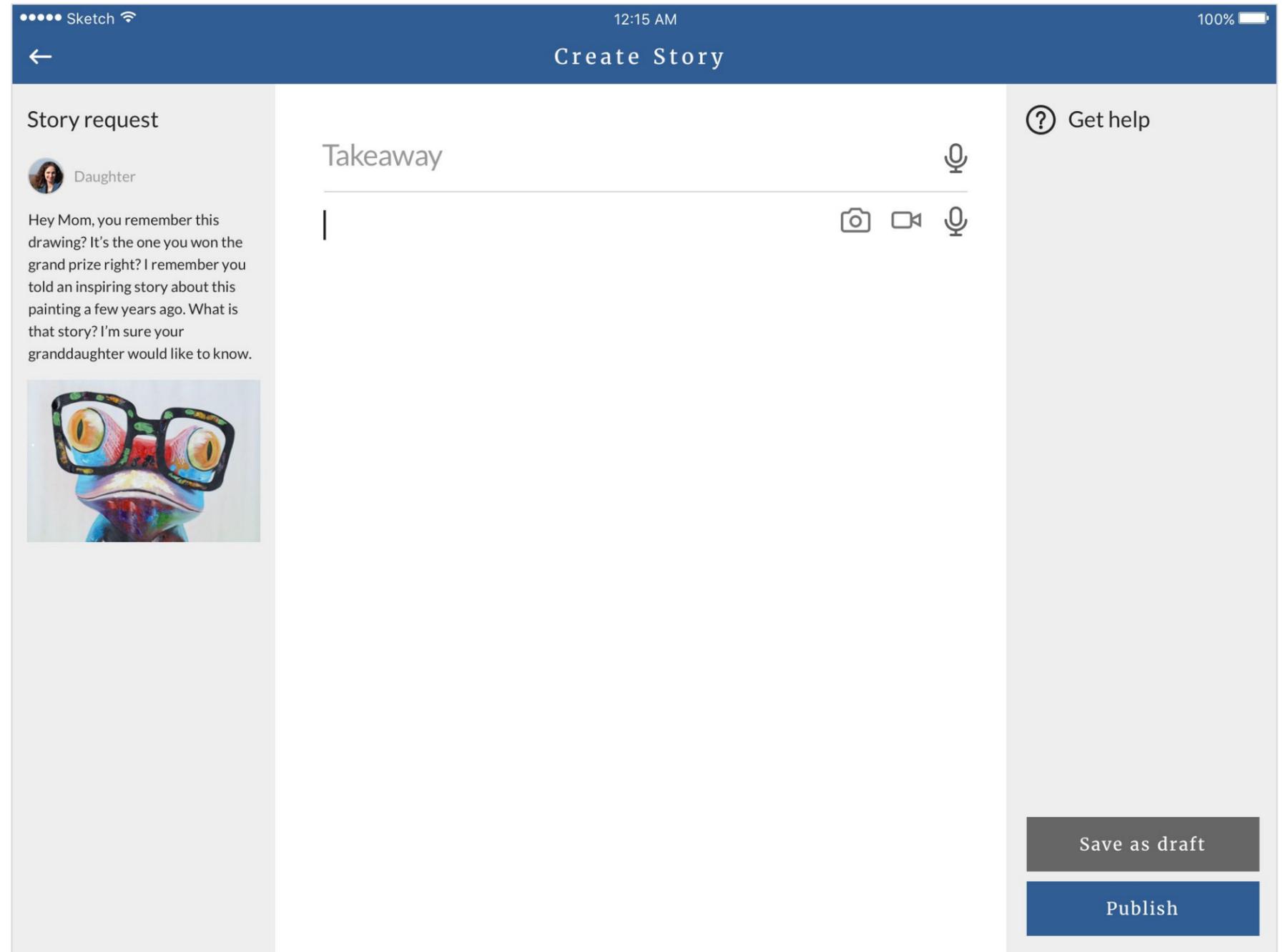
Composing - where a story starts

During the capture step, our platform allows users to write stories in multimedia formats, with an option to reach out to others for help.

If the story is started based on a prompt (questions, quotes or life events) or a request from the loved one, such information will be shown on the left side of the screen.

Each story shared on our platform is designed to include a key takeaway, which is audio-recorded by the storyteller. During our research, we found that voice is a medium that strongly evokes memory.

Unpublished stories are always auto-saved in the Draft box. A life story sometimes is triggered by a life experience; the idea can come and go in the next minute. Having a draft box allows users to capture the idea first and complete the story later.

