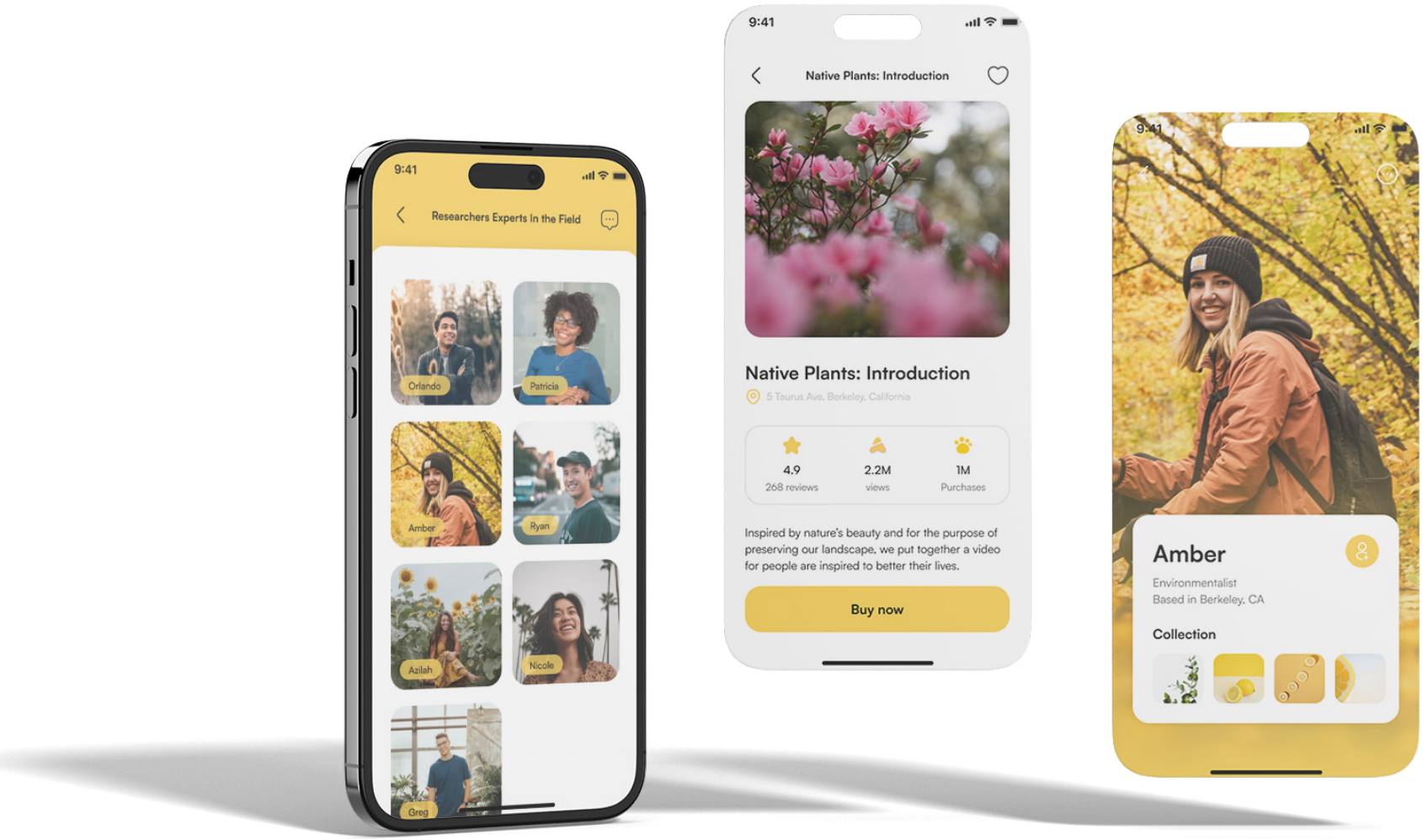
Terra Bella

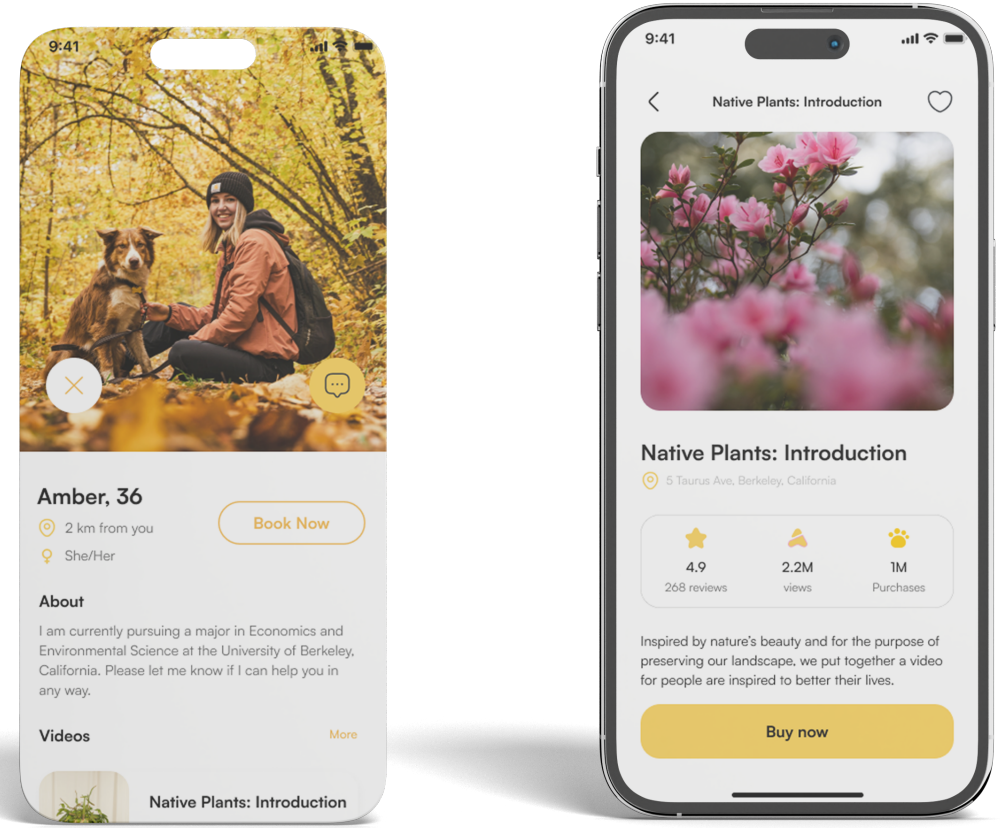
AN EXPERIENCE DRIVEN BY A
SUSTAINABILITY-POWERED VISION

ANNAMARIE FLORES

Designed By Annamarie Flores



Snapshots of interfaces I designed for the Terra Bella mobile application.



Snapshots of interfaces I designed for the Terra Bella mobile application.

Overview

Terra Bella: *Case Study*

My goal is to develop a digital product that enables me to better understand how I can deliver more value through utility and emotion.

Through this case study, my process starts with clearly defining the consumer journey, the business objectives, and what's happening in our environment.

A Call To Action

Challenge

Many of us have had first-hand experiencing the negative impacts of water shortage and distressed landscapes.

The ebb and flows of climate change & environmental factors have affected our lifestyle and the choices we make to help us navigate through a time of crisis.

Designed By Annamarie Flores

Educate & Restore

Objective

Educational resources at times are difficult to attain and hard to reach. My objective is to to educate people about native plants and how they can help fight water shortage & restore distressed landscapes.

A call to action is a campaign to get people involved in becoming aware of the environment around us and to start taking action by learning about and planting native plants in our landscapes.

Water Consumption

Statistics

The typical lawn consumes about 30 gallons per square foot each year. Compare this to the 3-5 gallons per square foot needed annually for a native landscape.

A typical monthly summer water bill for a large 1 acre conventionally landscaped yard might run upward of $900 per month, whereas the same size property landscaped in natives would cost around $125 per month.

Our Natural Resources

An Opportunity

The limits of our natural resources is an opportunity to create beautiful, lush, native landscapes in tune with nature's native landscape.

Californias have the permission to create interesting, beautiful landscapes based on a more realistic, healthful, and sustainable protocol.

Discovery Research

To understand my target users, the topic & the market, I conducted researched such as interviews and a competitive analysis that helped me gain insights into developing an application that is unique and tailored to the needs of the market.

User Research

My research findings consist of specific pain points and insights from conducted one-to-one interviews. In order to create a product that satisfies the user, I must first understand the needs and challenges my target audience face.

Interviews Highlights P.1

To design a unique experience, I gathered data so I can come up with new unique features that would satisfy all parties. I was inspired to pursue this project because I wanted to ease some of the pain on their end.

Grace

"I just moved into a house with some costly plants and trees, so I'm looking for plant alternatives that can help me spend less on maintenance while still having a beautiful garden"

Sunjae

"Water is a big concern here, so I want to be more informed about native plants that use less water. Water is scarce here and so costly that I want to look out and understand more about these native plants that reduce the impact on this ongoing issue."

