Indoor Plant Care

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M.Des. (UX/UI)

Introduction

Many indoor plant enthusiasts struggle to maintain the well-being of their plants due to varying care requirements, leading to challenges such as overwatering, insufficient light exposure, or inadequate nutrition. There is a need for a user-friendly digital solution that assists indoor plant owners in providing personalized care to their plants while fostering a sense of community among plant enthusiasts.

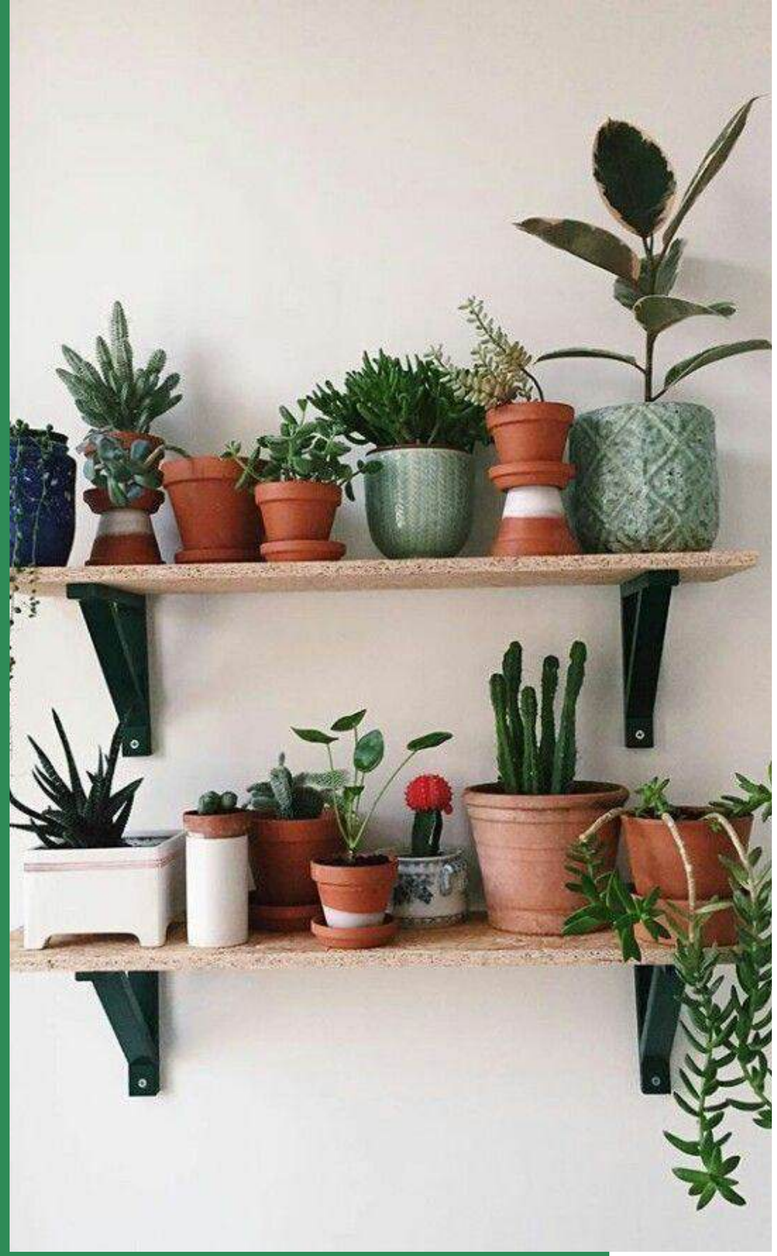
Secondary Research

What are Indoor Plants?

Indoor plants, as the name suggests, are plants that are specifically grown and maintained indoors, typically within homes, offices, or other enclosed spaces. These plants are cultivated for their aesthetic value, air-purifying properties, or simply to bring a touch of nature indoors.

Some Indoor Plants are:-

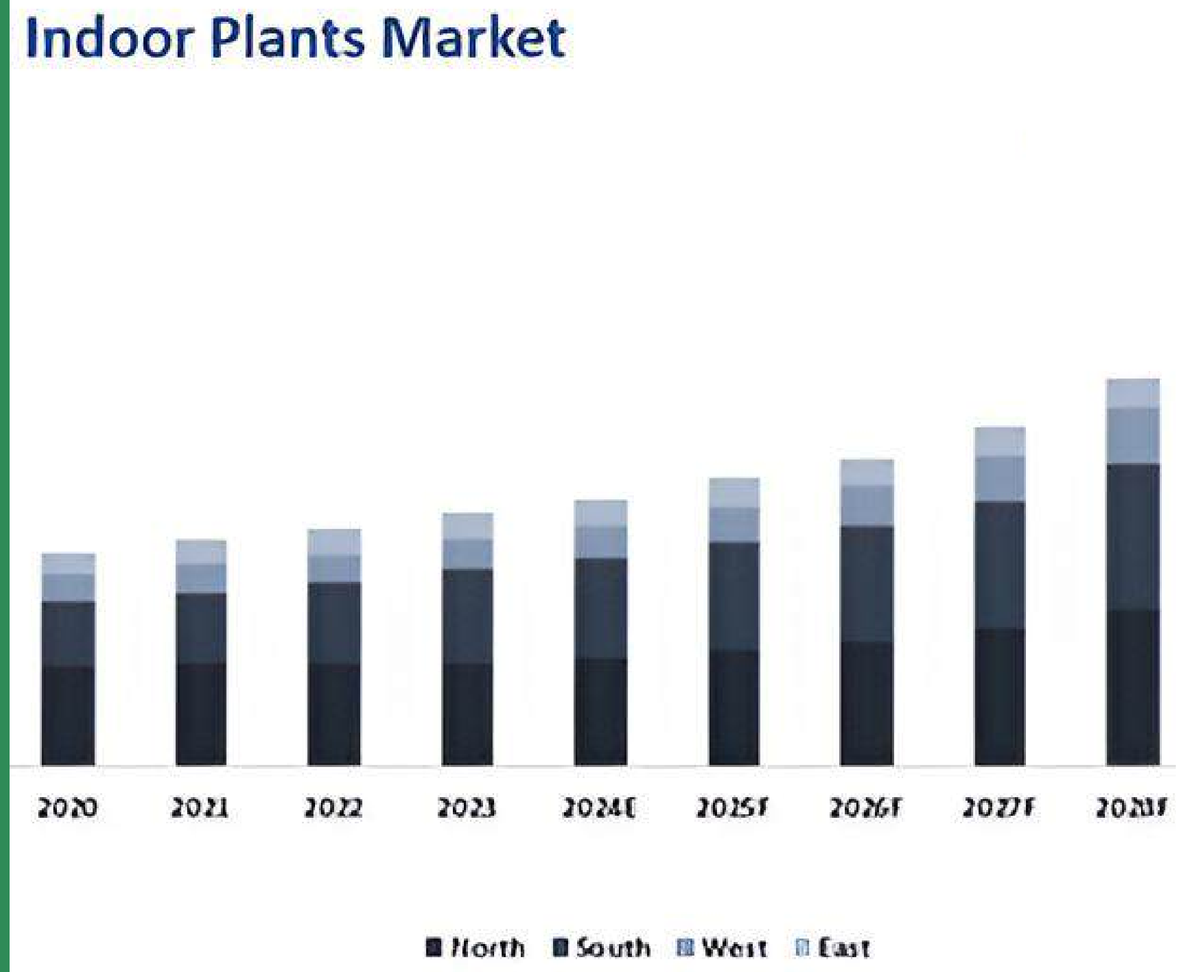
- Snake Plant,
- Aloe Vera Plant,
- Ferns,
- Monstera,
- Money Plant,
- Peace Lily,
- Spider Plant, etc.



Secondary Research

Health benefits of indoor plants

- **Improve air quality**:- According to a 1989 NASA study, houseplants can help improve air quality by removing cancer-causing chemicals like formaldehyde and benzene from the air.
- **Reduce stress**:- Interacting with plants helped suppress sympathetic nervous system activity and diastolic blood pressure. Participants reported feelings of comfort when working with plants versus working on a computer.
- **Improve your sense of well-being**:- Studies have shown that indoor plants can improve focus, decrease depressive moods and lessen symptoms of anxiety.
- **Improve environmental wellness**:- Our environment has a major impact on our overall wellness. Living in an environment that is healthy and peaceful can be beneficial to your overall wellness.
- **Indoor Plants are a great home décor**:- Besides providing health benefits, the benefits of houseplants are also aesthetic as they create an excellent home décor.



