INFO 5440 App Design & Prototyping

Project Milestone 3

Team Hot Pot (H.P.)

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Revisions

Based on the client's feedback from the Planning Phase, we made the following adjustments: (1) we refined our value proposition to match our **Most Viable Product** (MVP) features, (2) we rewrote **user scenarios** to make them **more task-based**, and (2) we revised the **list of features** implemented in the design to make sure that we can deliver the MVP to meet target users' goals. You can find our Planning Phase Report by clicking here.

Revised Value Propositions

Product Concept: Our team attempts to create a **gardening journal** for families with children who have a garden at home with basic gardening knowledge to create interactive family learning experiences that support nature engagement for every family member.

Compared to the existing solutions, our product provides:

1. Free access to the basic information and gardening instructions of various playful plants
2. An online journal to keep track of the family's gardening progress and the growth of plants
3. Interactive family journaling platform to promote parent-child relationship
4. Easy and approachable operations that allow a more organized and streamlined gardening process

Revised Scenarios

Emma is a 38-year-old college professor. Her husband, Richard, is a 40-year-old manager at a large finance company, who is often really busy and usually comes home at 8 pm. They have a 9-year-old son, Lucas, and live in a house with an outdoor garden. When they moved into the house two years ago, Emma started gardening to let his son play in the field and have fresh vegetables. The garden is now filled with tomatoes, green onions, cucumbers, spinach, and cabbages. Since Emma loves flowers, she recently planted some lilies. While taking care of those plants, Emma usually asks Lucas to help by teaching him some basic skills, such as watering, digging, etc.

Scenario 1: Browse and Learn about Plants

Value proposition: Free access to the basic information about various playful plants

During the weekends, Emma wants to relax and have quality family time with Lucas by starting to plan for their garden in early March. Emma asks Lucas to browse information about different potential plants they can have in their garden. Inside the app, there is a Plant page specifically about learning and education regarding plants. It includes a list of playful plants for a wide variety of use, such as plants that are edible, visually appealing, nature attracting, colorful, etc. Emma can quickly scroll through the list and see all the plants with images, plant names, and tags of main characteristics.

Emma wants to plant something easier to grow and survive in her backyard garden. She also hopes the plants can be edible for the family because that would benefit everyone's health to eat more greens. To encourage Lucas to participate more actively in the planning and gardening process, Emma asks Lucas to find a plant that is suitable for the family to plant and is edible at the same time.

Lucas uses the filter function and chooses the tag of "edible." After applying the filter, the page automatically refreshes and shows several plants with the tag of "edible." Lucas clicks on the first one that shows up, which is the "autumn brilliance serviceberry," because he thinks the picture of the plant is very appealing. After clicking on the plant's card, it leads to the plant detail page with more information. He learns that autumn brilliance serviceberry is not only edible but also colorful, nature-attracting, and medicinal. The page includes a brief description of the plant and the gardening instructions. While reading, Lucas shares the knowledge with Emma and moves on to exploring more plants. The free access to numerous plants allows Emma's family to engage in learning about the natural world and better prepare them for the upcoming gardening season.

Scenario 2: View Previous Journals

Value proposition: An online journal to keep track of the family's gardening progress and the growth of plants

To monitor the plant's growth, Emma's family has a habit: they record the planting process every day. Emma would take pictures of the garden and Lucas doing gardening work and upload them on the app. And Lucas would take photos of the plants and enter some texts to describe his observations in the journal. Sometimes Emma and Lucas would also read over their past journal entries to see their progress throughout the journey. This journal is a shared journal that everyone in the family can write and read, and it helps the family share their learnings and experiences during the planting process.

Today, Lucas is bored and wonders how much he has grown in the past year. Thus he wants to check what he wrote last year. He opens the Journal page and scrolls through many journal entries. Then, he uses the date pickers on the top of the page to choose the range of time. Because he wants to reminisce about what happened last March and April, he selects the start date as "March 1st, 2021" and the end date as "April 30th, 2021." After applying the time range, two journals show up. Lucas clicks on the first one, "Ready for the Garden Project," which redirects him to the Journal detail page. He reads through the journal and feels very accomplished by what his family has done throughout the year, and he also realizes how much he has grown from last year.

The journal serves as an excellent tool for the family to document their gardening experience, learning, and growth of plants over time. And it is always really satisfying to reminisce about the past and see how much they have learned along the way.

Scenario 3: Create a New Journal of Kid's Gardening Experience

Value proposition: Interactive family journaling platform to promote parent-child relationship

To keep track of Lucas's growth and progress in gardening experience and preserve precious memories, Emma uses the gardening app to keep a journal. After completing daily tasks, Emma walks to the outdoor garden and finds her son watering the flowers and vegetables. Although

Lucas is slightly clumsy, he works hard. Emma wants to record the moment she can share with Lucas when he grows up.

She starts a new journal on the app. She writes the journal-title to be "Lucas waters flowers and vegetables today" and selects the creator's name to be herself, Emma. This way, all family members can distinguish the creators of each journal easier. Then, she writes down several sentences of feelings about her son's progress and achievements. Last but not least, Emma wants to capture Lucas by opening the camera and taking a picture of Lucas working in the garden. After Emma completes all the required information for this journal entry, she saves the journal, uploads it to the server, and joins Lucas to have fun in the garden. This journaling activity really makes it an interactive gardening experience for the entire family.

Also, Emma sometimes browses previous journals and recalls those experiences. What significant progress her son made! Emma feels so proud of Lucas. Emma can quickly delete incomplete journal entries by using the trash feature when encountering incomplete journal entries.

Scenario 4: Create a Gardening To-Do List for Kids

Value proposition: Easy and approachable operations that allow a more organized and streamlined gardening process.

At 5:00 pm on Monday, Emma just picked up Lucas from school. She has a hectic schedule tonight since her students requested a last-minute online meeting with her at 6:00 pm. After the meeting, she needs to start cooking to make sure that they can have dinner at 8:00 pm. Suddenly, she realizes that she didn't water the garden this morning. It will rain tomorrow, so she needs to cover the plants with plastic wrap. Moreover, she needs to grab some tomatoes and spinach from the garden for dinner. However, she won't have time to take care of the garden tonight. She really hopes for someone to help.

When Emma and Lucas arrive home at 5:45 pm, Emma suddenly recalls that there may be a to-do list feature on the Playful Plants gardening app. She thinks it is good to ask Lucas to help

with gardening since he has finished his schoolwork today. Emma opens the gardening app on her phone, taps the "Journal" button on the bottom navigation bar, and starts a new journal entry. Then, she sees a "to-do list" icon. Emma clicks the icon and finds an empty to-do list appearing on the screen. She quickly enters the tasks of watering the garden, picking tomatoes and spinach, and covering plants with plastic wrap. After saving and posting the journal, she calls on Lucas to check the journal and finish the to-do list.

Lucas opens the app on his phone, finds today's journal posted by Emma, and reads the to-do list. Then, he goes to the garden and starts working. At 6:30 pm, Emma finishes her meeting. She rushes to the garden, sees tomatoes and spinach are on the table, and watches her son trying to cover the plants with plastic wrap. She feels so proud of her son and comes close to helping Lucas finish the last task. After Lucas finishes the task, he reopens the journal and checks all the boxes for the accomplished to-dos, which marks the end of gardening for the day!

Revised Features

Remove My Garden Feature

We previously set the My Garden feature allowing users to add plants to their garden plant list from the Plant Catalog, so they could be able to check what they have planted in their gardens even when they are away from home. The feature aimed to help users keep track of their plants' growth. However, we found that the Journal feature can well fulfill the plant tracking need, and the My Garden feature could gradually become **pointless** because it cannot present the growing process of the plants. Therefore, we believe the idea is unnecessary to deliver our MVP. Moreover, we estimated that there might be some **technically feasible difficulties** related to databases we could encounter. Therefore, we decided to eliminate it from our design.

Integrate To-Do List Feature into Journal

The To-Do List feature was previously designed for parents to assign tasks for children daily so that it could become more convenient for them to teach children gardening skills step by step. It was aimed to provide operations that allow an organized and streamlined gardening process. Nevertheless, we also found that it could be well integrated with the Journal feature by enabling parents to write down the to-do list in their daily journal with checkboxes that children can check later. Also, considering the **user-friendly level for children**, we were concerned about setting the to-do list and the journal in two different places, which might confuse the children and thus make it difficult for them to use the app efficiently. Therefore, we decided to integrate the To-Do List feature into the Journal feature, which could simplify the app structure and be more intuitive to the users.

Brainstorming

Before our team started designing our product, we held a brainstorming session to explore potential solutions and ideas on ***how to enhance the interactive family learning experience via a gardening journal app***. The brainstorming session was divided into 2 phases: the Individual Brainstorming Phase and Group Discussion Phase.