Interviews Highlights P.2
Expert Consultant

Greg Rubin

"I have been doing much of my native plant treatment research and development in my own ½-acre yard, but I'm looking for more directed and organic approaches."

"It has proven quite incredibly satisfying to bring native plants like Dendromecon,and Lavatera back from the brink of death, and to realize how adaptable and resilient these plants can be in the absence of bug infestation."

Key Takeaways

After interviewing my colleagues and experts in the field, I was surprised to see that this problem was so prevalent. I found that all participants needed to look for credible research and seek different approaches into solving issues in terms of holistic landscape maintenance.

Based on these research insights, I took what they said into consideration and started designing user flows. User stories and interviews help me define my project and inspire me to create a product that solves their specific problem.

Survey Findings

Demographics

Location : California
Education : Holds any degree
Ages : 18 years old and up
Ethnicity : All ethnicities
Devices : Tech savvy

Survey Questionnaire

Has climate change affected you financially?
No: 25%
Yes: 75%

Are you aware of native plants?
No: 15%
Yes: 85%

Did you know that native plants can help prevent soil degradation?
No: 80%
Yes: 20%

Did you know that native plants can help save water?
No: 75%
Yes: 25%

Do you like the idea of a native plant tracker?
No: 100%
Yes: 100%

Do you think there's enough credible resources about native plants?
No: 100%
Yes: 0%

Do you think people should be aware of native plants?
No: 0%
Yes: 100%

Personas

After developing a problem to solve, I created two personas based on our users stories and user journeys from my interviews. I made sure to capture the diverse user base to capture use cases in later designs.

Persona

01

Grace Tian

Business Owner

Grace is a busy small business owner and garden enthusiast. Grace wants to plant a landscape that can help her save water, costs, and maintenance. She needs to talk to an expert and gain some research to properly start her garden. Grace wants to learn about native plants and needs landscape consulting services.

Pain Points:

- Maintaining a garden take too much time and effort
- Does not know how to garden the right way.

Goals:

- To become more familiarized with how native plants benefit the landscape.
- Knowledge about what specific native plants would be well-suited for her garden.

Designed By Annamarie Flores

Persona

02

Sunjae Lee
Professor

Sunjae is a college professor who has a passion for sustainability. He needs to collaborate and synchronize some research to put together a project about native landscapes but he can't find any reliable information. Sunjae needs to find experts that are located in California but do not know where they are.

Pain Points:

- Landscapes are distressed and barren due to climate change
- Resources about native plants are not readily available

Goals:

- Wants to become more familiarized with native plants to benefit the environment
- Wants to take action by adopting sustainability approaches

Competitor Research

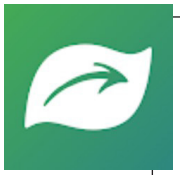
The competitive analysis allowed me to discover what applications out there that was similar to my concept. I compared *Terra Bella* to apps that were specific for users to observe, track and locate native plants to help them understand them more.

While keeping the above statistic in mind, I analyzed the six most popular apps surrounding this goal/productivity space. I found that almost none of them had this aspect of an research and credible sources to help the user achieve their goals. This then became my opportunity for the solution.

Competitive Analysis

I did a side by side comparison of the screens of iNaturalist and NatureID to identify qualities , features and opportunities to innovative unique new features.

Nature ID app allows users to take photos of plants and get useful information about how to plant, grow, and care of those plants directly to your screen. The app has features where you can start your collection of flowers, take as many photos as you want, share,and keep track of them anytime.



iNaturalist App uses the power of image recognition technology to identify the plants and animals all around you. Earn badges for seeing different types of plants, birds, fungi and more!

Key Takeaways

I found that there were many applications in the market that had alreaedy created features I thought out, however what the apps were lacking was an educational component. This finding helped me discover an feature these applications lacked and could benefit from.

Competitive Analysis

I wanted to include a feature where users can locate, track and take photos of native plants. I found that the ***iNaturalist App*** application includes these features and covers a wide range of different plant species, but not that specific to native plants.