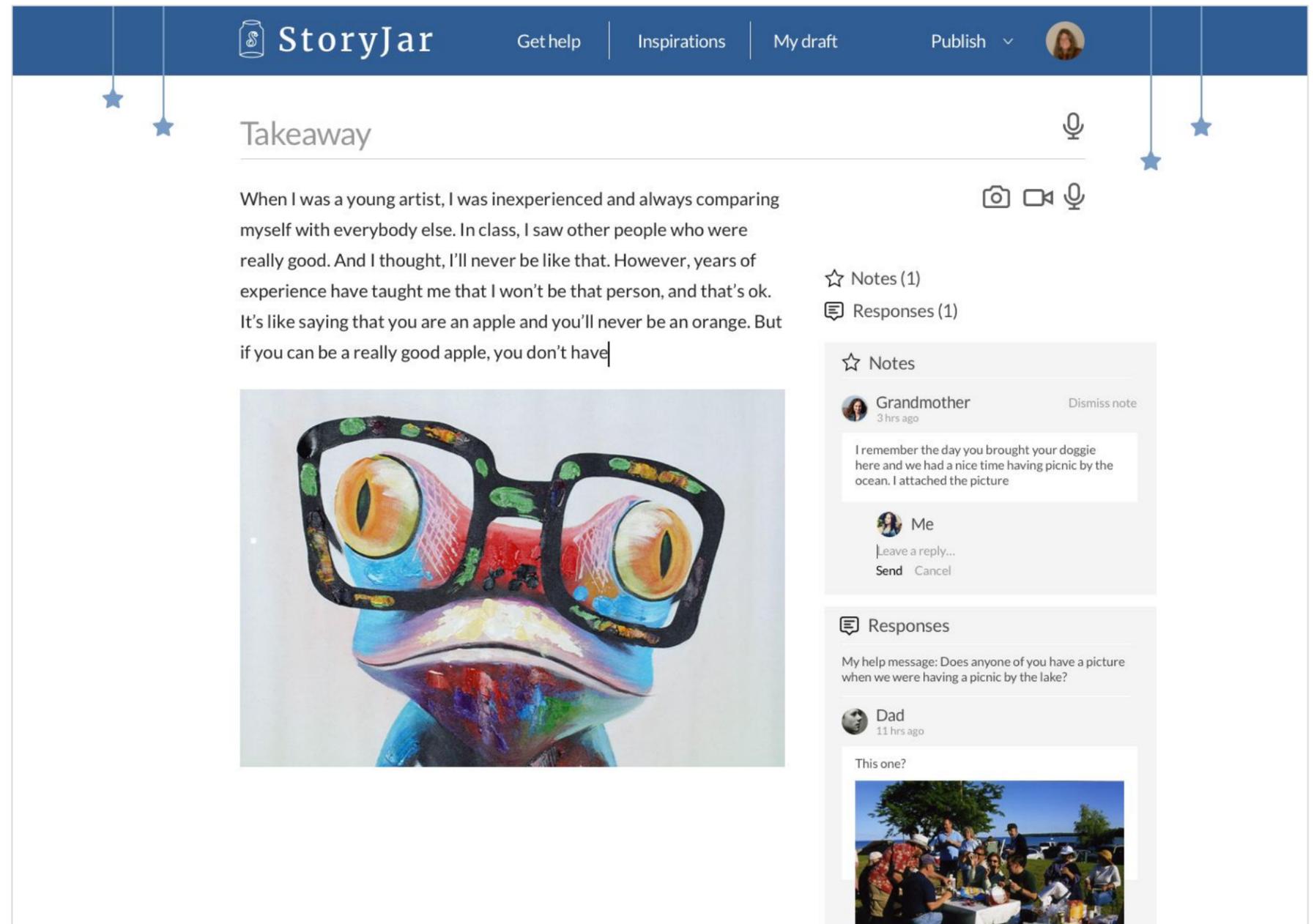


Get help - collaborative writing process

People naturally tell stories to each other in everyday conversations. Our system leverages this natural behavior and allows people to ask for help from their friends and family for inspiration and feedback during the writing process. This turns storytelling into a collaborative and fun activity.

The storywriter clicks 'Get Help' to choose the person who will receive the request for a comment or story materials. Only persons in the same story jar this story belongs to can help.

The feedback and comments are shown beside the story. In addition, the multimedia assets posted can be easily added to the story or simply stay on the sidebar as a source of inspiration.



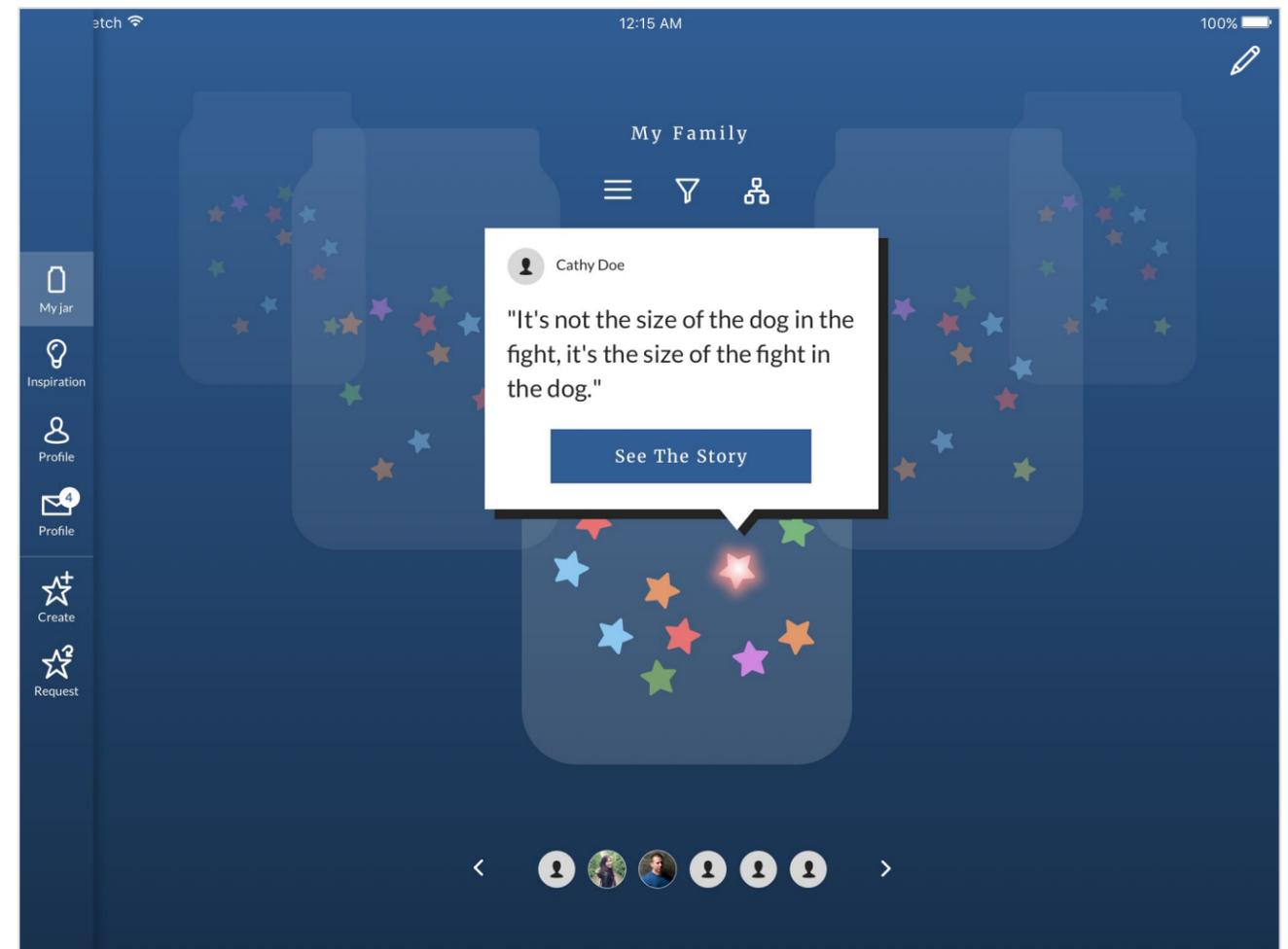
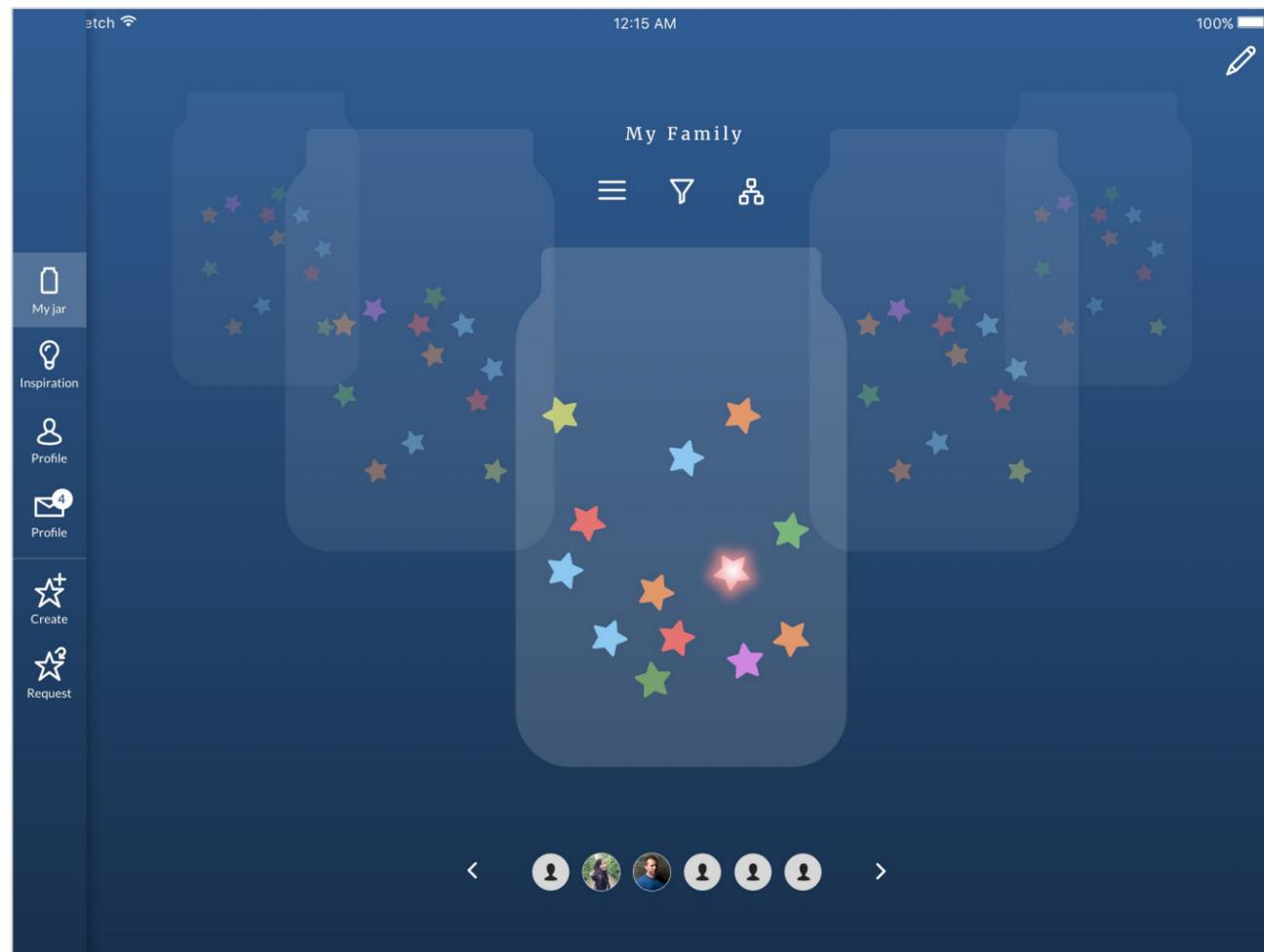
The screenshot shows the StoryJar web application interface. At the top is a dark blue navigation bar with the StoryJar logo, a 'Get help' button, and links for 'Inspirations' and 'My draft'. A 'Publish' dropdown menu and a user profile picture are also visible. The main content area features a story titled 'Takeaway' with the text: 'When I was a young artist, I was inexperienced and always comparing myself with everybody else. In class, I saw other people who were really good. And I thought, I'll never be like that. However, years of experience have taught me that I won't be that person, and that's ok. It's like saying that you are an apple and you'll never be an orange. But if you can be a really good apple, you don't have'. Below the text is a painting of a blue frog wearing large, colorful glasses. To the right of the story is a sidebar with a microphone icon, camera and video icons, and sections for 'Notes (1)' and 'Responses (1)'. The 'Notes' section shows a note from 'Grandmother' (3 hrs ago) with the text: 'I remember the day you brought your doggie here and we had a nice time having picnic by the ocean. I attached the picture'. Below this is a reply form for 'Me' with 'Send' and 'Cancel' buttons. The 'Responses' section shows a help message: 'My help message: Does anyone of you have a picture when we were having a picnic by the lake?'. Below this is a response from 'Dad' (11 hrs ago) with the text 'This one?' and a photograph of a group of people having a picnic by a lake.