Phase 1: Individual Brainstorming

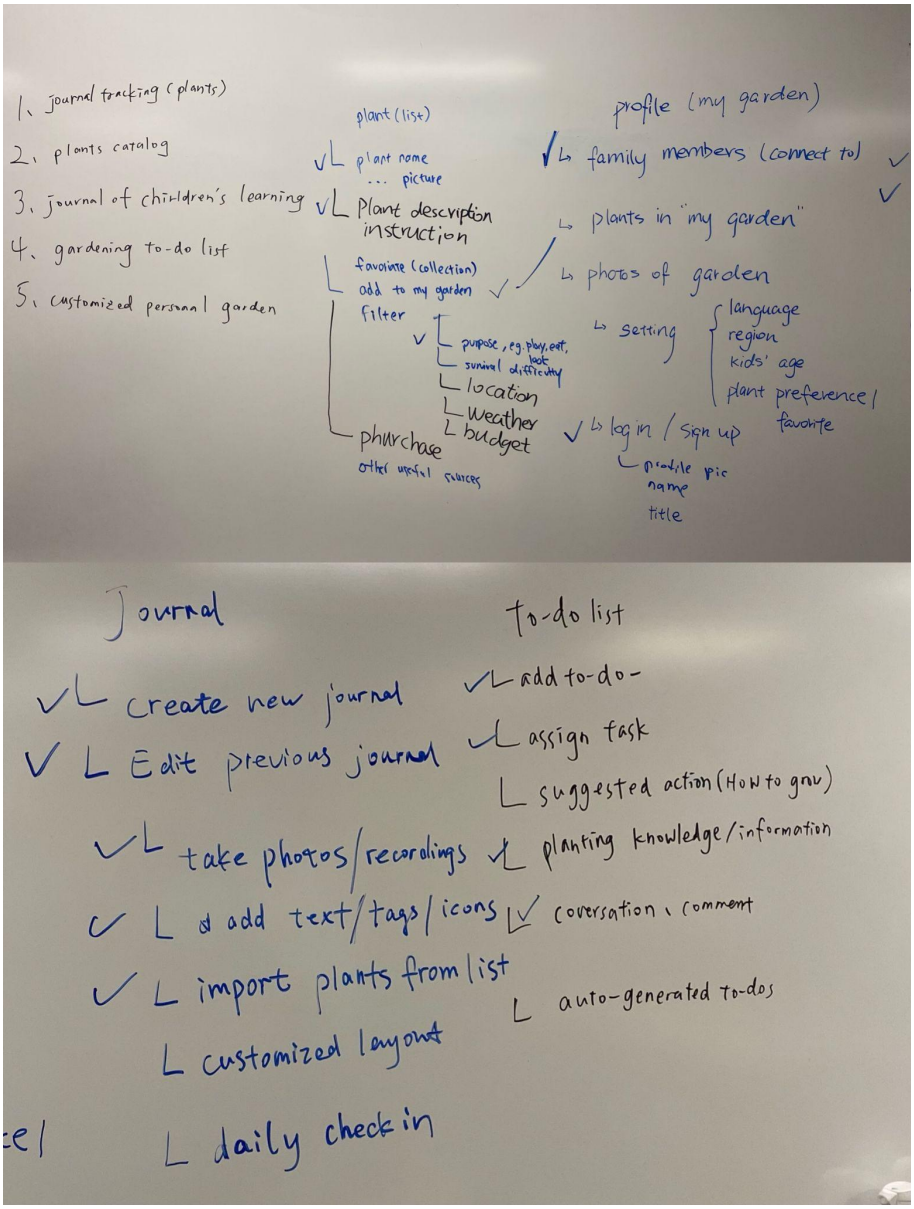


Image 1: *Whiteboard Brainstorming*

We started by generating a list of **5 potential features** implemented in our design based on **user scenarios** that we created in the planning phase. Then, we moved to the ideation process. Everyone picked a marker and wrote as many ideas on the whiteboard as possible in 15 minutes. Throughout the process, we followed the "**No-Negative**" principle that no one should judge or criticize any idea, ensuring a thorough exploration of the solution space. We quickly gained a long list of ideas, as shown in *Image 1*.

Phase 2: Group Discussion

When the individual brainstorming session ended, we gathered to discuss and evaluate each idea on the whiteboard. The following questions guided our evaluation:

- ➔ Which user goal(s) does the idea fulfill?
- ➔ Is the user goal primary or minor?
- ➔ Does the idea fall within the scope of any project themes?
- ➔ Is the idea necessary for delivering the MVP?
- ➔ Is the idea feasible to be implemented based on available resources, which include time availability, our technical ability, and etc.?

While reviewing each idea, we put a **checkmark** (as shown in Image 1) besides feasible and necessary ideas that would fulfill primary user goals, fall within the scope of our project themes, and help us create an MVP.

We **iterated** the above review and evaluation process twice to **prevent intuitive decisions** and finally came up with our final design idealist:

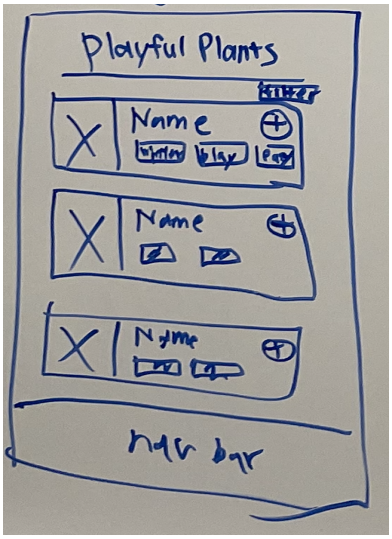
- ➢ **Plant Catalog:**
  - Photo Grid
    - Plant Name
    - Tag
  - Plant Detail Page
    - Plant Description
    - Gardening Instruction
  - Filter
    - Purpose

- **Journal:**
  - Create New Journal
    - Take photos / recordings
    - Text entry
    - Create to-do list
    - Customize layout
    - Import plants from plant catalog
  - Edit Previous Journal
  - Sort by Date
- **Profile:**
  - Family Photo Grid
  - Family Member
    - Name
    - Relationship
    - Photo
  - Family Location
  - Login / Signup

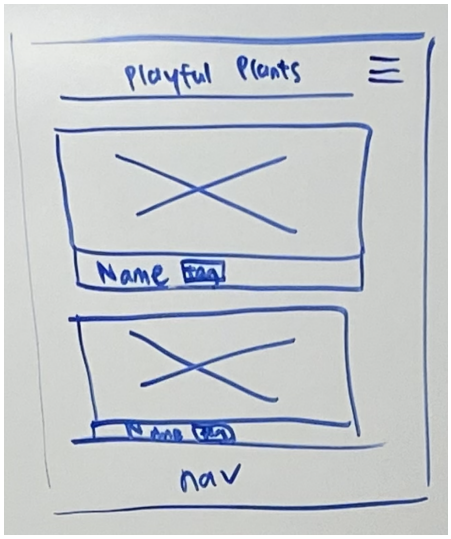
Sketches

Based on the design idealist from the brainstorming session, we started sketching out user interfaces for our app in both mobile and desktop frames on the whiteboard. We iterated the sketching process at least three times for each interface to generate more ideas.

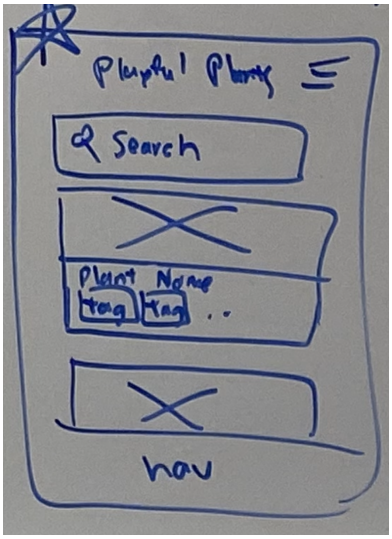
Plant Catalog Page



Mobile Frame: Iteration 1



Mobile Frame: Iteration 2



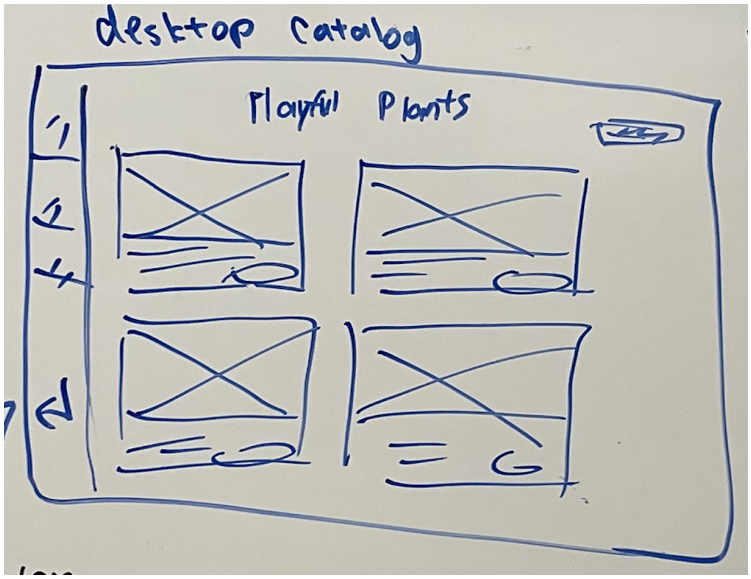
Mobile Frame: Iteration 3

- ***Iteration #1*** - In the first iteration, we provide the basic functionality of the *Plant Catalog Page*, which we discussed in milestone 2. It includes a list of plant entries containing the plant name, plant pictures, plant tags, and an "add" button. Also, there is a filter to screen the plants by tags.

- ***Iteration #2*** - In the second iteration, we consider placing the plant picture in the middle of the page. Thus, pictures occupy the vast majority of each entry, making it more attractive for the users, especially children. The plant name and tags are placed at the bottom of each entry, which is helpful for the recognition of plants.