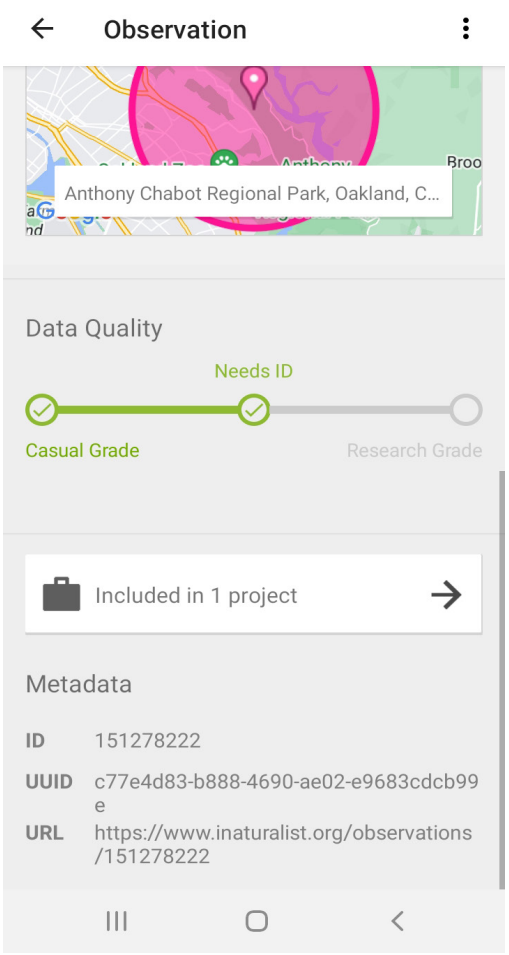
iNaturalist App

Pros:

- Tracks and locates plants.
- Earn badges for seeing different types of plants, birds, fungi.
- Features Data Quality

Cons:

- Need to raise standards with accurate research and improved data quality.
- Information Overload with overwhelming amount of accumulated data displayed.
- Featured posts lack quality control.



Competitive Analysis

Nature ID includes a plant identifier feature that I wanted to incorporate in my application, however, it is not specific to native plants. Their application was limited to specific features where the user could not gain location access.

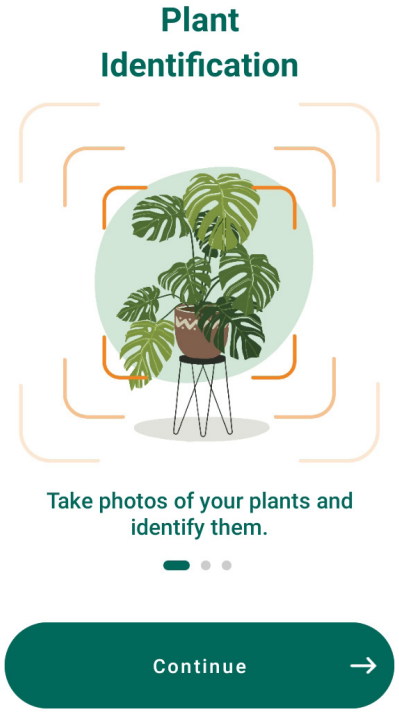
Nature ID

Pros:

- User has access to weather information.
- AI-powered disease diagnostics.

Cons:

- Navigation is limited.
- No editing and customization features.



Competitive Landscape • Feature Analysis

	Plant Locator	Camera Scanner	Plant Tracker	Map	Plant Profile	Research Feature	Data Quality
iNaturalist	✓	✓	✓	✓	✓		✓
Identify Plant		✓	✓	✓			
PlantIn			✓				
NatureID		✓		✓	✓		
Plant Snap	✓	✓		✓			
LeafSnap	✓	✓	✓	✓	✓		

Competitive Analysis

Key Takeaways

Learning from my competitors in the market helped me gain insight into the kind of features they included in their applications as well as their approach to solving the specific user problem.

I was also able to identify some of the pros and cons of each competitor to get a sense of direction of how I should design an application that is unique and stands out. The competition as no research and data quality aspect.

Solution

After defining the problem by doing a competitive audit, topic research and conducting user interviews, I went into creating three unique UX flows.