Story jars - where stories are preserved

Each star in the jar represents a story. Glowing stars are unread stories. The thumbnail on the bottom shows the co-owners of the story jar. Tapping the thumbnail icon filters the stories by author.

The story takeaway is the first thing a reader sees after tapping on a star. Tapping outside the Takeaway box will dismiss the box.

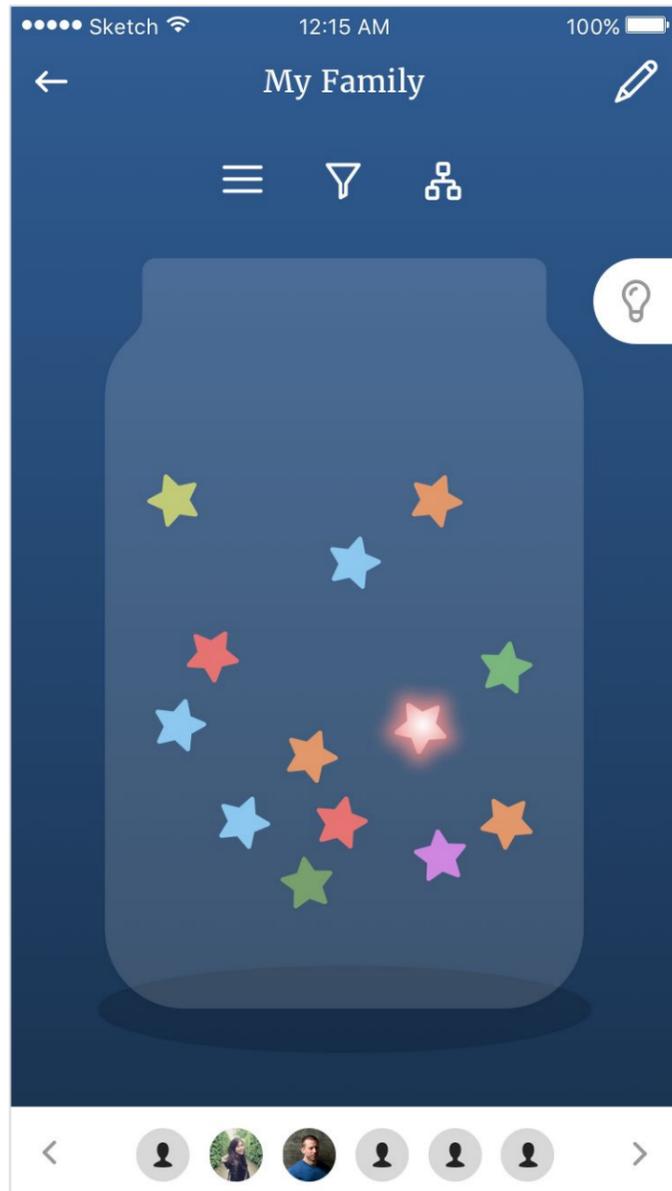
There is a List View that user can switch to. The user can also filter the story by keyword search in the Filter View.