Indian Indoor Plants Market size

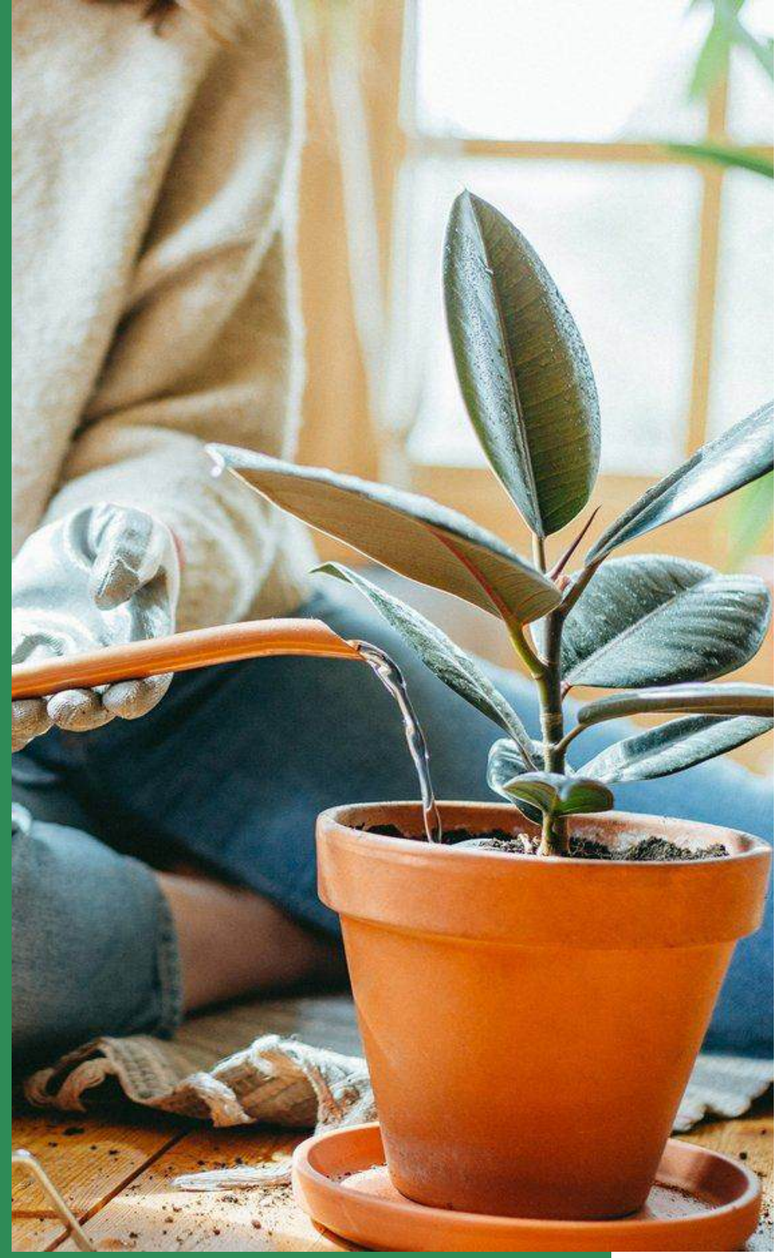
The market, which reached its peak during the pandemic, is estimated to grow at a **CAGR of 5.8%** from 2022 to 2029, according to a market research report by Market Intelligence Data. India's indoor plant market was valued at **$5.12 billion** in 2021 and is expected to reach **$9.8 billion** by 2029. Indoor plants, also known as houseplants, are plants that are grown indoors in residences or offices for decorative purposes, but recent studies have also shown they have significant positive psychological effects and help with indoor air purification.

Secondary Research

Secondary Research

Why it is growing in India?

Increasing air pollution, especially in the metro cities is one of the major factors driving the indoor plants market in India. Additionally, ease of purchase, low maintenance, and cost-effectiveness are further fueling growth in the market. Moreover, increasing awareness among the population would further steer growth in the market.



Secondary Research

Factors affecting Plant growth

- **Light**:- Of all of the factors affecting plant growth in interiors, adequate light is by far the most important. Light is needed for plants to produce food and survive.
- **Temperature**:- Temperature is the second most important factor influencing plant growth in interior environments. Indoor plants can tolerate and grow well in the 14°C - 30°C.
- **Humidity**:- For indoor plants, relative humidity below 20 percent is considered low, 40 percent – 50 percent is medium, and above 50 percent is high.
- **Water**:- Most plants die from overwatering. Most plants do fine if they are kept evenly moist, drying out slightly between watering.
- **Fertilization**:- It is important to fertilize plants because the soils they grow in do not contain the essential nutrients they need to thrive.

Secondary Research

Silent Killer in Indian Gardens

In India, many people struggle with understanding their plants' water needs, often resorting to watering them daily out of uncertainty. Unfortunately, this frequent watering habit often leads to overwatering, which is a primary cause of plant death. It's crucial for individuals to recognize the signs of overwatering and adopt proper watering practices to ensure the health and longevity of their beloved indoor greenery.

Secondary Research

Type of Fertilizer for Indoor Plants

- **Liquid fertilizer:-** The benefit of using liquid fertilizer is that it is simple to apply and control plant food. All you need to do is dilute to the appropriate strength and fertilize your plants as necessary.
- **Slow-release fertilizers:-** Nutrients are slowly released into the soil by spikes, pods, and capsules. This is advantageous because you do not have to remember to feed plants. For small pots, slow-release plant fertilizers are preferred.
- **Granular fertilizers:-** It is best to use this fertilizer when repotting a plant in fresh soil. As soon as you water the plant, the granules are absorbed into the soil and release nutrients. Like slow-release fertilizers, it’s hard to control the strength of fertilization.
- **Seaweed fertilizer:-** One of the best fertilizers you can use on your plants is liquid seaweed. However, this fertilizer is probably the last thing people think of buying when they visit a garden center or shop online. In addition to being organic, liquid seaweed fertilizer is also sourced sustainably.

Secondary Research

Practices for Healthy Plants in Indian Homes

- **Regular sunning is essential:-** Most indoor plants do not require too much sun. However, they all do well if they are regularly exposed to sun for a few days before bringing them back in.
- **Check their placement:-** If you keep your plants near a glass window that is closed through the day, there is a chance that the glass gets excessively hot due to direct sun.
- **Remove any dead leaves:-** This prevents pests from settling on dead and decaying leaves, and reserves the plant nutrition for optimal use by growing leaves. It is good for aesthetic reasons, as well.
- **Add fertilizer regularly:-** Either home-made compost or store-bought fertilizer, just sprinkle a little bit on the top soil to give shots of nutrition to your beautiful plants.

Secondary Research

Existing Technologies and Products for Indoor Plant Care

- **Mobile Apps:-** There are numerous mobile apps available for plant care, offering features such as plant identification, watering reminders, care tips.
- **Plant Fertilizers:-** Various types of fertilizers, designed to provide essential nutrients for plant growth and health.
- **Grow Lights:-** LED grow lights are commonly used to supplement natural light in indoor environments, ensuring that plants receive adequate light.
- **Self-Watering Planters:-** These planters come with built-in reservoirs that provide a constant water supply to plants, helping to prevent overwatering.

Competitor Analysis

Feature	Planta	Plantiary	PlantIn
Personalized Care Schedule	✓	✗	✓
Watering Reminder & Notification	✓	✗	✓
Light Level Monitoring	✓	✗	✗
Community - Driven Platform	✗	✓	✗
Plant care guides & tutorials	✗	✓	✗
Plant identification tool	✗	✗	✓
Customizable care recommendations	✓	✗	✓
Pricing	₹ 3200/year	₹ 690/week	₹ 4450 for lifetime

Planter Material Comparison

Feature	Fiberglass	Wood	Plastic	Metal	Terracotta	Concrete	Baskets
Durable	✓		✓	✓		✓	
Lightweight	✓	✓	✓				✓
Used Indoors / Outdoors	✓	✓	✓	✓	✓	✓	✓
Insulating	✓		✓		✓	✓	
Has UV Protection	✓		✓	✓	✓		
Does Well In Harsh Weather	✓		✓	✓	✓	✓	
Environmentally Friendly	✓	✓		✓	✓	✓	✓
Variety Of Shapes And Sizes	✓		✓	✓			
Visually Appealing	✓	✓	✓	✓	✓		✓
Inexpensive		✓	✓		✓		✓
Quality	✓			✓			
Professional	✓		✓	✓			