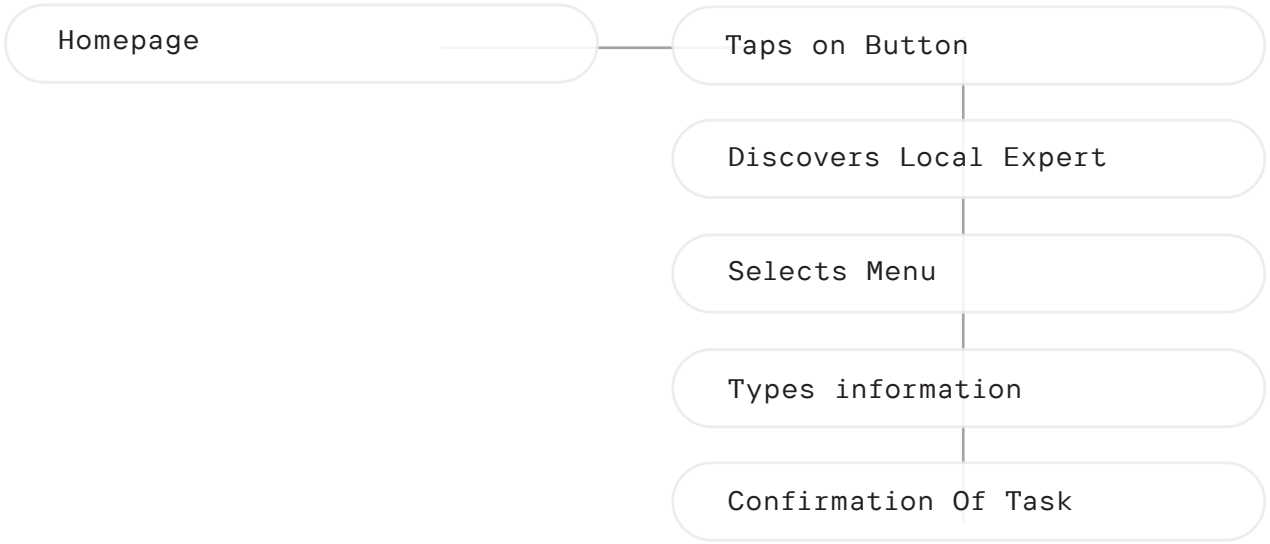
My aim is to develop specialized features to smoothly and quickly aid users into connecting with experts so they can understand the topic and take action.

Information Architecture

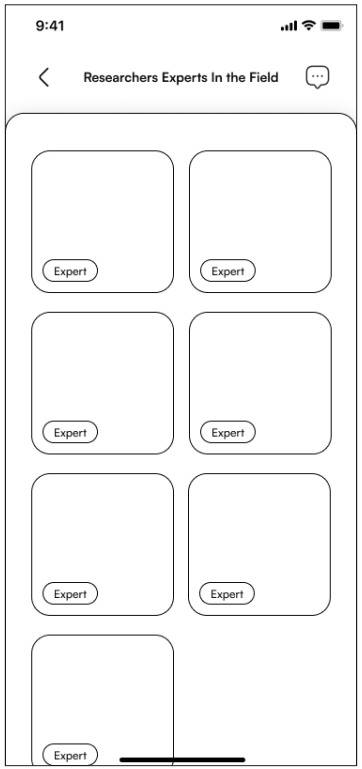
I came up with solutions and created an information architecture. Followed by that are sketches, mid-fidelity wireframes, usability testing, and a UI Style Guide.

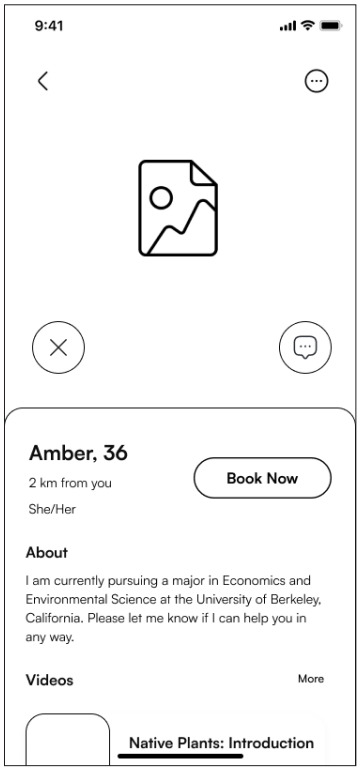
End To End Flows

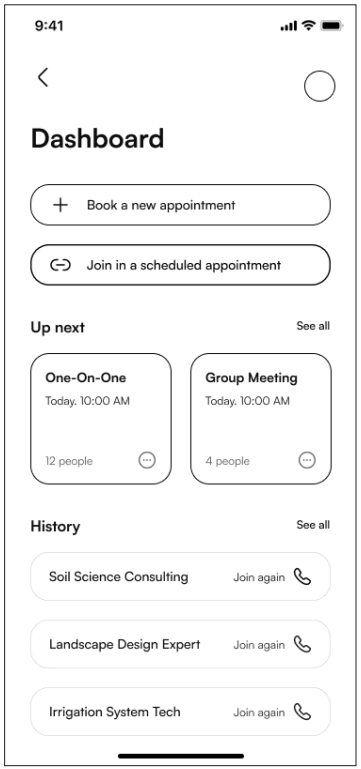
I creating three unique UX flows to address the pain points and honor the needs of my target users. This all resulted in creating an entire interactive end to end flow.