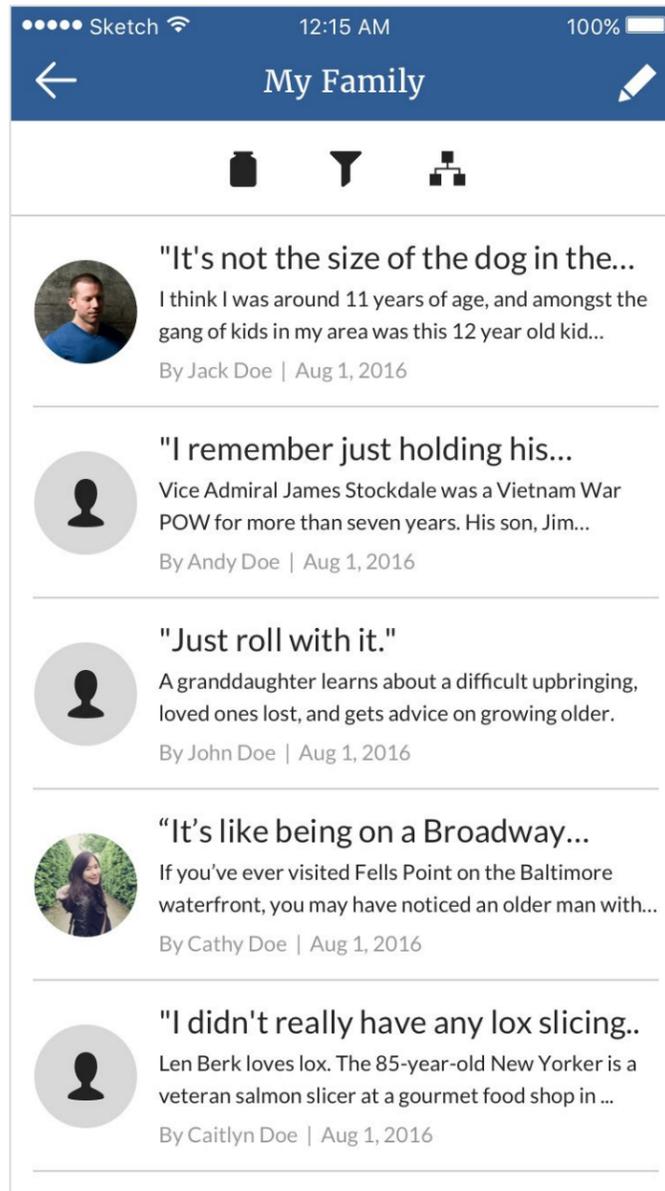
Reading - listen, read and comment

The story is presented with the highlighted takeaway and multimedia content. People are able to comment and respond to each other's stories, providing a way for them to reflect on meaningful life stories together with loved ones. The comments and responses themselves are part of the story and legacy that will be passed on.

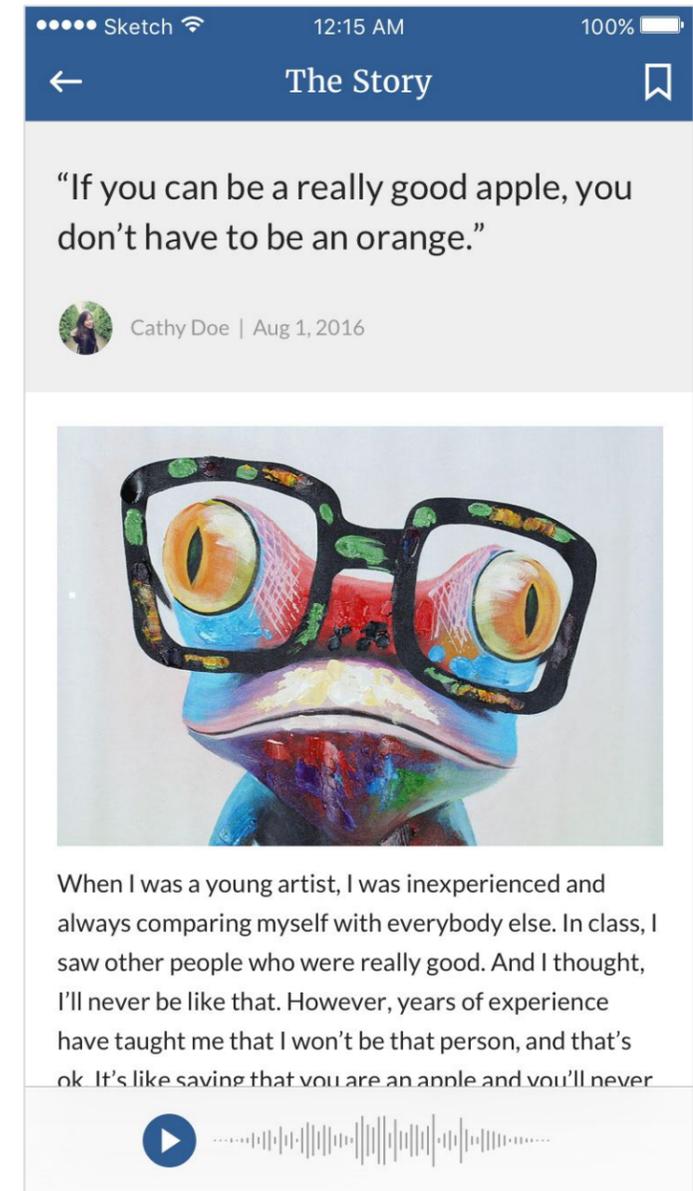
The screenshot shows a mobile application interface for a story titled "My Story". The top status bar indicates "Sketch" with signal strength, "12:15 AM", and "100%" battery. The app header is dark blue with a back arrow, the title "My Story", and a bookmark icon. The main content area is light gray and features a story by Cathy Doe, dated August 1, 2016. The story includes a quote: "If you can be a really good apple, you don't have to be an orange." Below the quote is a paragraph: "When I was a young artist, I was inexperienced and always comparing myself with everybody else. In class, I saw other people who were really good. And I thought, I'll never be like that. However, years of experience have taught me that I won't be that person, and that's ok. It's like saying that you are an apple and you'll never be an orange. But if you can be a really good apple, you don't have to be an orange." A painting of a colorful frog wearing large, black-rimmed glasses is displayed below the text. To the right of the story, there are sections for "Notes (1)" and "Responses (1)". The "Notes" section shows a comment from "Grandmother" (posted 3 hours ago) with the text: "I remember the day you brought your doggie here and we had a nice time having picnic by the ocean. I attached the picture". The "Responses" section shows a comment from "Father" (posted 3 hours ago) with the text: "My help message: Does anyone of you have a picture when we were having a picnic by the lake?". Below the father's comment is a small image of a group of people having a picnic by a lake.