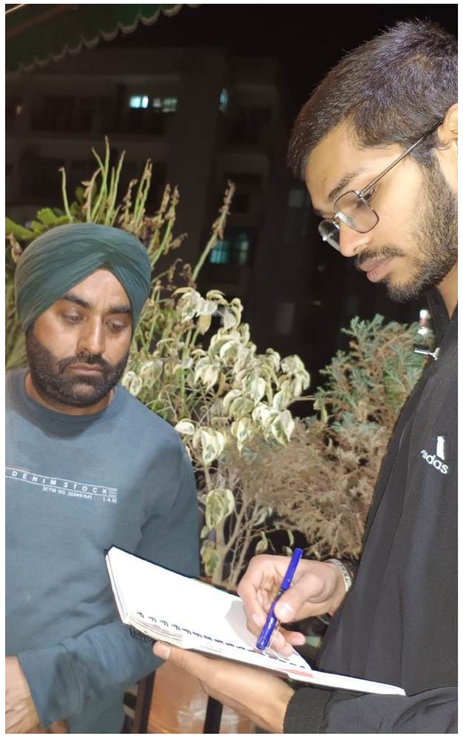
Secondary Research

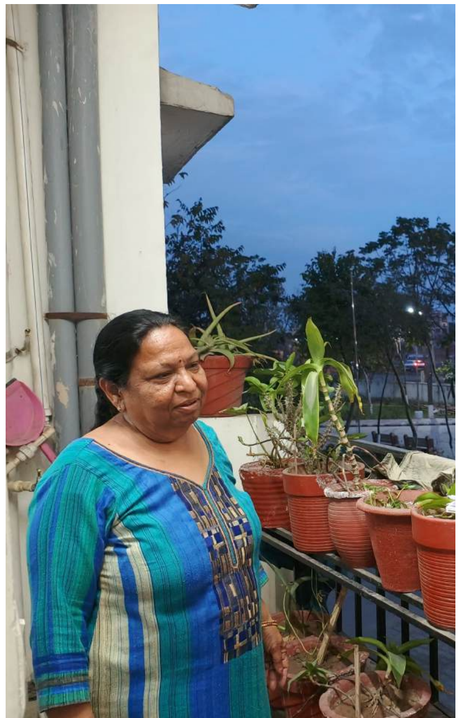
Insights Got from Secondary Research

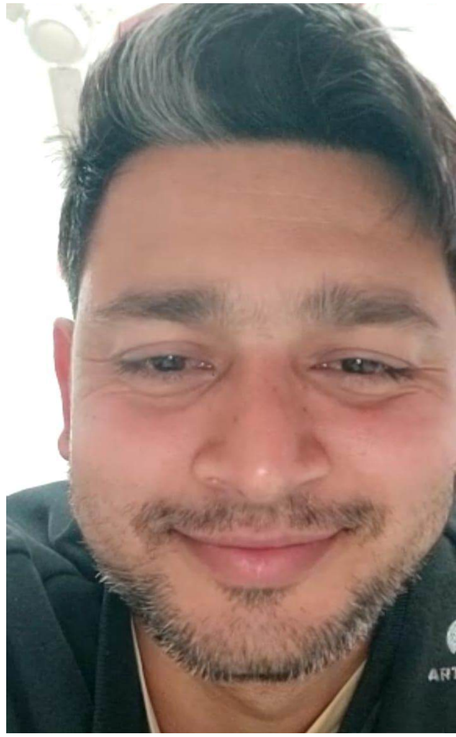
- India's indoor plant market is growing due to increased awareness of benefits like improved air quality and mental well-being.
- Each plant requires specific care regarding water, sunlight, and nurturing for optimal growth.
- Overwatering can harm plants, highlighting the importance of proper watering practices.
- Various fertilizers are accessible to aid plant health and combat diseases.
- India's indoor plant care methods blend traditional and modern approaches, reflecting its diverse gardening culture.
- Technology simplifies indoor plant care through innovations like smart monitors and mobile apps.

What User Says

- Plant owners understand their plants' needs but struggle with knowing how much is just right.
- When problems arise, they reach out to local experts or go online for help.
- They lack tools to check their plant's health live.
- They find existing plant care apps expensive and not very useful.
- They're willing to buy affordable tech products.
- Sometimes, they water too much because of using big pots.
- Moving plants to new pots can sometimes hurt them.







Priya Patel

> Plants are not just plants; we care for them as we would our children

Age : 28 Location: Chandigarh Relationship: Single Occupation : Marketing Executive

About Priya

Priya Patel is a 32-year-old marketing executive living in Chandigarh, India. She recently moved into a spacious apartment with ample natural light and decided to decorate her home with a variety of indoor plants to create a cozy and vibrant atmosphere. Despite her enthusiasm for gardening, Priya has limited experience with plant care and often finds herself unsure about how plant's health.

Goals

- To create a healthy and thriving indoor garden in her apartment.
- To learn effective plant care techniques and improve her gardening skills.

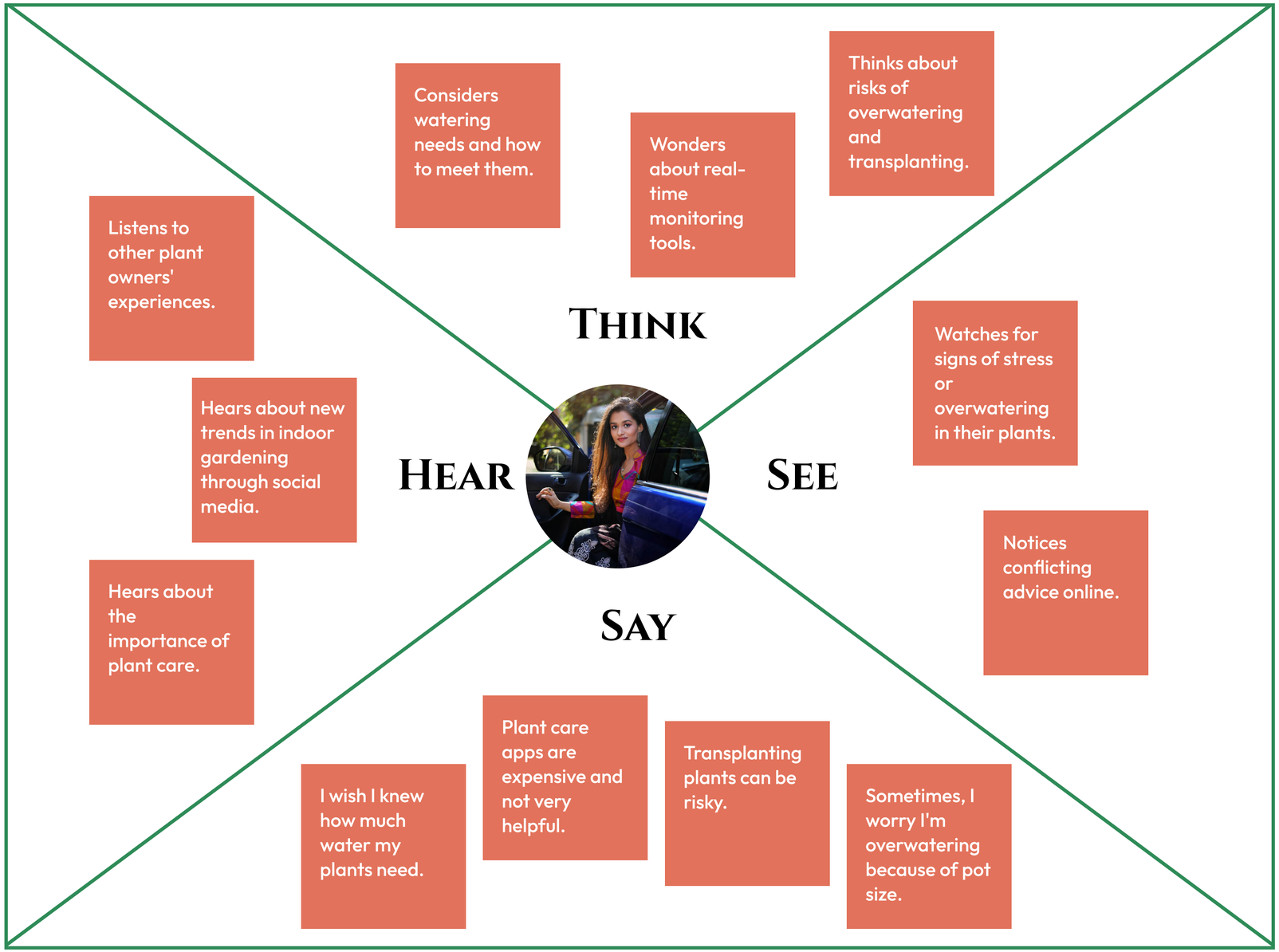
Needs

- Access to affordable tools and resources for monitoring and managing her plant's health.
- Connection with a supportive community of indoor plant enthusiasts for advice and inspiration.

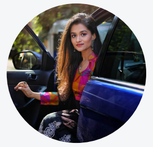
Challenges

- Uncertainty about proper watering and care techniques for her indoor plants.
- Difficulty navigating conflicting advice and information available online.
- Limited access to tools for real-time monitoring of her plant's health.

Empathy Map


Considers watering needs and how to meet them.
Wonders about real-time monitoring tools.
Thinks about risks of overwatering and transplanting.
Think
Listens to other plant owners' experiences.
Hears about new trends in indoor gardening through social media.
Hear
See
Watches for signs of stress or overwatering in their plants.
Notices conflicting advice online.
Hears about the importance of plant care.
Say
I wish I knew how much water my plants need.
Plant care apps are expensive and not very helpful.
Transplanting plants can be risky.
Sometimes, I worry I'm overwatering because of pot size.