- ***Iteration #3*** - In the third iteration, we decided to add the search bar at the top of the page. Since there are too many plants to display, it is time-consuming for users to scroll through the

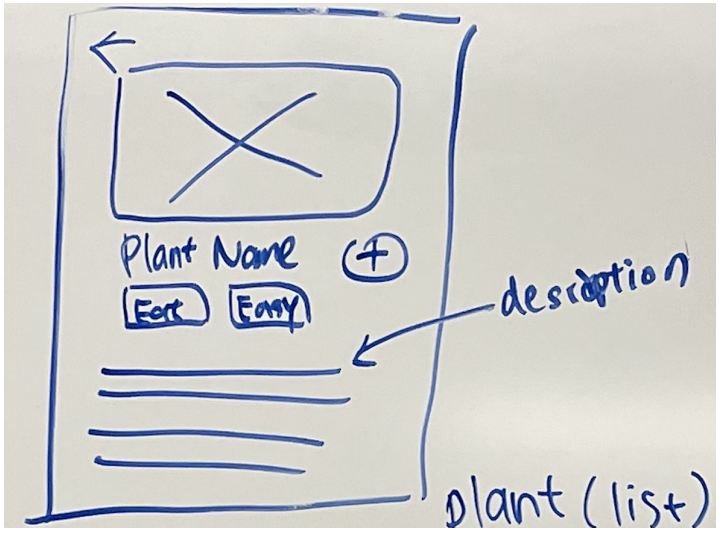
whole catalog to find a specific plant. Adding a search bar and improving the filter function simplify the searching process.



Desktop Frame

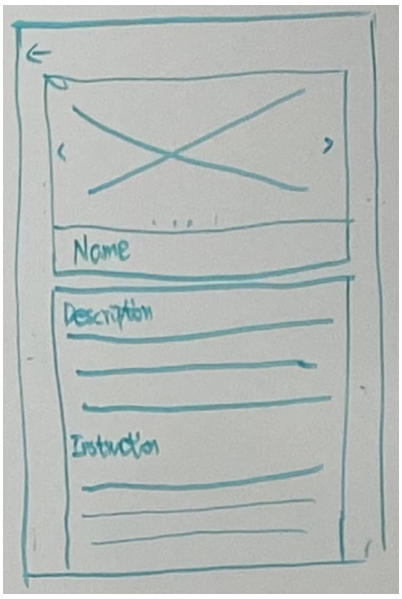
- ***Deaktop frame*** - As for the desktop version, the page direction is shifted from vertical to horizontal. We move the navigation bar to the left of the page and make a two to three-column layout to accommodate the page's width.

Plant Detail Page

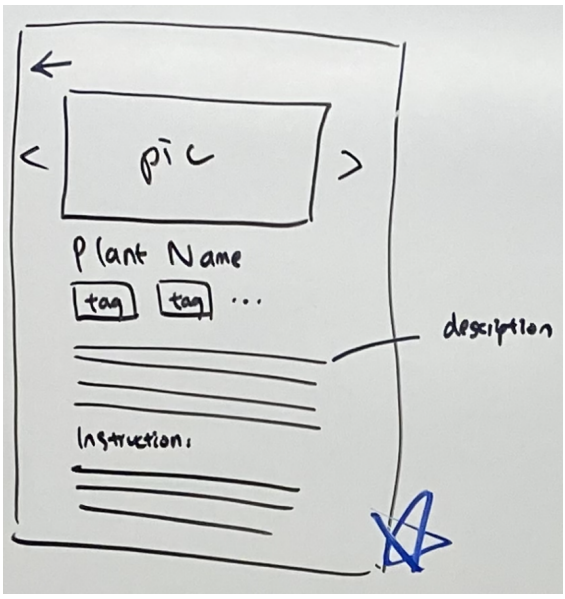


Mobile Frame: Iteration 1

- ***Iteration #1*** - In the first iteration, we just pile up all the information we want to display, including one plant picture at the top of the page, the plant name as large font, the plant tag, and the plant description as a multi-line text control.



Mobile Frame: Iteration 2

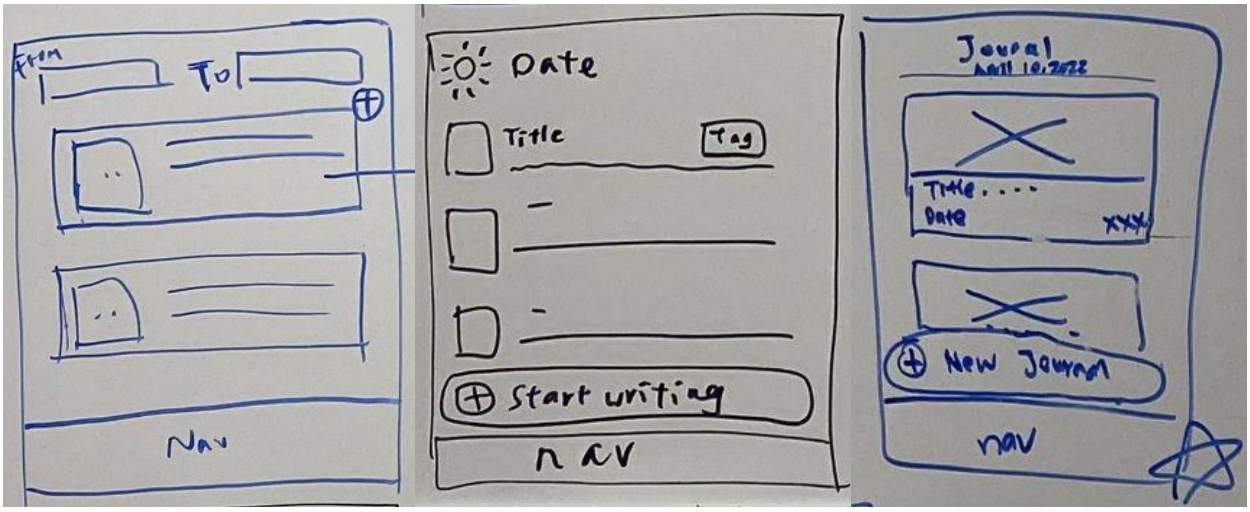


Mobile Frame: Iteration 3

- ***Iteration #2*** - In the second iteration, we put all the elements in rectangle frames, which we think would make the page clear and formatted. Also, we added left and right page-turning buttons for the pictures. Thus there are more than one picture can be placed. We divide the description section into description and instruction sections, which are more specific for users with different purposes.

- ***Iteration #3*** - In the third iteration, we remove the page frame lines to unify the whole style. We shrink the picture section and add tags of plants again because it is clear for the users to see at first sight. Then follows the description section and the instruction section.

Main Journal Page



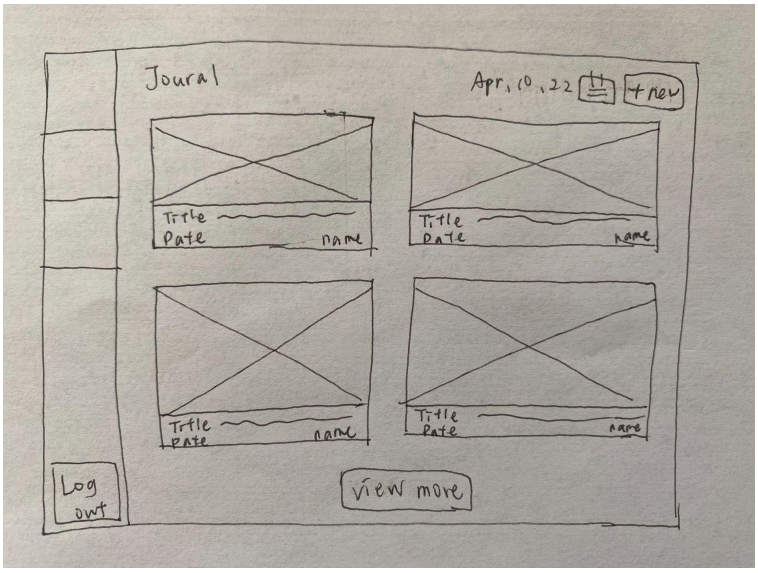
Mobile Frame: Iteration 1 *Mobile Frame: Iteration 2* *Mobile Frame: Iteration 3*

- ***Iteration #1*** - In the first iteration, we explored the key features of the journal, including a list of every day's journal entries, an time frame to select the start date and end date of the journal view, and a button to add a new journal entry.

- ***Iteration #2*** - In the second iteration, we try to explore a more modern design with no border for each journal and a fixed new journal entry area on the bottom. We want to change the interface design of "add new journal" because we were considering the feasibility of a floating add button, which was a suggestion we received from professor Kyle.