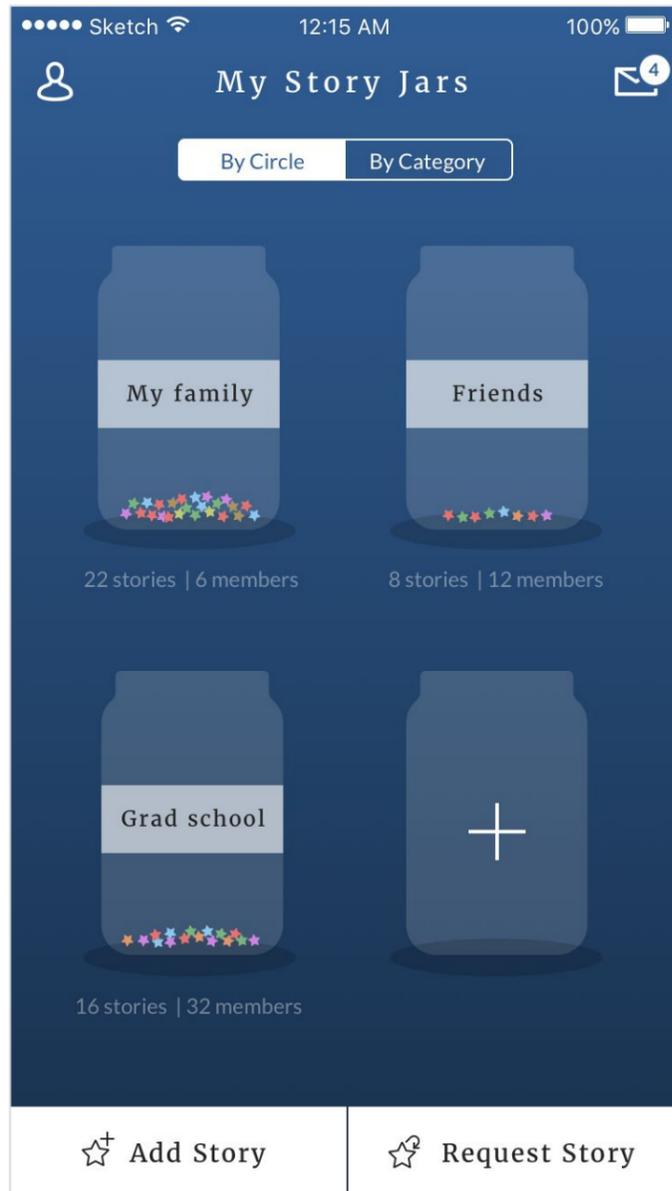
Story Jar in mobile app screen. The lightbolt is the Inspiration button.



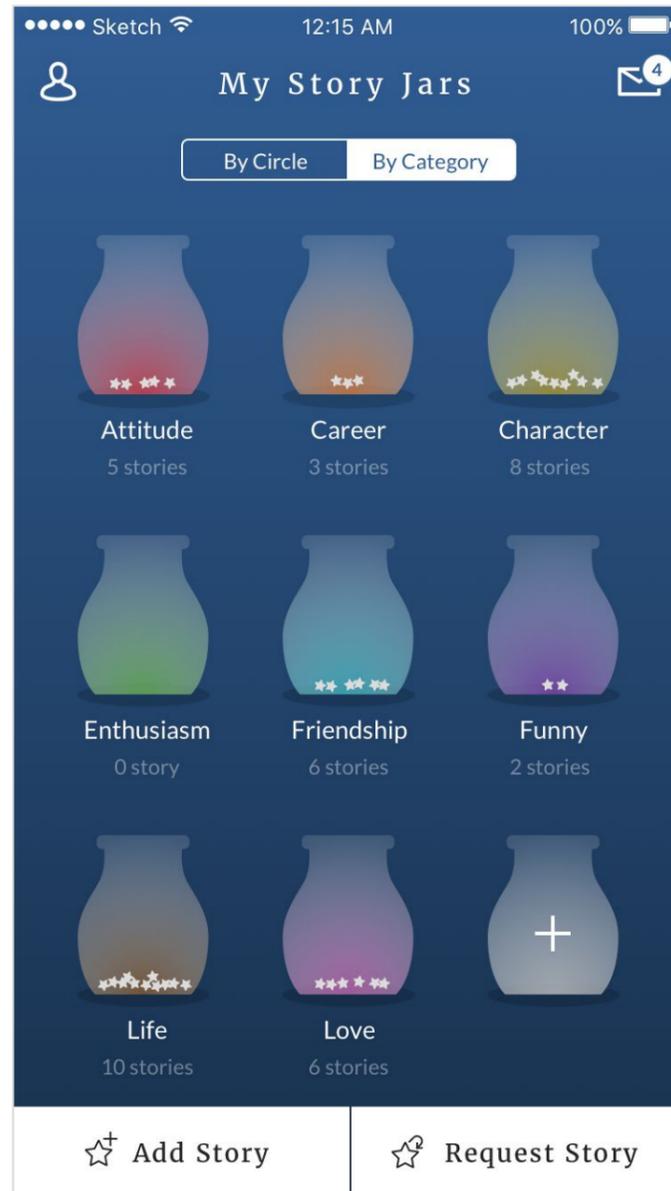
List View of the Story Jar, where people can see the author name, date, and the takeaway.



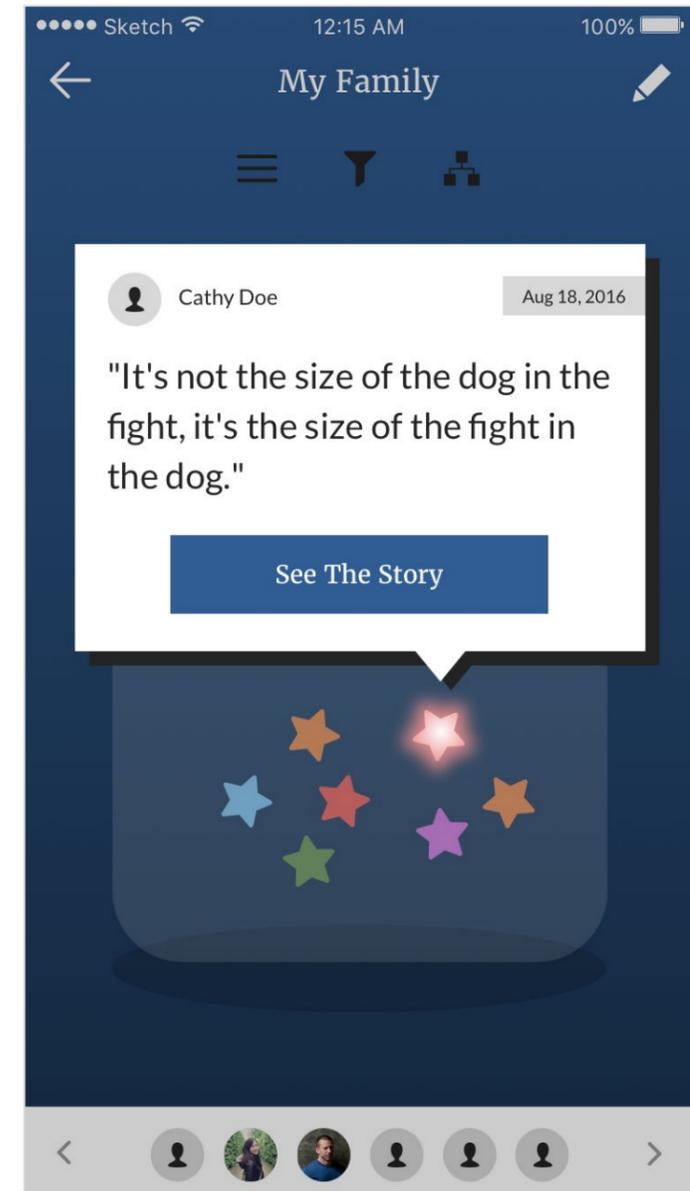
Inside each story, the takeaway is highlighted at the top. Reader can play the audio of the recording easily.