User Journey Map



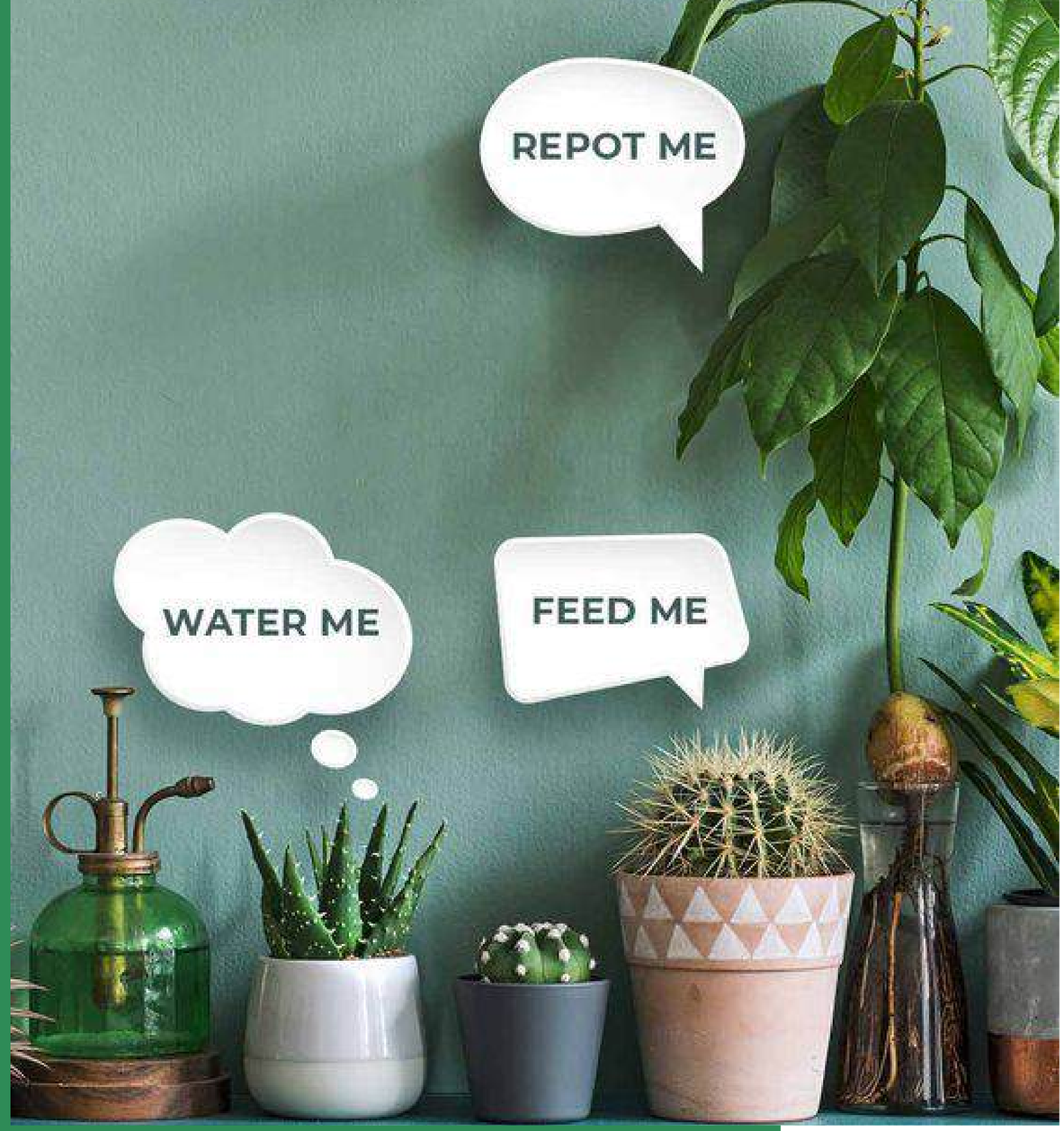
Priya Patel

Priya values nature and believes in the benefits of greenery for mental health and well-being.

Scenario

Priya notices her plant looking dull with drooping leaves and waterlogged soil, suspecting overwatering. Upon inspection, she discovers the pot is too small, indicating the need for repotting. Hesitant due to past mistakes, she seeks guidance from her local nursery, learning to adjust her watering schedule and safely repot her plant.

Task	Observing plant health and soil condition.	Identifying signs of overwatering and pot size issues.	Reaching out to local nursery for guidance.	Receiving expert advice on overwatering and repotting.	Adjusting watering schedule and repotting plant.	Monitoring plant health and growth progress.
Pain Point	Conflicting advice online creates uncertainty.	Concerns about damaging plant roots during repotting.	Feeling overwhelmed by the situation.	Difficulty in identifying and addressing overwatering.	Lack of tools for real-time soil moisture monitoring.	
Emotion	☹️	🙂	☹️	😡	😔	
Opportunity	Develop clear, concise online resources for plant care guidance.	Create step-by-step tutorials or videos for safe repotting techniques.	Design user-friendly tools for easily assessing plant health and soil moisture.	Introduce smart pots with built-in moisture sensors to prevent overwatering.	Offer personalized watering schedules or reminders through mobile apps or smart devices.	



How Might We

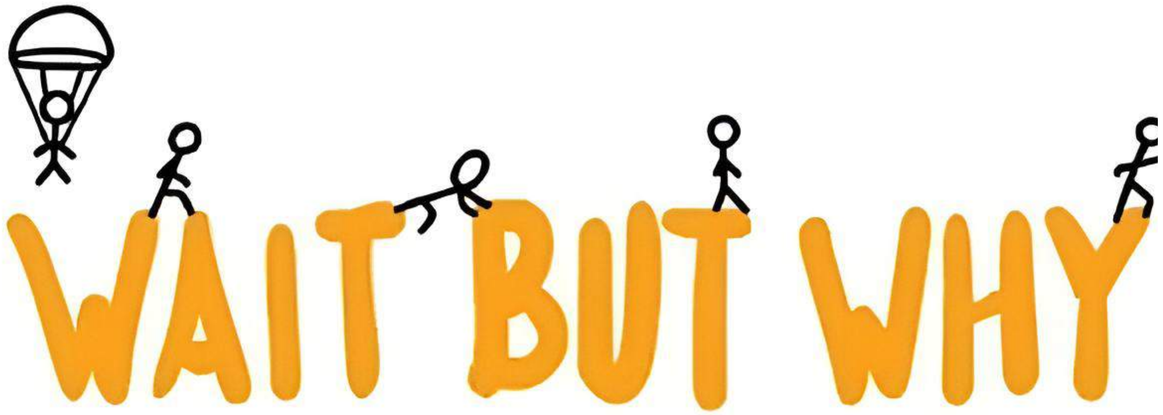
How might we develop a solution that helps indoor plant owners effectively manage watering schedules and safely repot plants, addressing concerns of overwatering and root damage?

Ideation

Final Ideation

Automatic expandable pot

- **Automatic Expansion:** Incorporate a mechanism within the pot that allows it to expand or contract based on the growth stage of the plant.
- **Built-in Moisture Sensor:** Embed a moisture sensor directly into the soil, which continuously monitors soil moisture levels and sends real-time data to the connected app.
- **Hydrogel Reservoir:** Integrate a reservoir of hydrogel beads within the pot, which absorb and release water as needed to maintain optimal soil moisture levels around the plant's roots.
- **Customizable Alerts:** Provide customizable alerts and notifications within the app, alerting users when the soil moisture levels are too high or too low.



Why this idea?