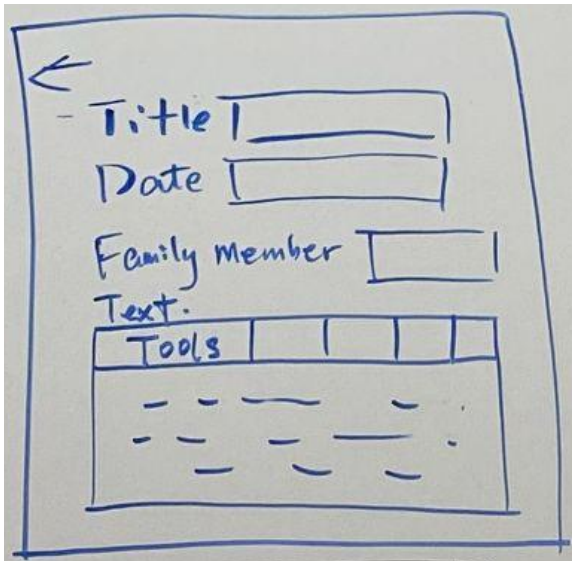
- ***Iteration #3*** - In the third iteration, we consider how to make the idea of journaling more intriguing for the children. We assume that children might be more attracted to pictures than texts. And as the plants grow, users can visually see their growth by scrolling through the journal, making it a satisfying experience for the children.

- ***Desktop frame*** **-** The desktop version of the page is derived from the app version. We try to make the two versions as similar as possible but at the same time take care of the larger-screen design best practices.

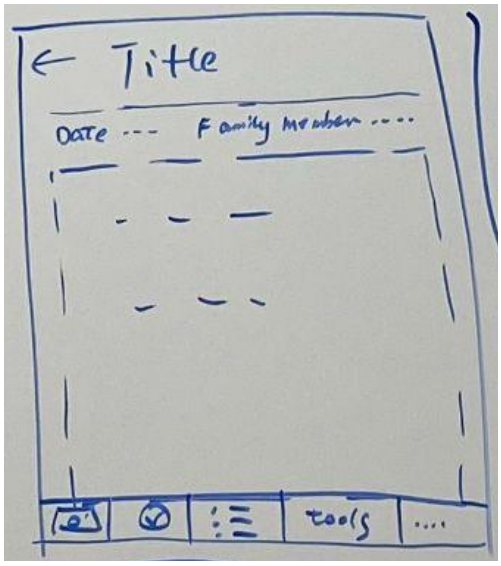


Desktop Frame

New Journal Page



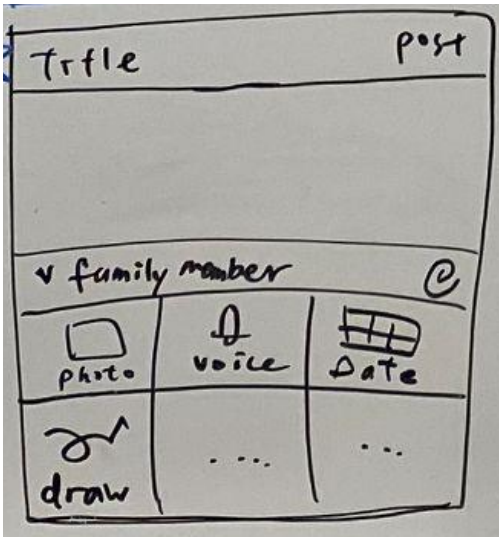
Mobile Frame: Iteration 1



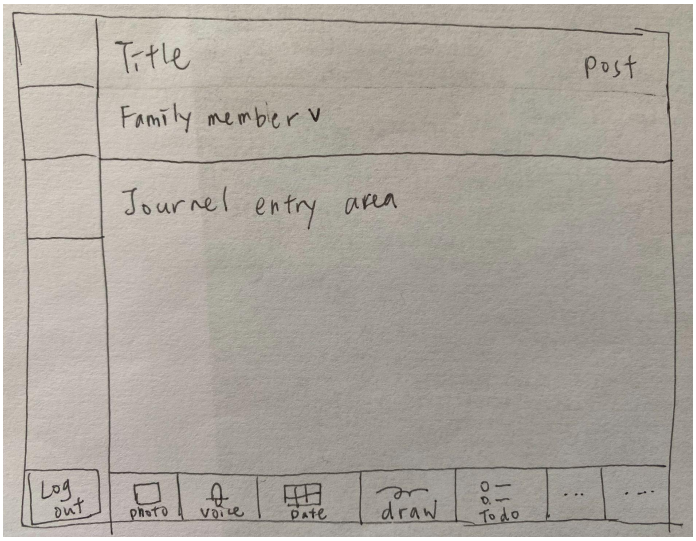
Mobile Frame: Iteration 2

- ***Iteration #1*** - We first arrange the information that we need from the users for a new journal entry with a traditional form-based design. The title will be a text entry, the date will be a date selector entry, the family member will be a drop-down menu entry, and the text will be a multiple-line text entry box.

- ***Iteration #2*** - In the second iteration, we want to highlight the input area of the journal to make it more like an actual journal entry instead of filling out a form using the traditional form-based design. All other commands will be squeezed on the top and bottom of the entry page but still discoverable for the users.



Mobile Frame: Iteration 3

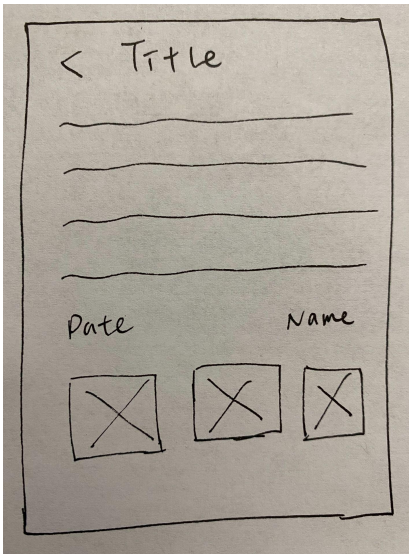


Desktop Frame

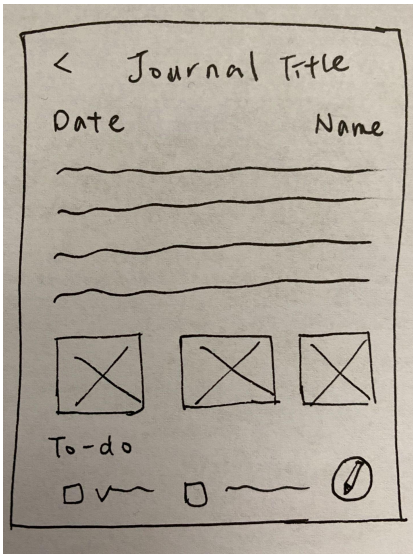
- ***Iteration #3*** - In the third iteration, we consider making the commands larger to encourage multiple entry types instead of purely text. We assume that allowing other interactions like voice recording and drawing would make the journal entry a more fun and exciting experience for children.

- ***Desktop frame*** - The large-screen version of the page is derived from the app version. We try to make the two versions as similar as possible but at the same time take care of the desktop interface design best practices.

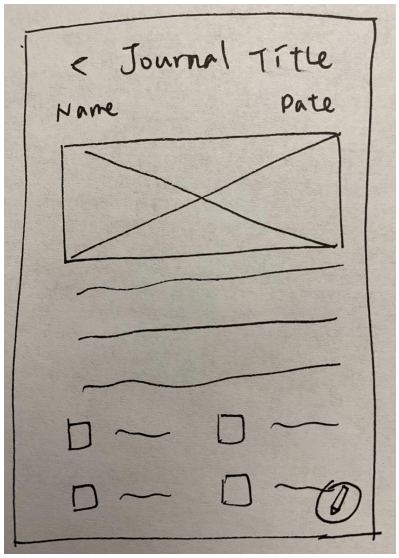
Journal Detail Page



Mobile Frame: Iteration 1



Mobile Frame: Iteration 2



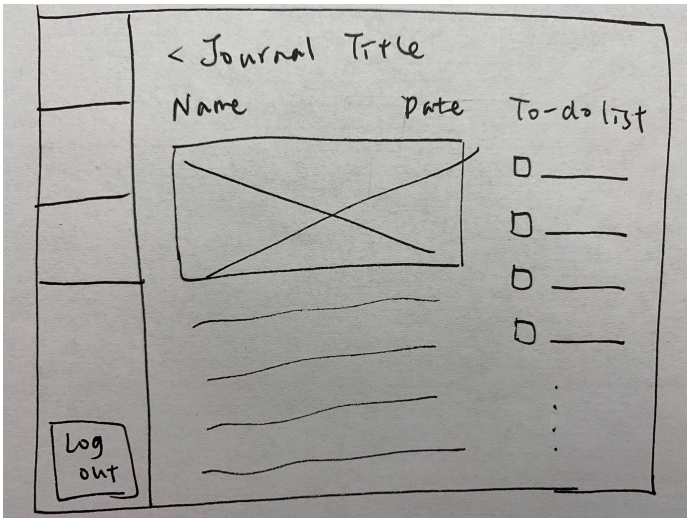
Mobile Frame: Iteration 3

- ***Iteration #1*** - In the first iteration, we think of what are the elements a journal will have and try to lay those elements out in the interface, including the journal text, date, name of the writer, and the pictures.

- ***Iteration #2*** -In the second iteration, we discuss adding the To-Do List feature, which can be helpful for users to keep track of the list of to-dos. Moreover, parents can assign to-dos to their children and help them develop a sense of responsibility.