Mobile app view for Story Jar by Circle.



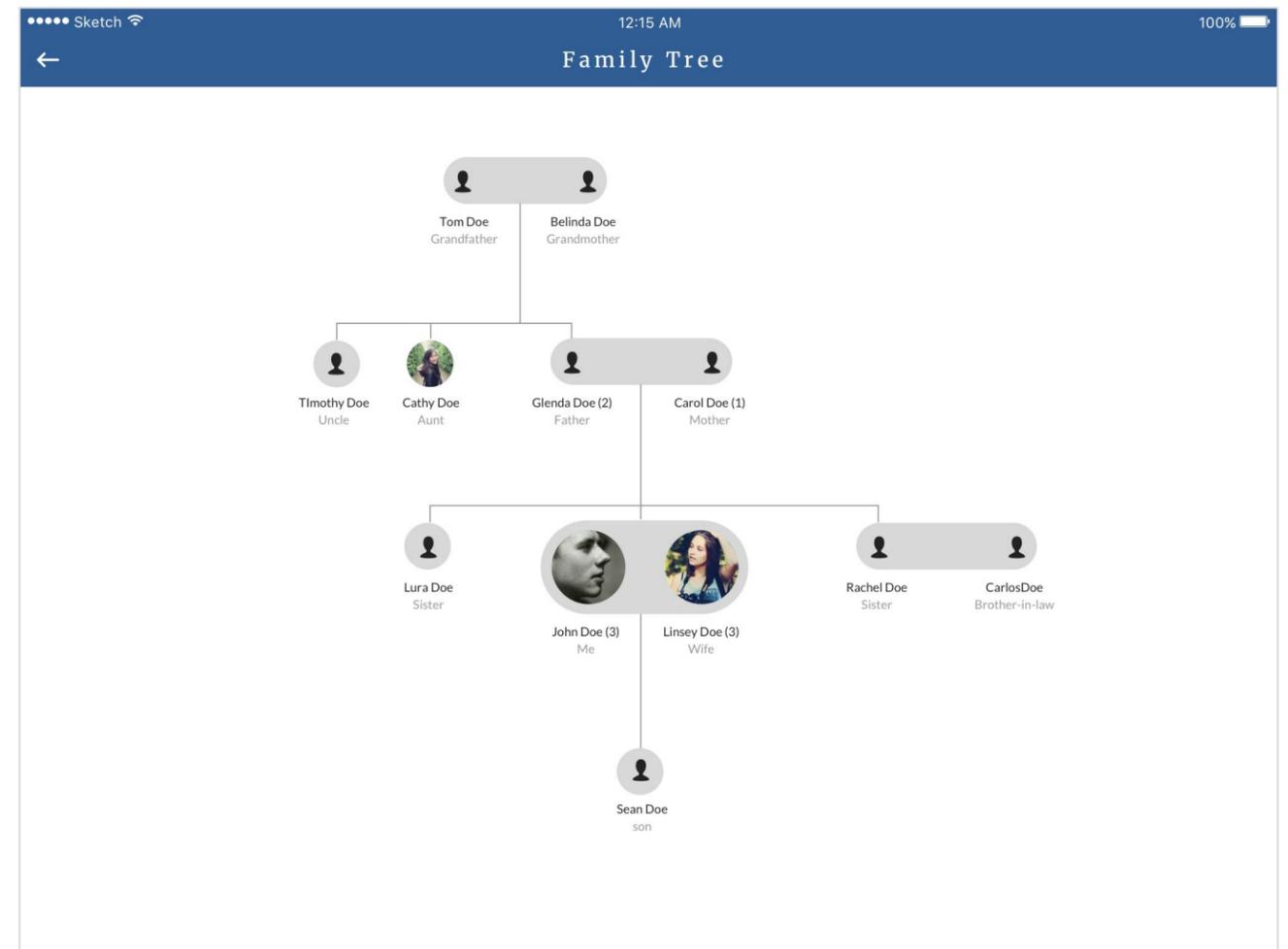
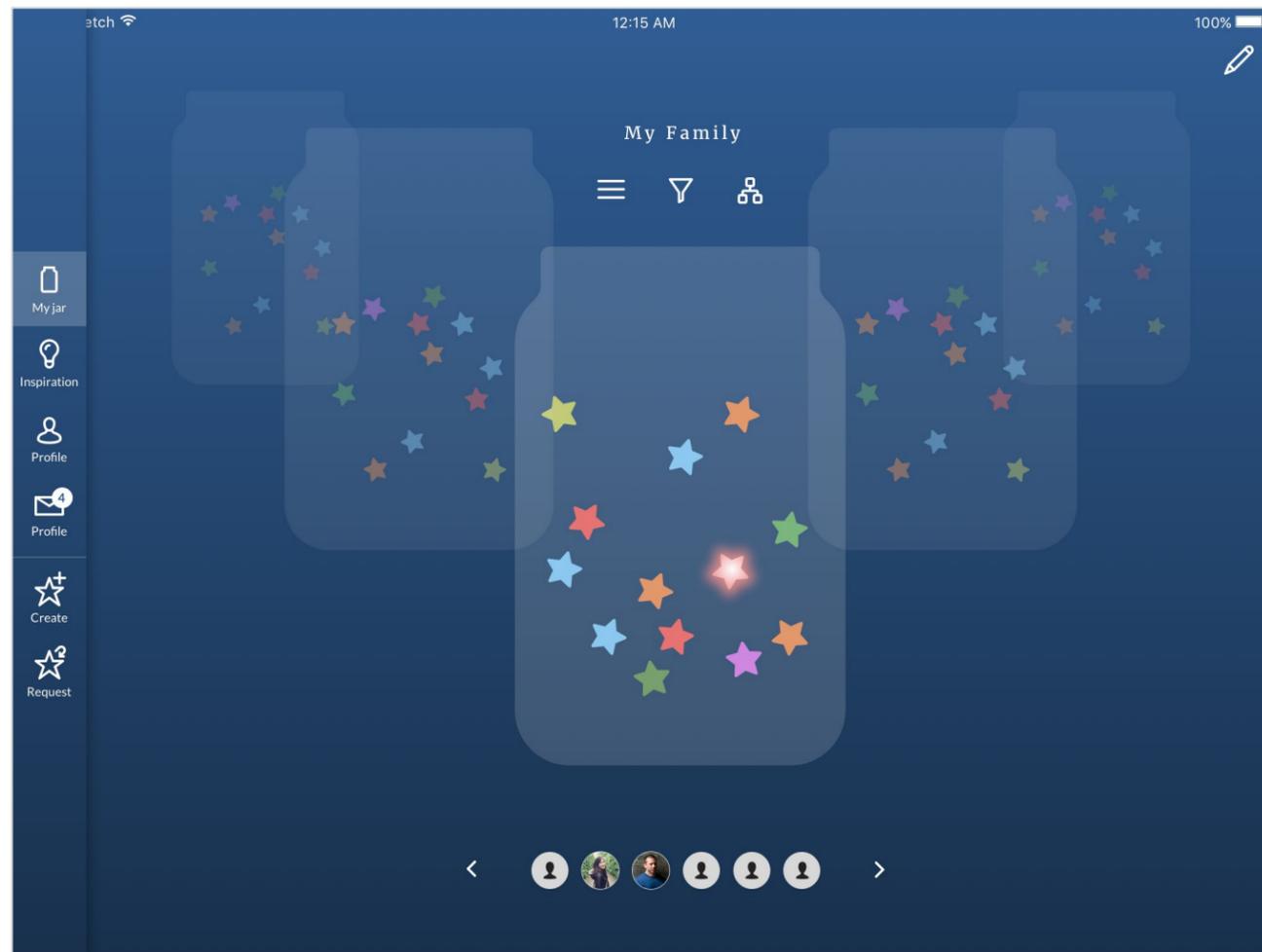
Switch between by Circle and by Category by tab.