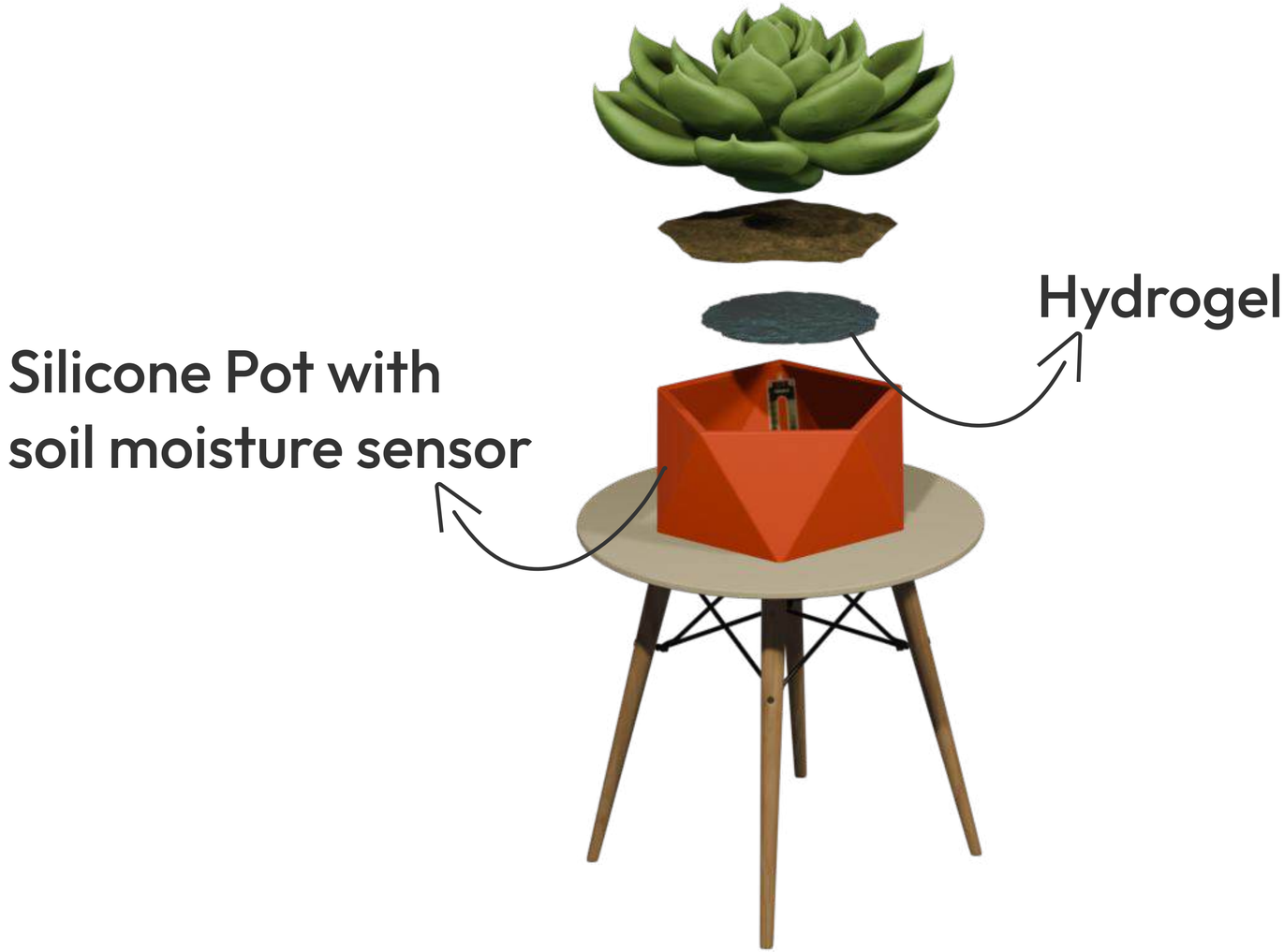
- **Convenience:** The automatic expandable pot eliminates the need for manual repotting, saving time and effort for users.
- **Optimal Plant Health:** By continuously monitoring soil moisture levels and adjusting expansion accordingly, the pot ensures that plants receive the right amount of water at all times. This helps prevent overwatering or underwatering.
- **Long-term Cost Savings:** Users save money on purchasing multiple pots of different sizes and reduce the need for frequent repotting, ultimately leading to cost savings over time.
- **Adaptability:** The automatic expandable pot adjusts to changing plant growth conditions, making it suitable for diverse indoor gardening.

Expandable Pot Design

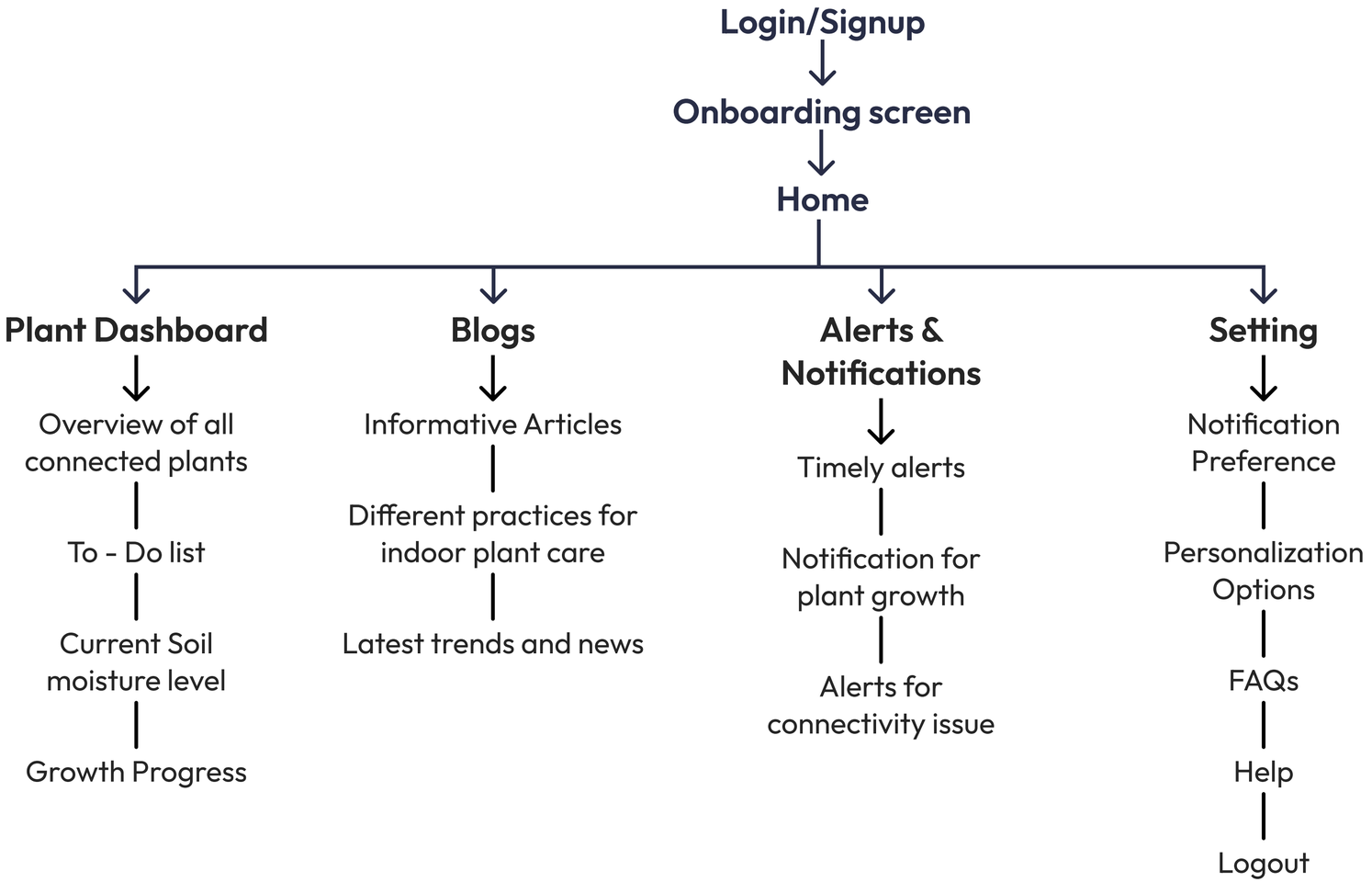
About the pot

- **Material Used:** The pot is made of silicone, specifically Medical-Grade silicone, which is a high-quality material that is used in medical devices and is known for its durability and flexibility. Medical-Grade silicone is also environmentally sustainable, which makes it a great choice for eco-conscious gardening enthusiasts.
- **Design of the pot:** The design of the pot is hexagonal, which means that it has six sides. This design allows the pot to expand easily as the plant grows, without causing any damage to the pot or the plant. The hexagonal shape also helps to evenly distribute the pressure of the hydrogel and the plant's roots, ensuring that the plant grows healthy and strong.