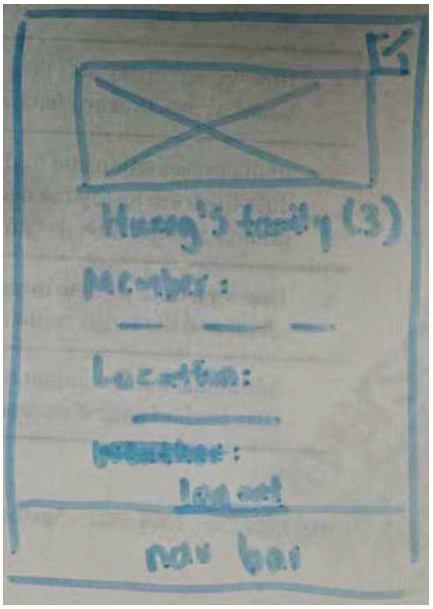
- ***Iteration #3*** - In the third iteration, we move the pictures to the top of the journal, making the visually attractive to the children. Another reason for changing the picture location is to make the design consistent throughout the application.

- ***Desktop frame*** - The large-screen version of the page is derived from the app version. We try to make the two versions as similar as possible but at the same time take care of the desktop interface design best practices.

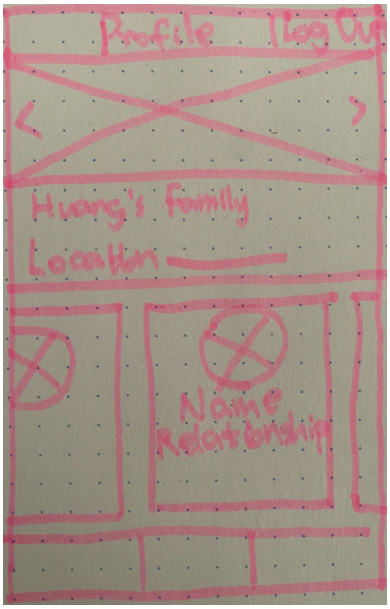


Desktop Frame

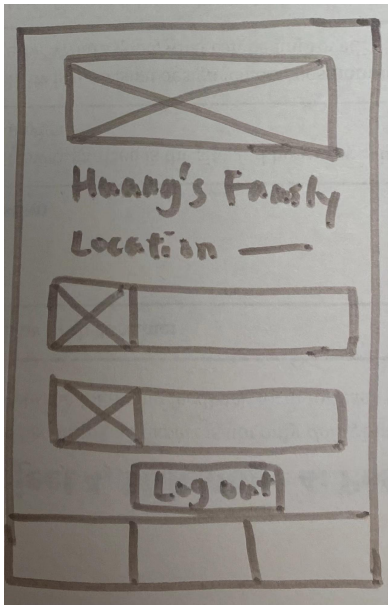
Profile Page



Mobile Frame: Iteration 1



Mobile Frame: Iteration 2

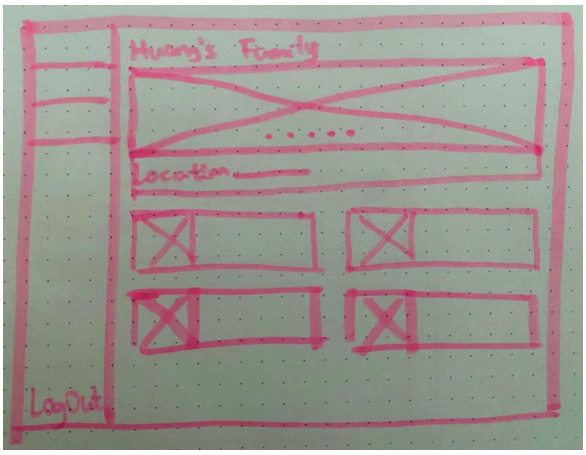


Mobile Frame: Iteration 3

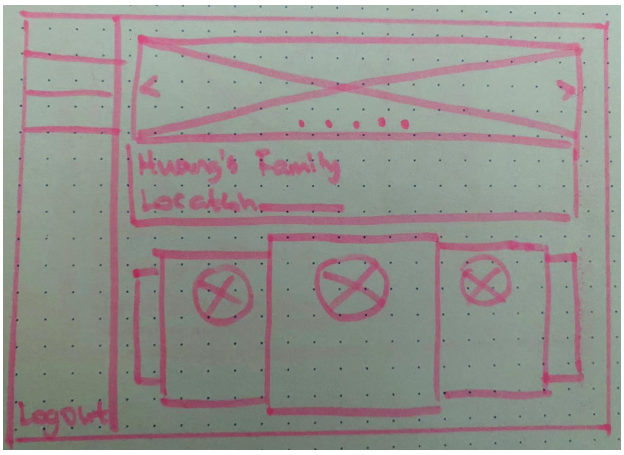
- ***Iteration #1*** - In the first iteration, we lay out the fundamental elements of the Profile Page in the most basic layout, with the family photo gallery on the top and the basic information of the family: each member's name and the family's location. There is one button at the button to log out and one button in the upper right corner to edit the profile information.

- ***Iteration #2*** - In the second iteration, we implement some changes to increase the user interaction within the page:
    - We enlarge the family photo gallery to attract visual attention better and add two arrow buttons to allow users to change the slide.
    - We change the family member information box into a vertical style card so that users can quickly swipe from left to right to navigate between the cards.
    - We also move the “Log Out” button to the upper right corner to leave more space for vital family information.

- ***Iteration #3*** - In the third iteration, we put each family member’s information into boxes and add a photo for each member for better recognition. We make the changes to match the design style of other pages and thus increase the visual appearance. We decide to remove the “Edit” button because we thought the profile editing part was not as essential as the other MVP features related to our theme.



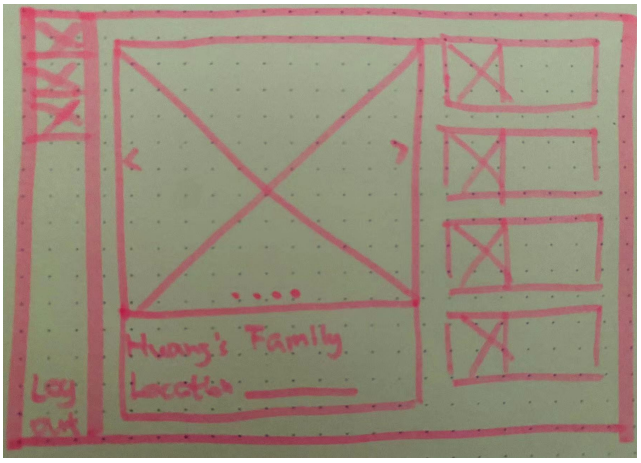
Desktop Frame: Iteration 1



Desktop Frame: Iteration 2

- ***Desktop Iteration #1*** - In the first iteration, we set the navigation bar on the left side with the “Log Out” button on the lower-left corner because it suits users’ left-to-right reading pattern. The three navigation buttons sit in the primary optical area. We adapt components in the same design style from the mobile version’s iteration 3 to match and move the family’s name to the top to keep it striking.

- ***Desktop Iteration #2*** - In the second iteration, we mainly modify the style of the family member's information boxes. Considering how users interact with the desktop screen, we change the layouts to allow them to swipe to change the gallery slide and check all the information cards. This iteration was also designed to match the mobile version's iteration 2.