Story takeaway in the mobile app view.

Family diagram

Our platform also tracks the relationship between you and others in your family. From the Family Jar view, users can find their family diagram. This family diagram helps people become more familiar with their extended family and discover their life stories in StoryJar.





6. Final Outcome

6. Final Outcome

6.1 Conclusion

Learning from your family narrative has been shown help younger generations to become more resilient. With StoryJar, we envision a future where people can digitally pass on their life values through storytelling.





6.2 Video Prototype

<https://vimeo.com/178134463>

The father in the video knows that the grandmother has life experiences that can be passed down, so he sends her a story request via our platform. The grandmother then composes her story and records the takeaway. Finally, the daughter reads the story from her grandmother and gets inspired by her life experience.

The story is designed to communicate how StoryJar is used by multi-generations, how a story request is inspired by a facebook life event, and how a story is requested, created and consumed. During the brainstorming, we considered non-linear narratives and telling several mini stories to incorporate more product features, but none of those methods could be easily presented.

We decided to keep the story simple and focus on the biggest product concept - passing on life values and legacy through a story.

6.3 Final Presentation

We presented the product, StoryJar, at MHCI+D Capstone Presentation on August 17th, 2016. The team was also invited to present to the Creative Studio team in HTC on the following day. Because our product targets a relatively broad audience, we decided to ask a couple rhetorical questions at the beginning of the presentation, to try to help audience see the need behind our design.

Overall, we received positive feedback. In the Q&A session, we had an in-depth discussion with the audience regarding how this platform can be used. Our answers clarified the product design and also addressed future possibilities for StoryJar.

The presentation slides are as follows:

- Slide 1:** StoryJar logo with tagline "Preserve your family legacy".
- Slide 2:** "How much do you know about your grandparents?" with a photo of a man and child walking.
- Slide 3:** "How do you know those stories?" with a sunset photo.
- Slide 4:** "How do you want to be remembered in 100 years?" with a starry night sky photo.
- Slide 5:** "What is your story?" with a photo of an open book and a lit candle.
- Slide 6:** Text box: "People's attitudes toward their own mortality? What they want to pass down? What kind of legacy is meaningful to them?"
- Slide 7:** "Life events are key triggers for legacy planning." with a quote: "My husband and I had our first will written 15 years ago after our two twin boys were born." - Participant 5, interview.
- Slide 8:** "Life values and guidance are meaningful types of legacy." with a quote: "Spiritual values are definitely more important than the physical things that I inherited. Things are just things, but you can't take them with you." - Participant 2, interview.
- Slide 9:** "People want to help the next generation to succeed." with a quote: "I want to make a video for grandchildren who won't see me, give them chance to know me, help them and tell them their potential." - Participant 5, interview.
- Slide 10:** "Remembering a deceased loved one's life values can help a person reflect on their own life." with a quote: "People should take some time to review those special days and rethink the impact on their life." - Participant K, Focus group.
- Slide 11:** "How do we help people pass on their life values to their loved ones?" with a photo of a hand holding a lit candle.
- Slide 12:** "Design Principles" with icons for: Life events as triggers, Life values, Cross-generational, and Easy consumption.
- Slide 13:** "Introducing Story Jar" with a blue background and faint icons.
- Slide 14:** "Key Actions" with a process flow: Prompt (question mark icon) - Capture (pencil icon) - Curate (phone icon) - Consume (tablet icon).
- Slide 15:** "System" diagram showing the flow from Prompt (Questions, Facebook life events) to Capture (Story request, User input) to Curate (Story Jar) to Consume (Read, Comment, Share) and back to Prompt via Story request.
- Slide 16:** "Landscape" diagram showing StoryJar's position relative to Family, Public, Medium, and Social media (Facebook, Twitter, YouTube) with "Thought leaders" at the bottom.
- Slide 17:** "Key Features" with a background of a notebook and pen.
- Slide 18:** "Personalized prompts help inspire stories." with the same Key Actions process flow.
- Slide 19:** Screenshot of the StoryJar interface showing "Questions" and "Life events" sections.
- Slide 20:** Screenshot of the StoryJar interface showing a story card with a colorful glasses illustration.
- Slide 21:** Screenshot of the StoryJar interface showing a collection of story cards.
- Slide 22:** Photo of a family (man, woman, two children) looking at a tablet together.
- Slide 23:** "Thank You" slide with StoryJar logo and partners: MINERVA and MHCI+D.

Summary of Q&A

1. **Question:** There are many people who are not close to their family. How do they use your product to learn life values?

Answer: 1) StoryJar targets family-oriented people.
2) User can create custom StoryJars to share the story with non-family members.

2. **Question:** How do you make sure users' stories are well and safely preserved?

Answer: We envision the user can backup the stories on Google Drive or in the local hard drive. Printing a hard copy of the family storybook for users can be a potential extended business model to further address the backup issue.