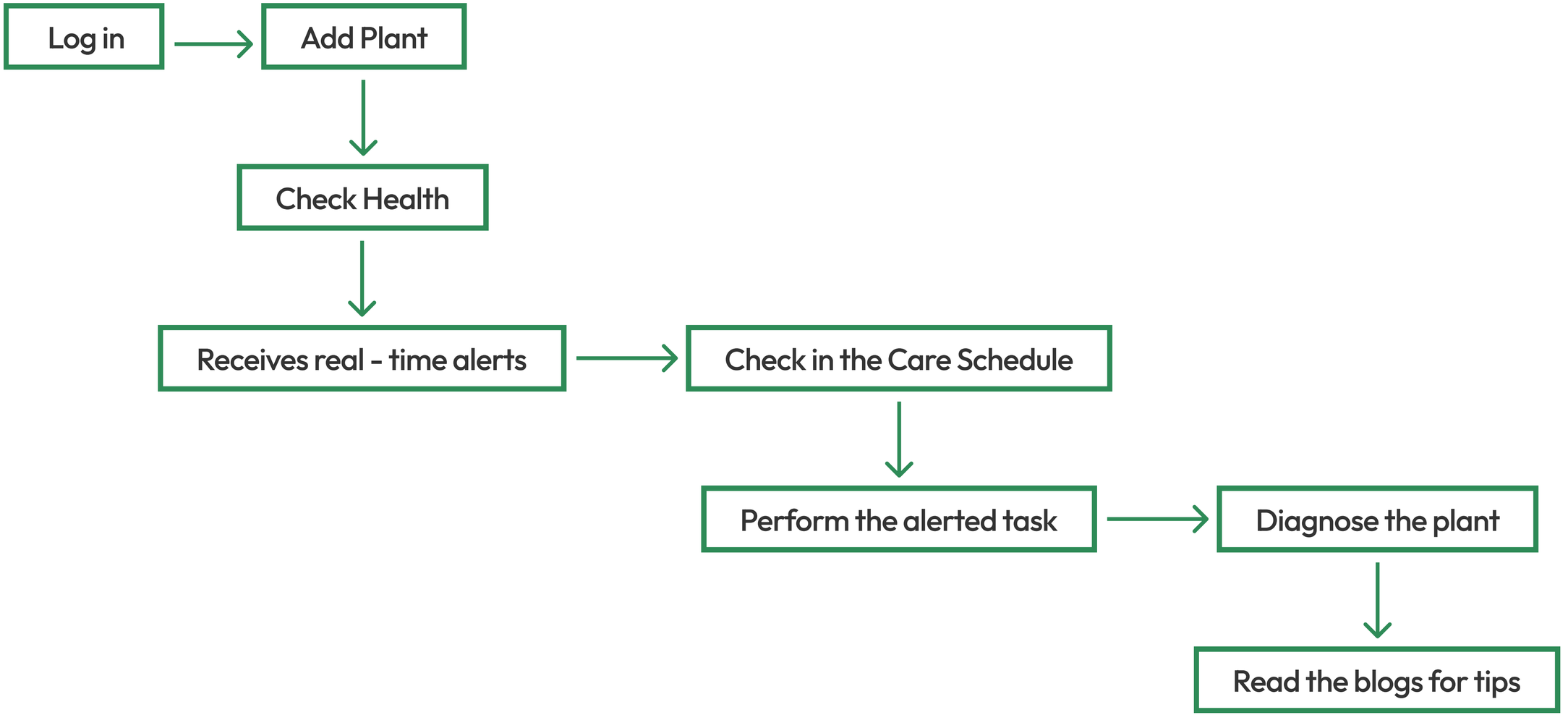
Inside the pot



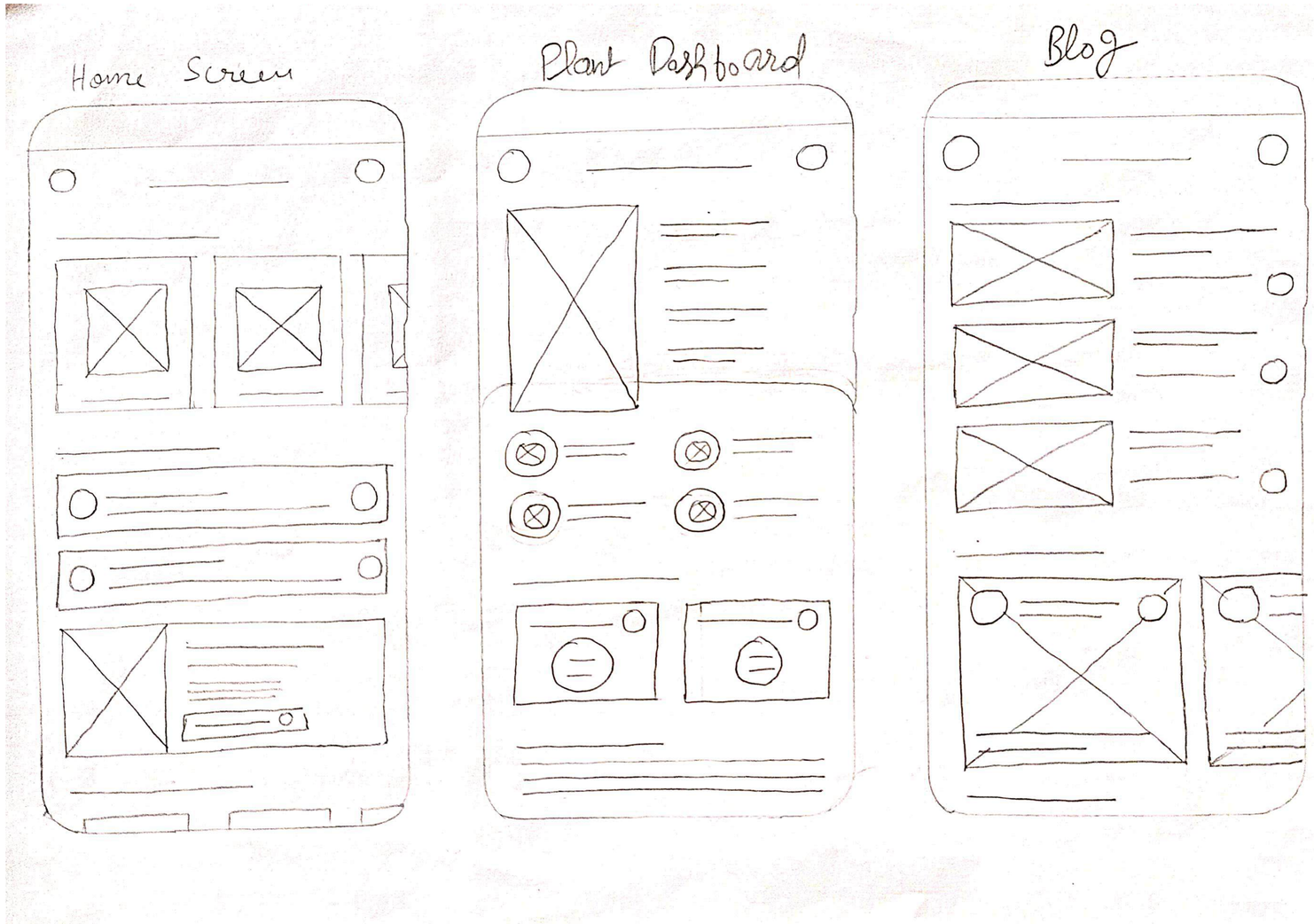
Information Architecture



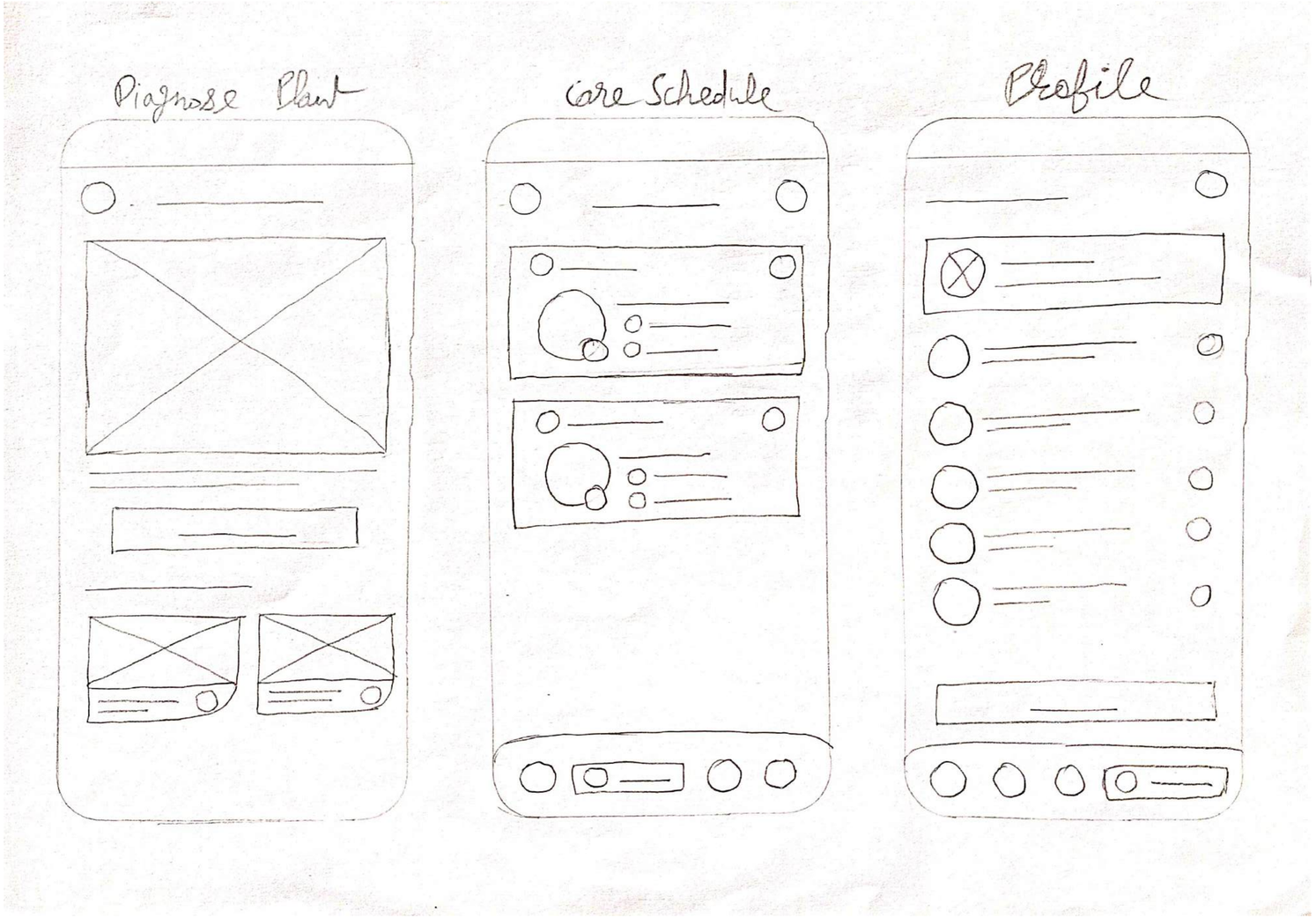
Task Flow


Log in
Add Plant
Check Health
Receives real - time alerts
Check in the Care Schedule
Perform the alerted task
Diagnose the plant
Read the blogs for tips