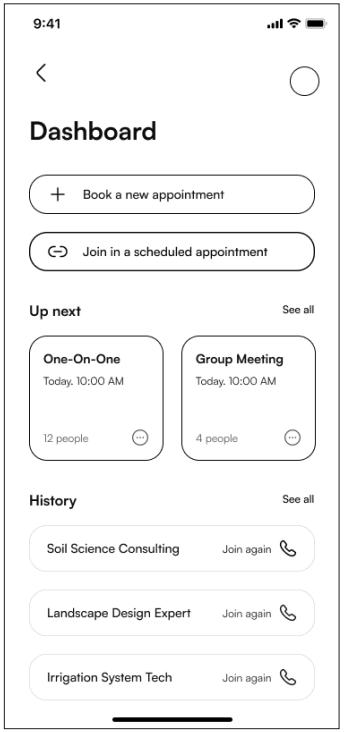
Wireframes - Task Flow 1

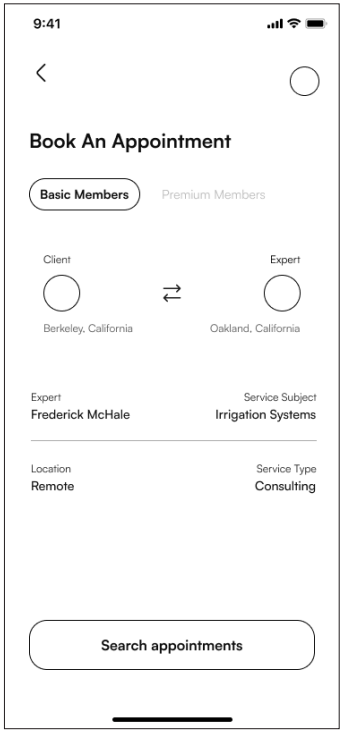


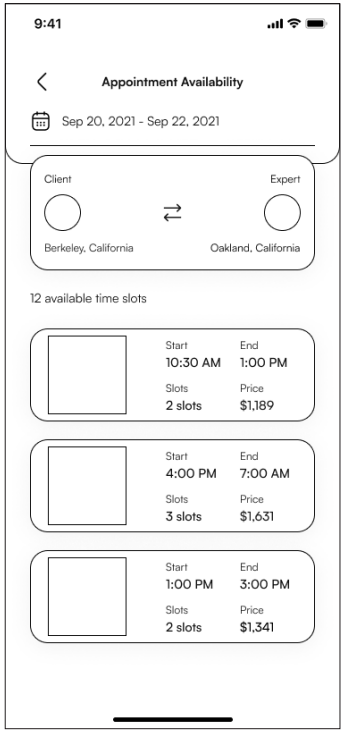


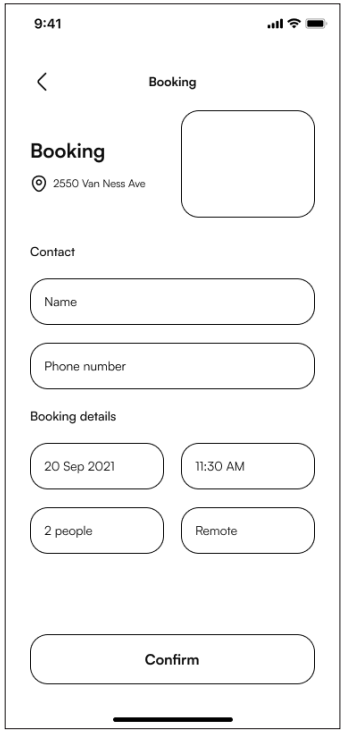


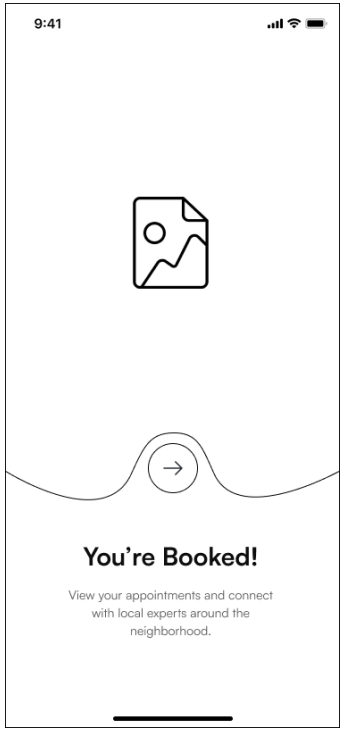
Wireframes - Task Flow 2



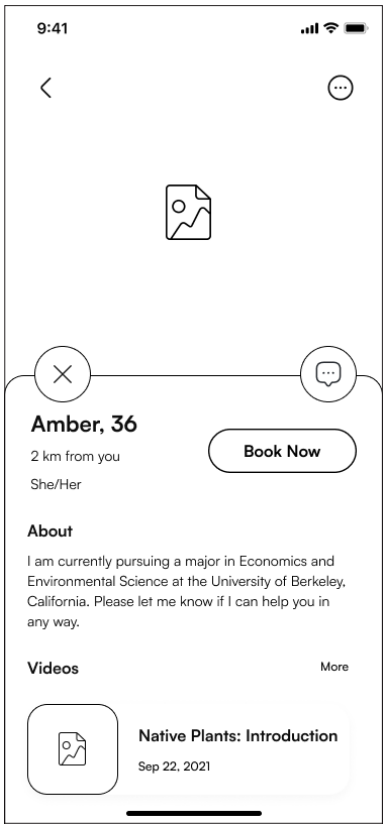


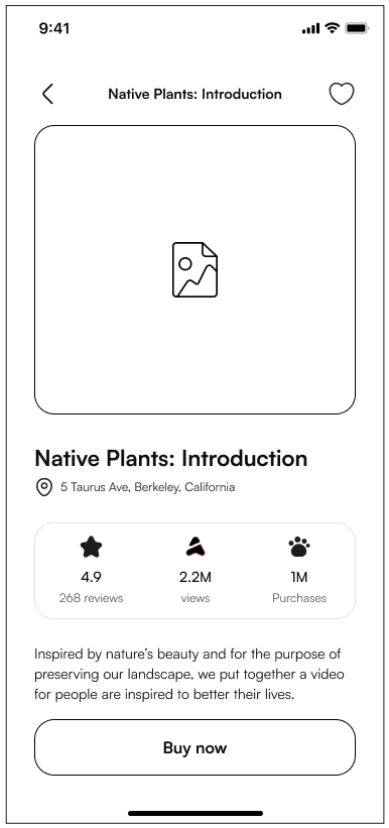


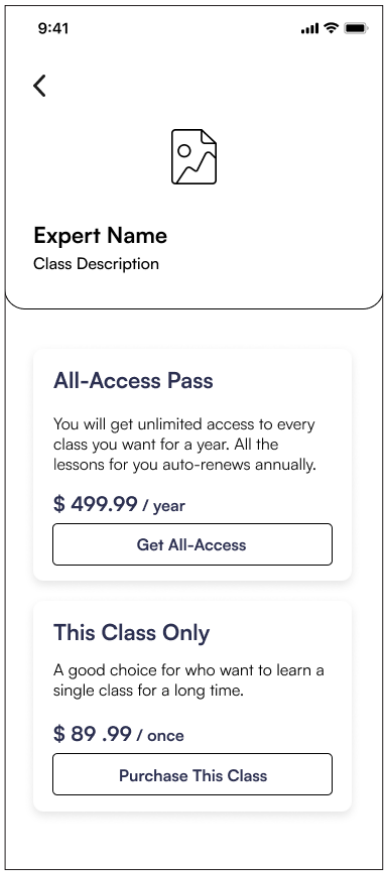




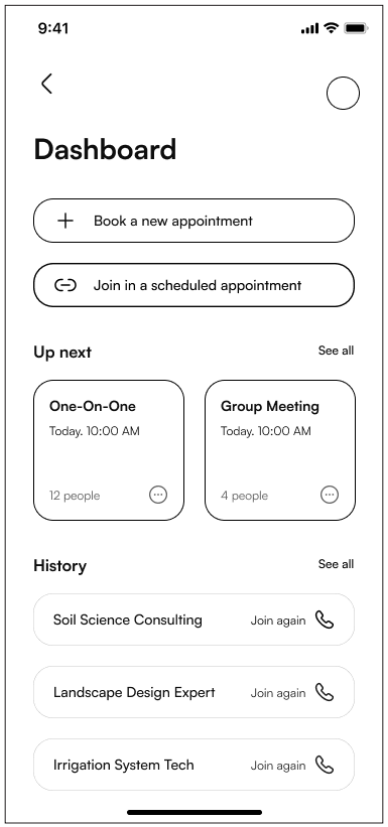
Wireframes - Task Flow 3

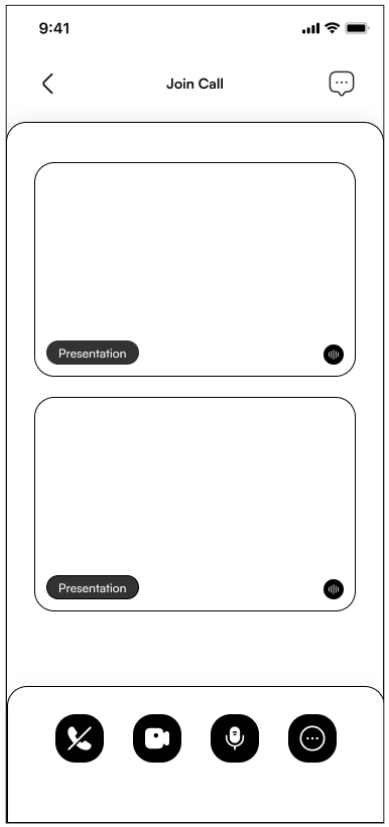


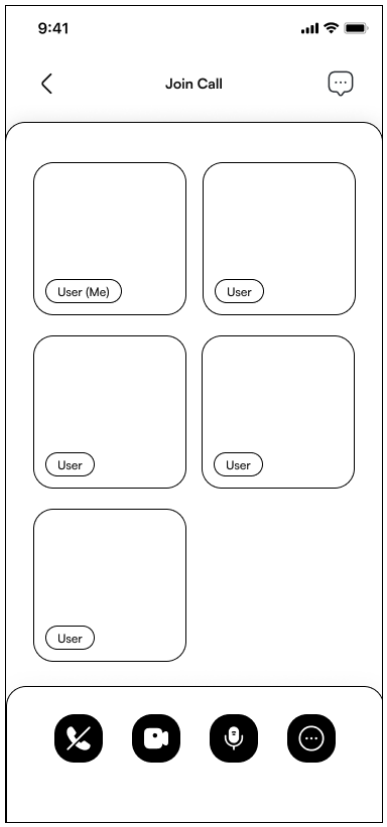


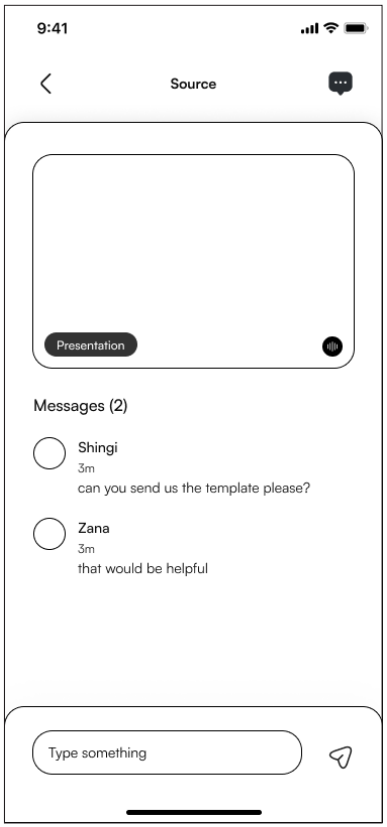


Wireframes - Task Flow 4









Lo-Fi Prototype

After creating three flows, I started creating wireframes of how the application would look like. After user testing and iterations, I created an interactive prototype.