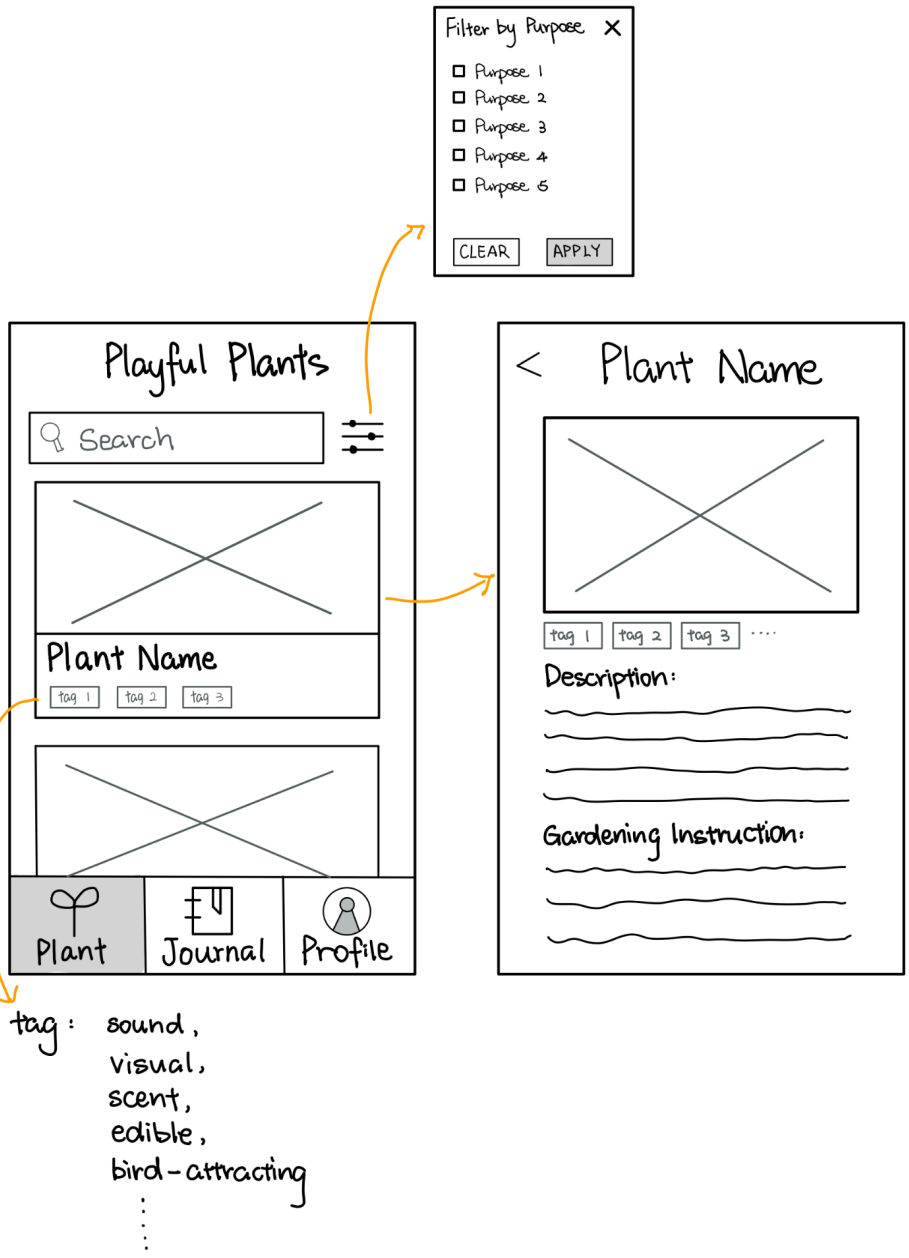
Desktop Frame: Iteration 3

- ***Desktop Iteration #3*** - In the third iteration, we reduce the width of the navigation bar. We remove the labels of three navigation buttons and the "Log Out" button. We believe the four icons are commonly used so that users can understand from first sight. Therefore, we save more space for enlarging the gallery. We set it to the left of the screen with the family member' information boxes aligned on the right side.

Final Design: Wireframes

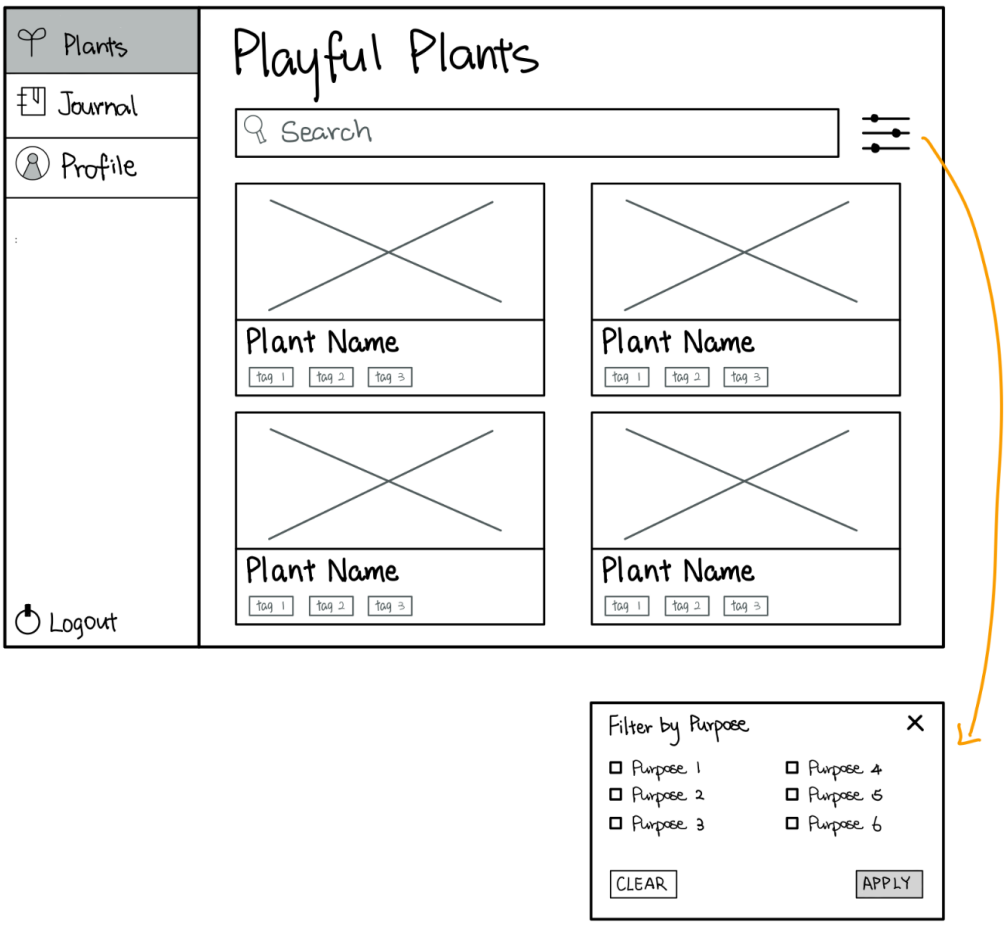
Based on our sketch iterations, we finalized our design with three main pages: *Plant Page*, *Journal Page*, and *Profile Page*.

Plant Page

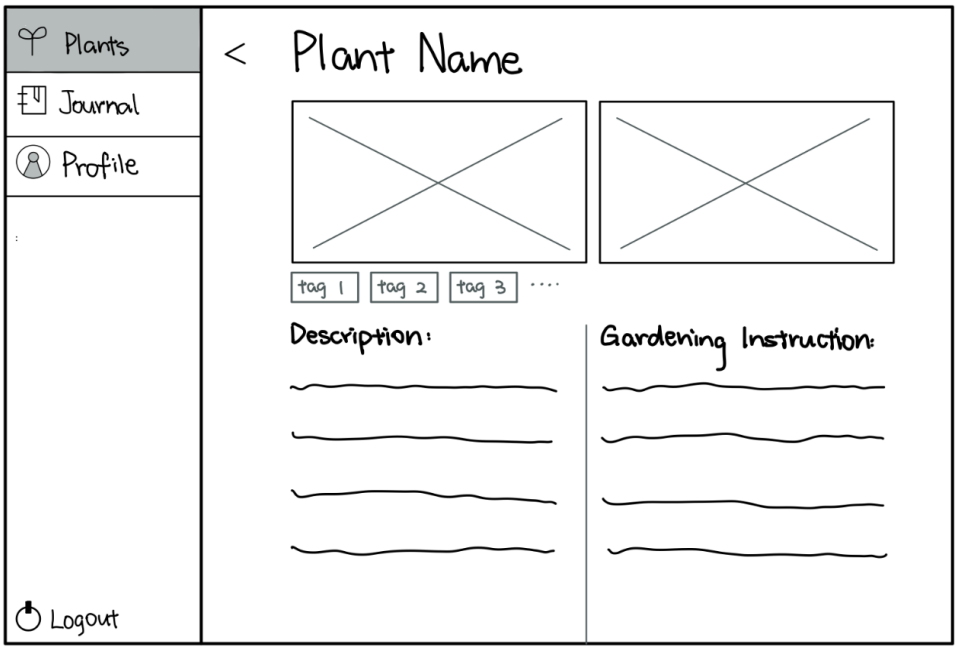


Mobile Frame: Plant Catalog & Plant Detail Page

The ***Plant Catalog Page*** shows a list of playful plants from the database. Users can search particular plants, browse through a variety of plants, and filter plants based on different categories, including edible, scent, sound, visual, bird-attracting, and other characteristics. We use the card design to display each plant's picture, plant name, and tags that show its characteristics. Once users click on a plant card from the *Plant Catalog Page*, they will be directed to the ***Plant Detail Page***. This page shows a more detailed view of the plant, including its picture, name, tags of characteristics, description, and instructions for gardening the plant. Users can also quickly return to the *Plant Catalog Page* by clicking the "<" icon on the top left corner.



Desktop Frame: Plant Catalog Page

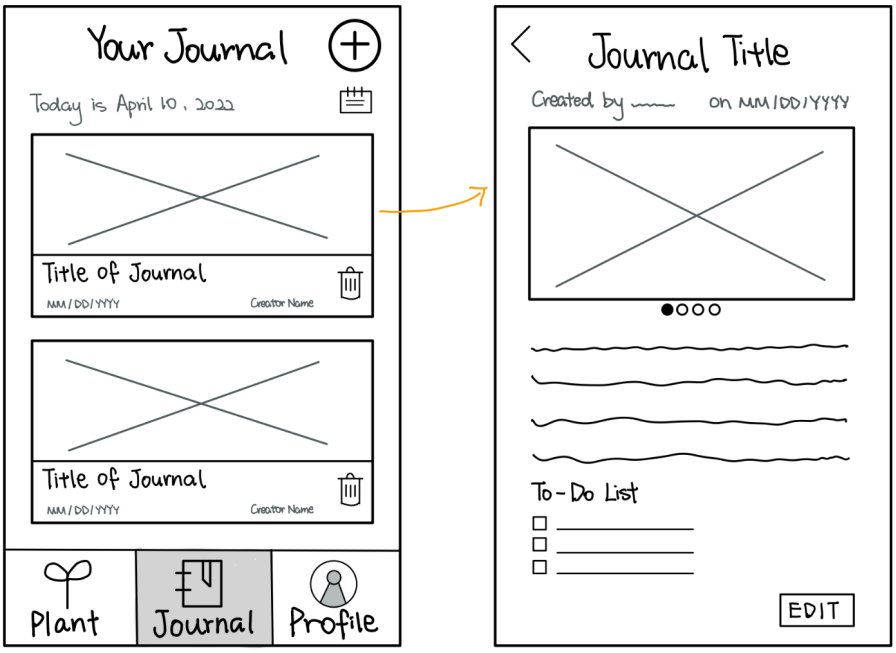


Desktop Frame: Plant Detail Page

We adjust our mobile-frame design and create the desktop-frame design to ensure that the app is **fully responsive**. We change the location of the navigation bar from the bottom to the left and use two-column grids to display information and details.