Low - Fidelity Wireframes



Low - Fidelity Wireframes



STYLE GUIDE

Colors

Color Theme

60%

30%

10%

#004710

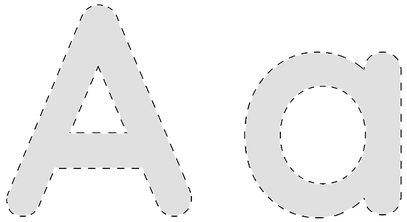
Primary Color

Grayscale

#FFFFFF #E6E6E6 #CCCCCC #B3B3B3 #999999 #666666 #4D4D4D #333333 #1A1A1A #000000

Style Guide

Typography



Quicksand

Regular/Medium
Semi Bold/Bold

Outfit

Regular/**Medium**
Semi Bold/Bold

Text Hierarchy

Name	Font weight	Font size	Font color
Display	Regular/Semi Bold/Bold	40 px	#333333
Heading 1	Regular/Semi Bold/Bold	32 px	#333333
Heading 2	Regular/Semi Bold/Bold	20 px	#333333
Body 1	Regular/Semi Bold/Bold	16 px	#333333
Body 2	Regular/Semi Bold/Bold	14 px	#333333

Style Guide

Grid Systems

Mobile

Mobile

Column: **4**

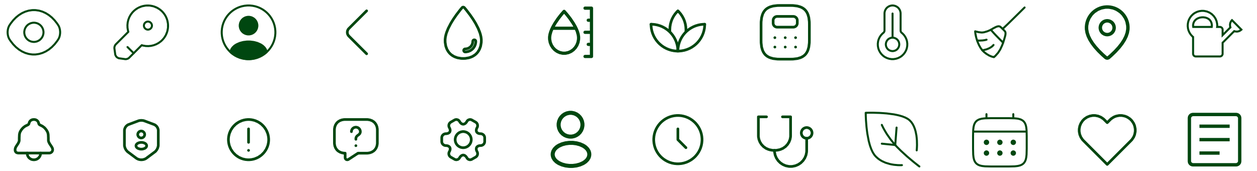
Type: **Stretch**

Margin: **20px**

Gutter: **16px**

Iconography

Icon Sets



Style Guide

Components

Next

Phone number or E-mail

Login

Login

Watering
One of your plant need water

Skip

Ready to break free from repotting?

Curious about the magic behind it? Let's unveil how it works!

Know More

Peace Lily

This plant is well known for its air-purifying abilities.