I prototyped each flow so that we could explore three drastically different designs and gain feedback from user testing to see which parts of each users preferred and found most intuitive.

Hi-Fi Prototype

We prototyped in high fidelity a mix of both options. We used a button that allows users to indicate whether they want a basic or premium subscription, and asked users to to select their choice and to list the best option.

Though it would be extra steps, users we tested felt it was just enough to complete their task. It would also be beneficial for the user in making the best decision possible if they had less options.

Refinement

After further testing and feedback, we eliminated the need to include data quality information and instead made it optional. We also broke up the listing of options items to reduce user cognitive load.

Final Prototype

The final prototype ensures the user will be able to find and connect with a local research expert in native plants, and allows the user to be aware how native plants benefit the environment.

Link To View Interactive Prototype:
Final Prototype

End To End Flow 01

Link To Interactive Task Flow 01:

Find and Select a Local Research Expert Nearby

Designed By Annamarie Flores

End To End Flow 02

Link To Interactive Task Flow 02:

Schedule, Book an Appointment and Video Call Meeting With Researcher

Designed By Annamarie Flores

End To End Flow 03

Link To Interactive Task Flow 03:

Pay and Choose Subscription For Class On Topic and Research

Designed By Annamarie Flores

Thanks

Designed By Annamarie Flores