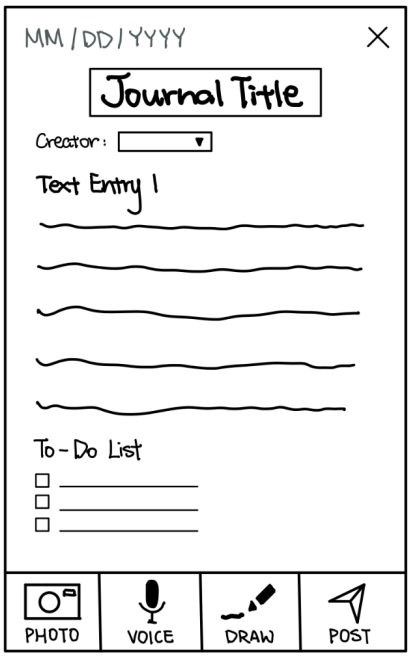
Journal Page

Another main function of the app is that users can record their gardening experience with journals. On the ***Main Journal Page***, they can browse through their existing journals. At the top of the page, users can view the current date. They can select a specific date range using the calendar icon to view the corresponding journals. The visual design is consistent with the *Plant Catalog Page*. We still use the card design to show pictures, journal title, entry date, and the creator. Users can make a new journal entry via the "+" icon on the top right corner or delete a journal via the "delete" icon on the side of each entry.



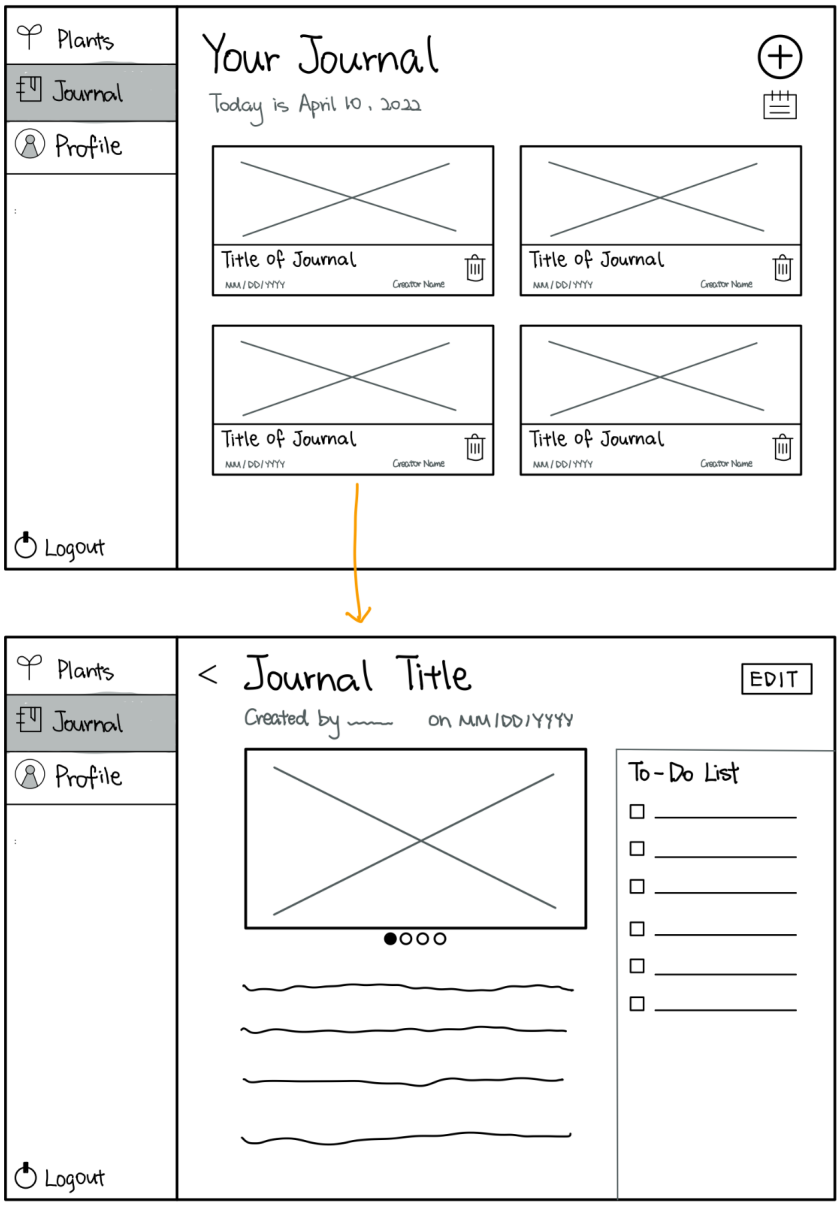
Mobile Frame: Main Journal & Journal Detail Page

When users click on a specific journal entry from the main journal page, they will see the ***Journal Detail Page***, including the journal title, the entry date, the creator, pictures, text entries, and the to-do list. This page is for users to recall what they wrote on a specific date and track the detailed progress of their gardening experience. Users can return to the *Main Journal Page* via the "<" button.

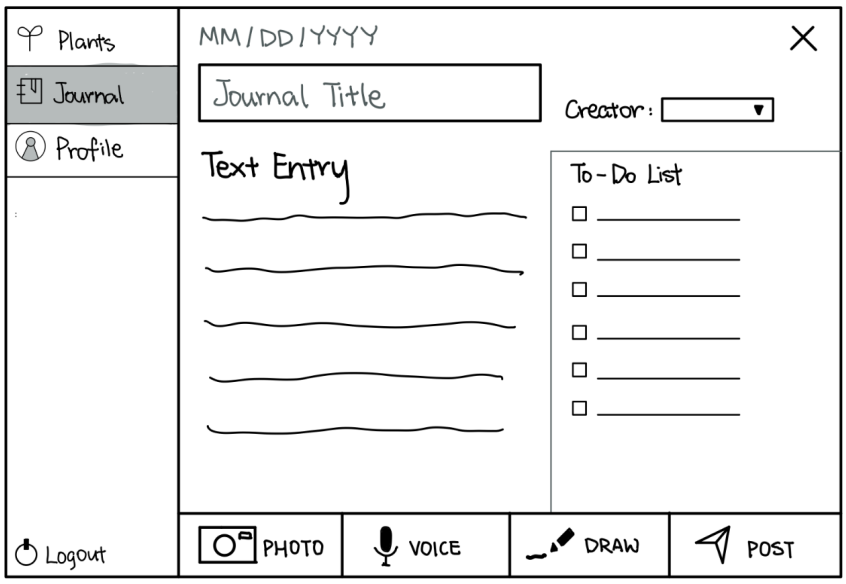


Mobile Frame: New Journal Page

While clicking the "+" icon on the *Main Journal Page*, users will see the ***New Journal Page***. On this page, they can enter the title of the journal in the text box. Because all family members share the same account, the creator dropdown list allows the creator to choose their name from the family member list. The date is auto-filled with the entry date on the top left corner. The toolbox is on the bottom, which provides users with three advanced features for journaling: taking photos/videos, inserting voiceovers, and drawing. When users finish writing the journal, they can click the "POST" button and expect to see the new entry shown on the *Main Journal Page*.



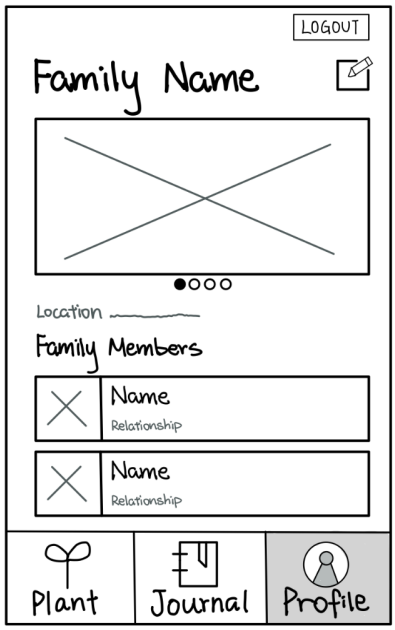
Desktop Frame: Main Journal & Journal Detail Page