3. **Question: Life values don't necessarily come from the family. Did you consider providing the life lessons from the famous people or professional?**

Answer: Although our product focused more on passing on legacy within family, we do think the platform can potentially have a section where stories are shared publicly and anonymously. This can encourage more people come to read the story and use StoryJar regularly.

This audience member said he envisioned this platform can be a contextual CUI with AI, like Amazon Echo, which constantly prompts the user to tell a story by asking the right question.

4. **Question: How do you retain the user given there won't be too many family stories on the platform?**

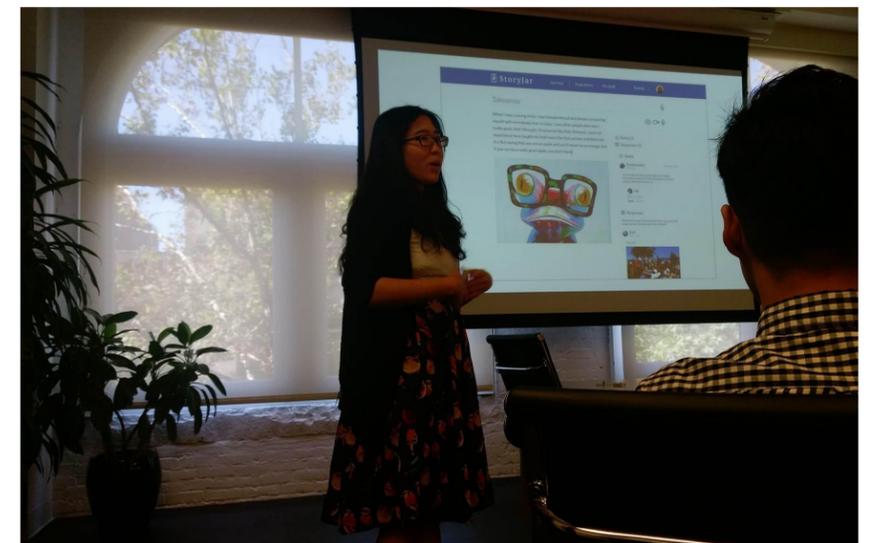
Answer: 1) StoryJar lets people stay connected with more family members than they can do now. The user then can read stories from more extended family members and interact with them on the platform. 2) We can consider offering public story jars where people can read important life lessons from outside of family.

5. **Question: Many life lessons and stories are triggered by the current life experience or from day-to-day conversations. Not really like "grandpa, can you tell me a story?" How does your system incorporate this fact?**

Answer: The Request a Story function provides the user the chance to start the conversation that can potentially trigger a new story. The collaborative composing model also allows the author to have more conversations during the writing process. Using Facebook historical posts and Life Events as prompts is another way to help people write down the story to pass on.

6. **Question: How do users define the story jar circle? People might want to share stories to different groups of people, and the group circle may change when new members join the family. How does your system fulfill such need?**

Answer: StoryJar gives user the freedom to create any size of circle. It is like the Messenger or Slack model where every user knows they belong to the same story jar in order to create the sense of collection and legacy. We expect people are likely to share stories with core family or extended family. A new member can either be added to the existing circle or to a new circle.



7. **Feedback:**

the platform you designed can be repackaged and used for corporate leadership training. The executive of every company wants their management and employees to understand and follow the core value and company culture. If you can fine tune the design and pitch to the corporate consulting firm, there might be higher business value for your product.



6.4 Reflection

1. **Having a good team dynamic helped us overcome many difficulties in this project.** Back in the beginning of the project, only two members had worked in the same team previously. We were relatively unfamiliar with each other's personality and work style. However, the tight project schedule didn't give us too much time to warm up. We had to work closely in the research planning and execution right after the team was formed. Knowing the team dynamic was an important factor to make us work more effectively, we spent at least every Friday lunch together. At least in the first couple lunches, we asked each other some critical questions, such as 'how do you usually piss off others', and 'what do you expect to get out of from this project', in order to know our teammates more. Those non-work times were worthwhile. Although we did encounter critical moments of tension in the later time frame because we had different opinions toward the project direction or because we all had ups and downs in the project, we were able to move on and eventually came to the point which everyone was willing to contribute their own part. We also learned a lot from the peer evaluation feedback. It is the close bonds that we already created that made it possible to talk about the pros and cons of each person face-to-face in the same meeting room. We were truly proud of our team dynamic.



2. **Could we have spent less time arriving at the final project direction?** At the beginning of the project, we started with asking broader questions in the user research. Our findings led us to at least three project directions: 1) help people be more aware of preparing for their own death, 2) help people have better end-of-life experience and 3) help people be remembered in a meaningful way. During our ideation, we ideated on all these three areas. We were not able to focus on one direction partly because we didn't have strong consensus on which direction to go, and partly because we evaluated our top concepts mainly by our own design preferences. As designers, we naturally want to design something that makes sense to us. However, everyone's preference and sense of design highly depends on our life experiences and our own view toward the world. Looking back, perhaps if we could be more aware of our own bias, and use more of the user's perspective as the foundation of discussions, we might have been able to avoid having as many back and forth debates on what is a "better" design. Since this project touched upon an area that was not that familiar to any of us, we think it's not easy to say we could have come to the end without the initial broad research. We believe, however, after doing this project, that we are more sensitive to the impact of not having a focused problem space during the ideation stage. Our experience will help us to have a better decision making process in the future..



References



References

1. Brubaker, J. R., & Callison-Burch, V. (2016). Legacy Contact. Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16. doi:10.1145/2858036.2858254
2. [Unpublished paper] Gulotta, R., Gerritsen, D., Kelliher, A., Forlizzi, J. (2016) Engaging with death online: an analysis of systems that support legacy-making, bereavement, and remembrance.
3. Gulotta, R., Odom, W., Faste, H., & Forlizzi, J. (2014). Legacy in the age of the internet. Proceedings of the 2014 Conference on Designing Interactive Systems - DIS '14. doi:10.1145/2598510.2598579
4. Gulotta, R., Odom, W., Forlizzi, J., & Faste, H. (2013). Digital artifacts as legacy. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems - CHI '13. doi:10.1145/2470654.2466240
5. Hunter, E. G., & Rowles, G. D. (2005). Leaving a legacy: Toward a typology. *Journal of Aging Studies*, 19(3), 327-347. doi:10.1016/j.jaging.2004.08.002
6. Kübler-Ross, E., & Kessler, D. (2005). *On grief and grieving: Finding the meaning of grief through the five stages of loss*. New York: Scribner.
7. National Hospice and Palliative Care Organization. (n.d.). Preamble and Philosophy. Retrieved June 03, 2016, from <http://www.nhpco.org/ethical-and-position-statements/preamble-and-philosophy>
8. The Digital Beyond. (n.d.). Digital Death and Afterlife Online Services List. Retrieved June 03, 2016, from <http://www.thedigitalbeyond.com/online-services-list/>



StoryJar

Preserve your family legacy