Desktop Frame: New Journal Page

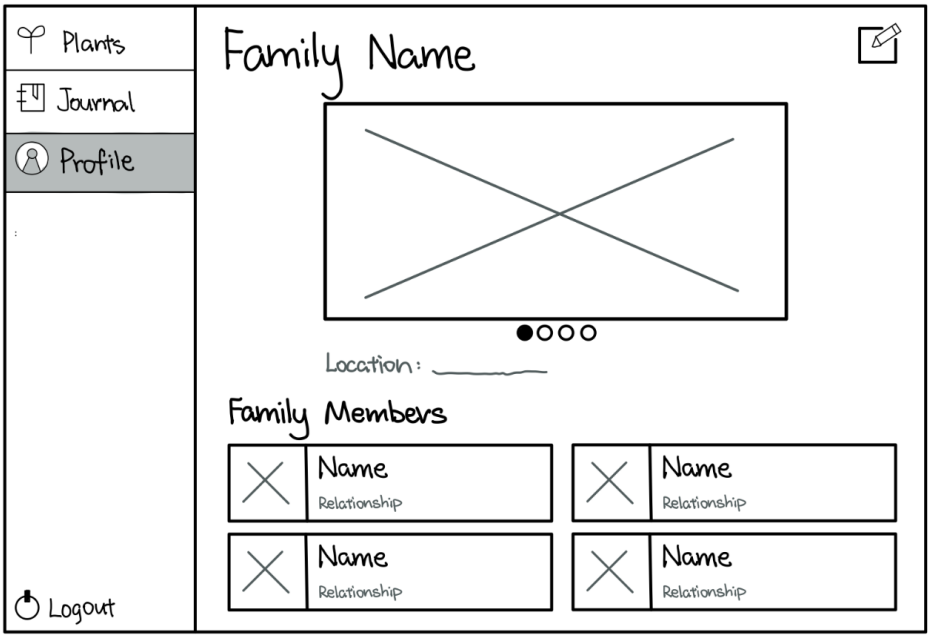
The desktop-frame design shows the responsive version to larger, horizontal screens. All functions, described above, are included in the desktop-frame version with only the difference in their locations on the screen.

Profile Page



Mobile Frame: Profile Page

On the ***Profile Page***, users can see an overview of their family profile, including their family photos, family name, location, and information of each family member. Each family member's input is grouped on a card, displaying their photo, name, and relationship. Users can edit the page via the edit icon on the top right.



Desktop Frame: Profile Page

The major difference between the desktop and mobile versions is that the logout button is moved to the bottom of the navigation bar on larger screens.

Design Rationale

User Goals Achieved

Throughout the designing process, we recall the goals of our persona, Emma, and try to fulfill most of her goals via our design features. Our design has three main functions: (1) displaying plant catalog, (2) recording gardening experience, and (3) showing family profiles. Each of these functions is designed to meet one or more of Emma's goals.

The ***Plant Page*** allows Emma and her son, Lucas, to explore a list of playful plants. They can learn gardening and plant knowledge together. Throughout the process, Emma can achieve her goals of inspiring Lucas' curiosity and rebuilding family connections. The ***Journal Page*** allows Emma and Lucas to track their gardening progress, and the to-do list feature encourages them to share the gardening responsibilities. Emma can achieve her goals of training Lucas' hands-on practical ability, motivating him to engage in more outdoor activities, and enhancing interaction with him. The ***Profile Page*** allows Emma to invite all family members to join the gardening process to reduce her workload and strengthen the whole family relationship.

Overall, our app is designed to build a **family activity** for Emma so that she can find a work-life balance, allocate more time to raise and educate her son through hands-on experience, and enhance family interaction.

Visual Design Rationale

Plant Page

One of Emma’s goals is to let Lucas learn more about the natural environment. Because Lucas already has some experience using electronic devices, we want to encourage him to use technology to learn informative things about plants and the natural world rather than playing computer games all day. The *Plant Page* is an excellent resource for Emma and Lucas to learn about a great variety of plants with different characteristics and uses. Browsing through the *Plant*

Page can increase the quality of family time they spend together and encourage an interactive learning environment, rebuilding family connections.

For the **page's layout**, we want to emphasize the learning of various plants. The title of "Playful Plants" is placed on the top of the page to highlight the purpose of this tab intuitively. A search bar and a filter icon are placed underneath, always sticking on the top of the page. This layout can help Lucas and Emma navigate easily on the page without getting lost. They can search for a particular plant or filter plants based on specific criteria. Then, there are the card designs for each plant. On each card, it consists of the plant's picture, name, and tags. We want the picture to be the dominant component because we think images can speak a thousand words and will be more attractive for Lucas to learn and recognize plants in nature. Elements on the cards are aligned vertically to follow the grid structure so Lucas and Emma can quickly scan the pages. However, we decide to have the tags arranged horizontally because a plant can have many characteristics, including scent, edible, bird-attracting, etc.

We plan to use standard **typography** that is simple, legible, and readable, such as Helvetica and Open Sans. These fonts are more suitable for both children and parents to read. We are planning to use **icons** from the Javascript FontAwesome library for the filter icons, so it is easier to implement and consistent with common design patterns. The cards of plants on the main plant page will **afford** the clicking function because users can click on them and be directed to the Plant Detail Page. Therefore, the cards will have a hovering state. The search bar is also clickable, and it will have placeholder texts like "Search Plants" to indicate how Lucas and Emma should interact with controls. After they click on the filter icon, it will show a small popup with checkbox options of different plant characteristics, and the checkbox will afford to click on multiple choices. They can click on the "Apply" command to filter the plant information. In the plant details page, we hope to balance the visual structure of the page by involving plants' pictures as the **graphic** component. Since Lucas is still very young, he prefers looking at colorful images rather than heavy texts. Therefore, we use pictures and colorful tags to convey the most critical information, and Emma can help Lucas understand the textual information.

While our group still hasn't decided on the **colors** of the prototype, we think the colors should convey a playful vibe so it is attractive to Lucas and not too childish for Emma to use. The final sketches for the Plant Page indicate the **animations and transitions** between the main plant page and the plant details page. Clicking on the plant card will lead to the plant details page, and clicking on the return button will take them back to the main plant page. Such interaction follows the common design patterns, which should be relatively easy and intuitive to use and understand. After Emma and Lucas enter the keyword for searching or clicking on the checkboxes inside the filter, the page will be refreshed with sorted plant cards. The refreshed content will give them feedback and draw attention to change.

Journal Page

The Journal Page includes three sub-pages: the *Main Journal Page*, the *Journal Detail Page*, and the *New Journal Page*, which allow users to view previous journals and create new ones. We try to make the entire journaling process smooth and effective through the lens of communication.

The **layout** of all three pages follows users' reading and scanning patterns to ensure that they can find information quickly. For example, the title "Your Journal" is placed on the top center to provide visibility affordance on the Main Journal Page. Each journal entry is grouped on a card and ordered chronologically from top to bottom, so users can scan the page and quickly locate a journal. A date selector is provided in the top right corner so that users can more effectively find a particular journal with a date in mind. The "+" button is placed in a strong fallow area to catch users' attention and ensure the function of starting a new journal is visible to them.

Second, we try to implement appropriate **UI elements** to instruct users on how to interact with our product clearly. For example, on the *New Journal Page*, we use a large edit box with a "Journal Title" placeholder to indicate that the box is editable with an expected title input. Besides the label "creator," a drop-down list instructs users to select their name from the family member list. Checkboxes under the to-do list imply that each element is independently selectable, so users can check it when they complete a task. The toolbox in the button is framed

like buttons to instruct users to click for usage. The "x" icon indicates that the page can be closed, so users can expect to return to the *Main Journal Page*.

Third, we use standard, recognizable **icons** with the supplement of **labels** to ensure that users can easily comprehend them and associate them with desired commands. For instance, we employ four icons on the New Journal Page to demonstrate four controls: taking photos, recording voiceover, drawing, and posting. We also label them appropriately to avoid confusing users.

Profile Page

Users can quickly scan the page from the upper left and go straight down on the *Profile Page*. The family pictures are in the middle of the page, which users are supposed to **focus on**, at first sight, making the page evident and attractive. Each family member is listed with pictures, names, and relationships. In this part, we emphasize more on the name of a family member. Thus the **font size** of "name" is larger than others. All the labels and controls are **left-aligned**, making the page look clear and concise. At the top of the page, there is a "LOGOUT" button and an "edit" icon. The 'LOGOUT' button is conspicuous and gridded in the first line of the page. The users can find it quickly and log out whenever they want without complicated operations. The edit icon is designed like paper with a pen. It is common sense that this **icon** represents the 'edit' operation. Users can effectively recognize it without any notice text.

Team Member Contribution

Han Gao

- Participate in the brainstorming session for ideation and sketching
- Responsible for sketching the final design wireframes in both mobile and desktop framework
- Revised the Scenario 4
- Wrote the Brainstorming, Final Design, and Design Rationale for Journal Page in the report

Kehui Guo

- Participate in the brainstorming session for ideation and sketching
- Revision - Responsible for revising Scenario 2
- Sketch - Responsible for sketching plant pages and journal pages, writing and sketching for Final Design & Wireframe
- Design Rationale - responsible for writing the design rationale of the Plant Pages part

Hang Jiang

- Joining all brainstorming sessions and contributing several design iterations
- Revision - Responsible for feature revision rationale
- Sketch - Responsible for the iteration rationale of the Profile page
- Editing - Helped with editing the report

Hongxi Jin

- Joining all brainstorming sessions and contributing several design iterations
- Revision - Responsible for revising Scenario 3
- Sketch - Responsible for writing the iteration of the Plant Catalog, including the Plant Catalog and Plant Detail
- Design Rationale - responsible for writing the design rationale of the profile setting

Daisy Liu

- Joining all brainstorming sessions and contributing several design iterations
- Revision - Responsible for revising Scenario 1
- Sketch - Responsible for the iteration rationale of the Journal feature, including the Journal view, Add new Journal, and View Journal details