Snake Plant

Dashboard

Mold in the plant's soil

Next Watering

6 days

April 20, 2024

Aloe Vera

Living Room

200ml water is needed

Brooklyn Simmons

10 hours ago

Full Guide on Plant Leaves turning yellow

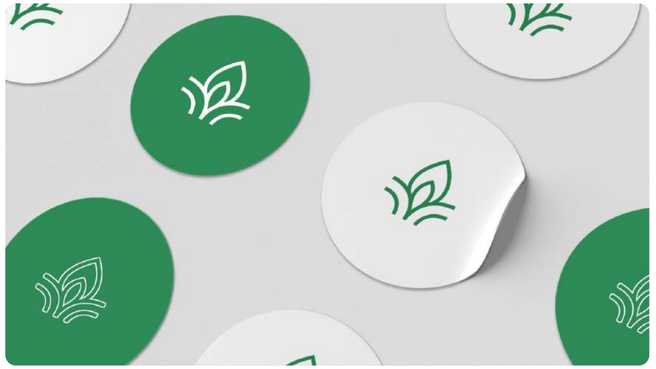
Choose plant based on the light

May 05, 2023

Style Guide

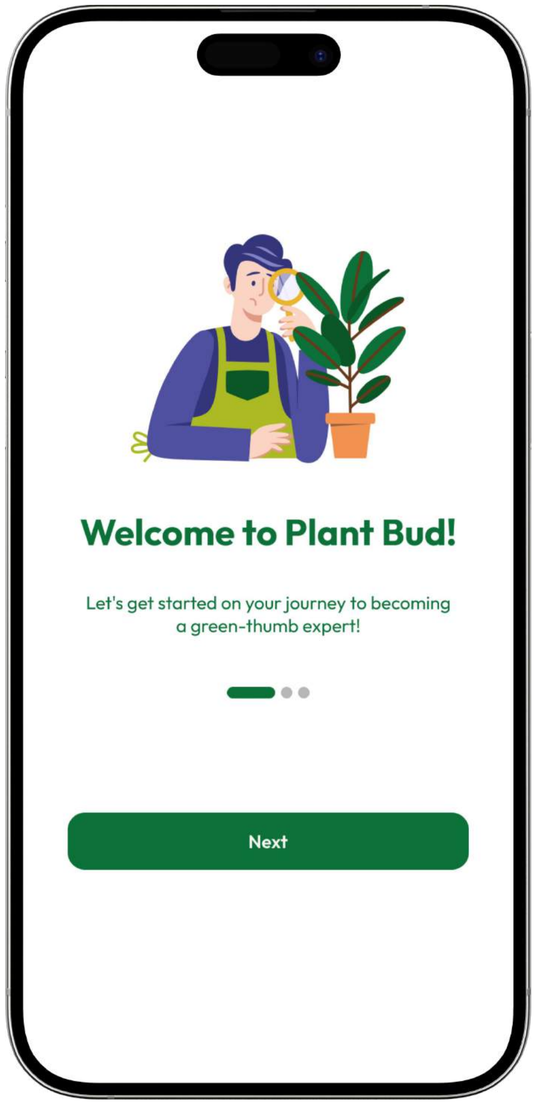
Illustrations

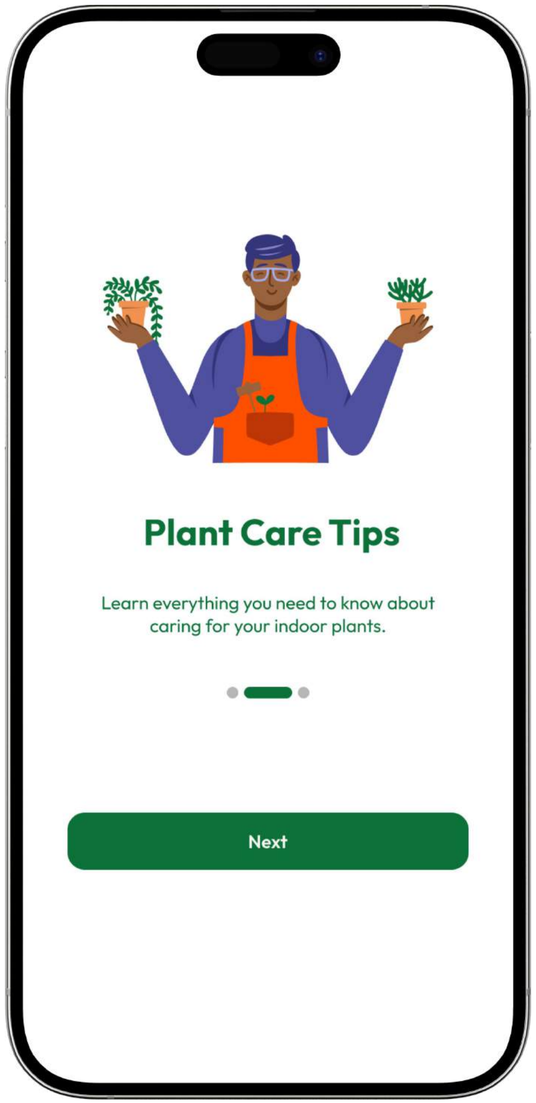
Logo



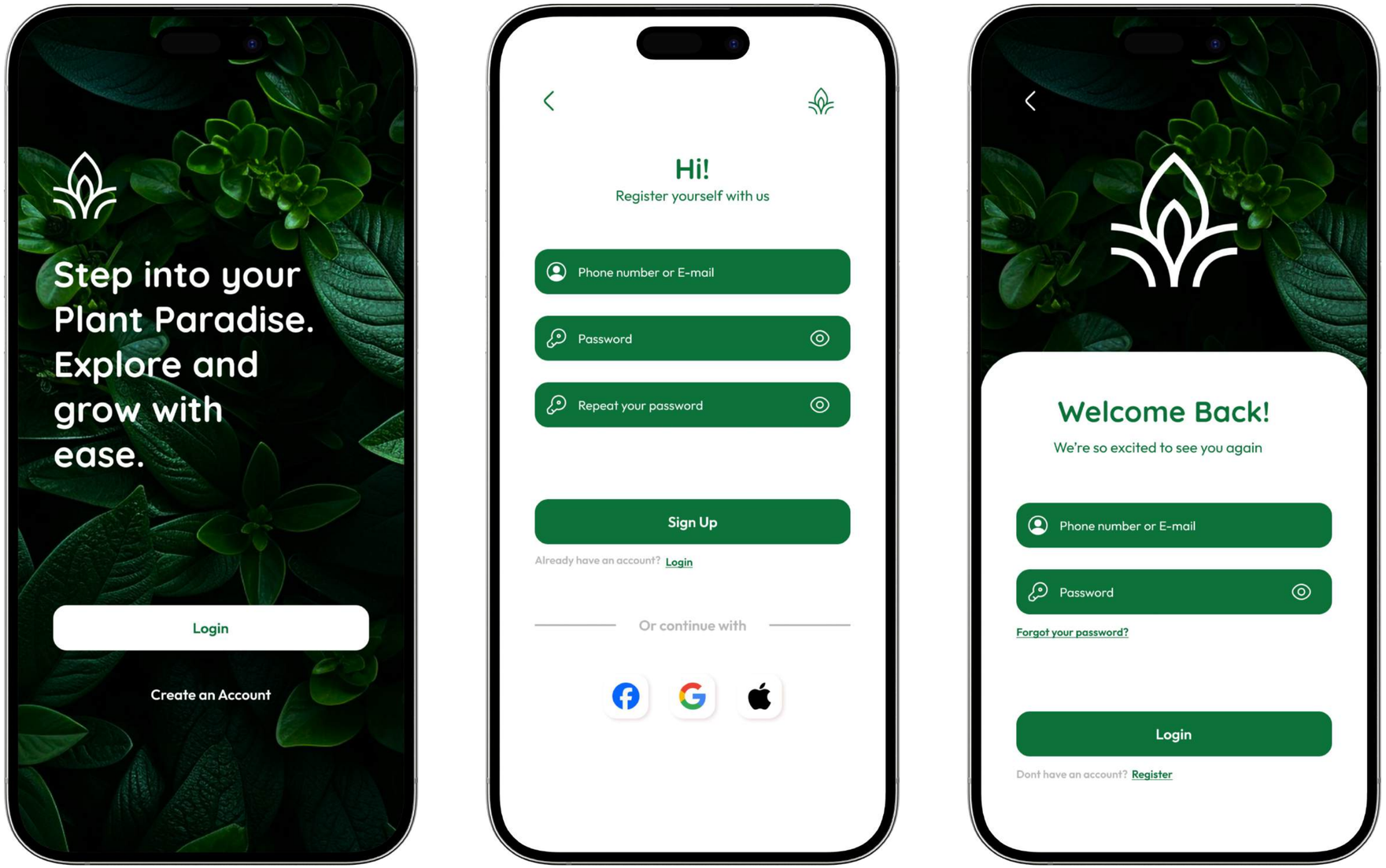
Final Screens

Onboarding Screens

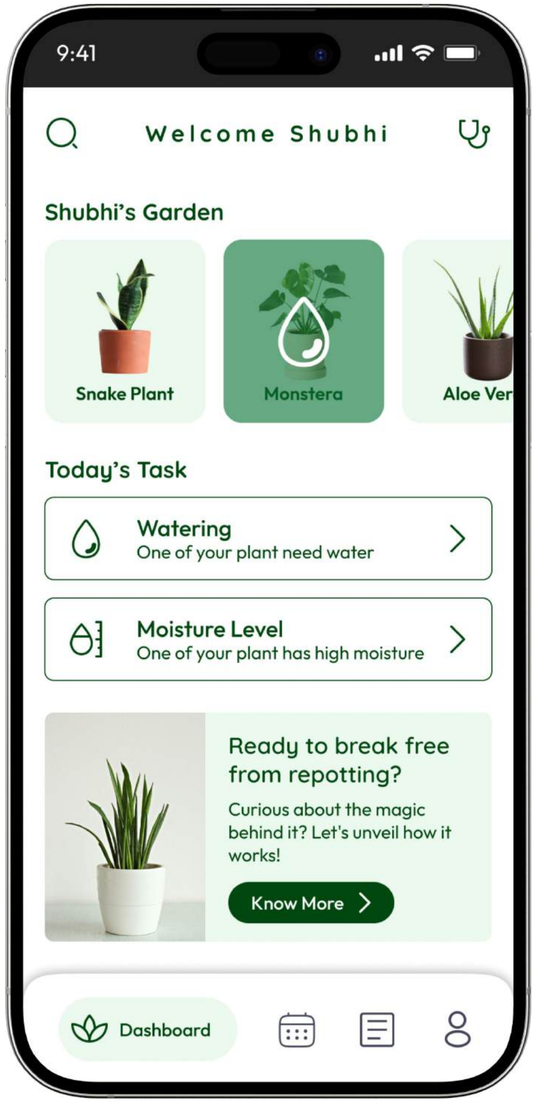




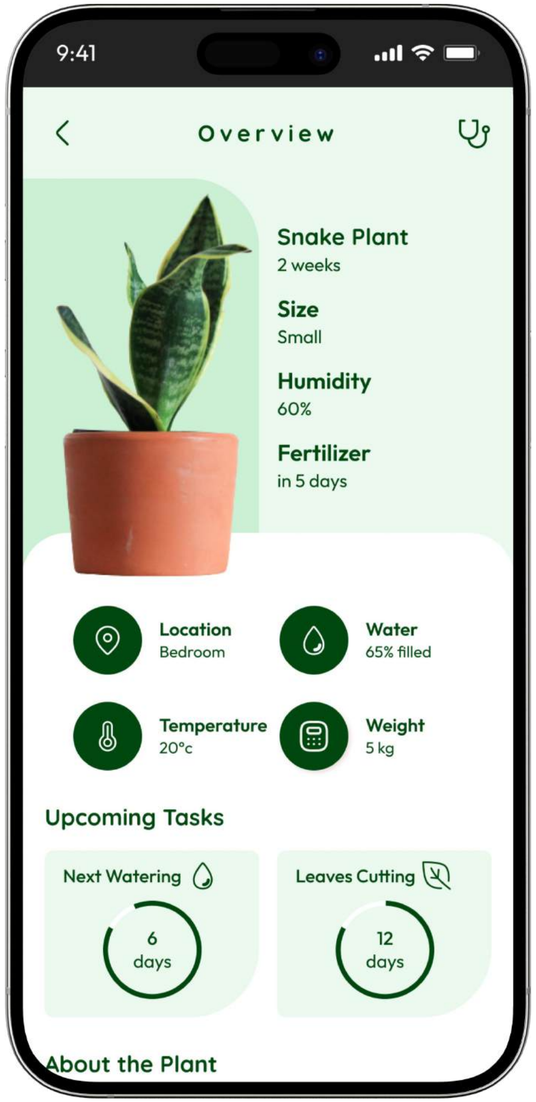
Login or Registartion Screens



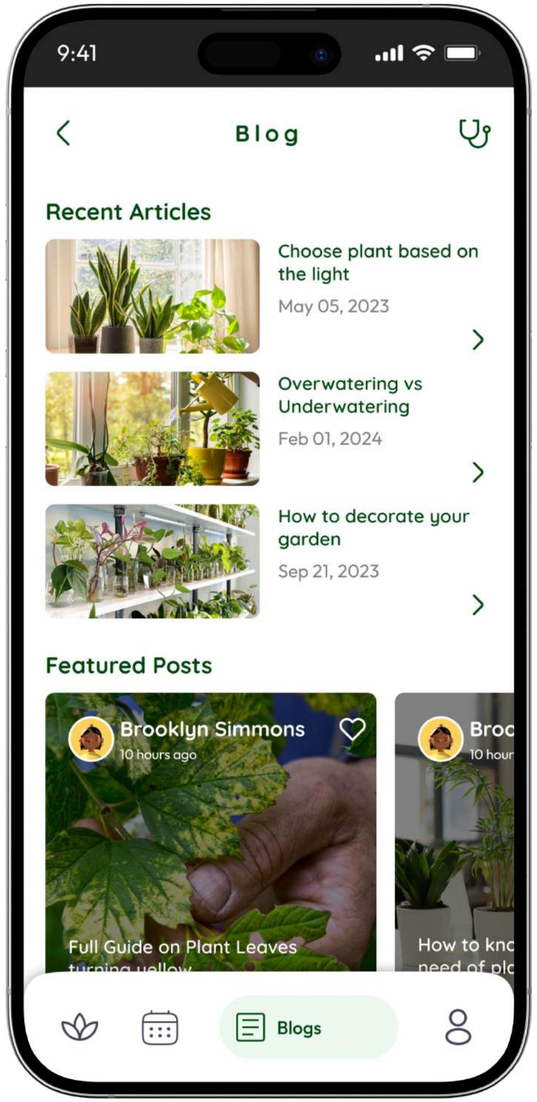
Home Screen



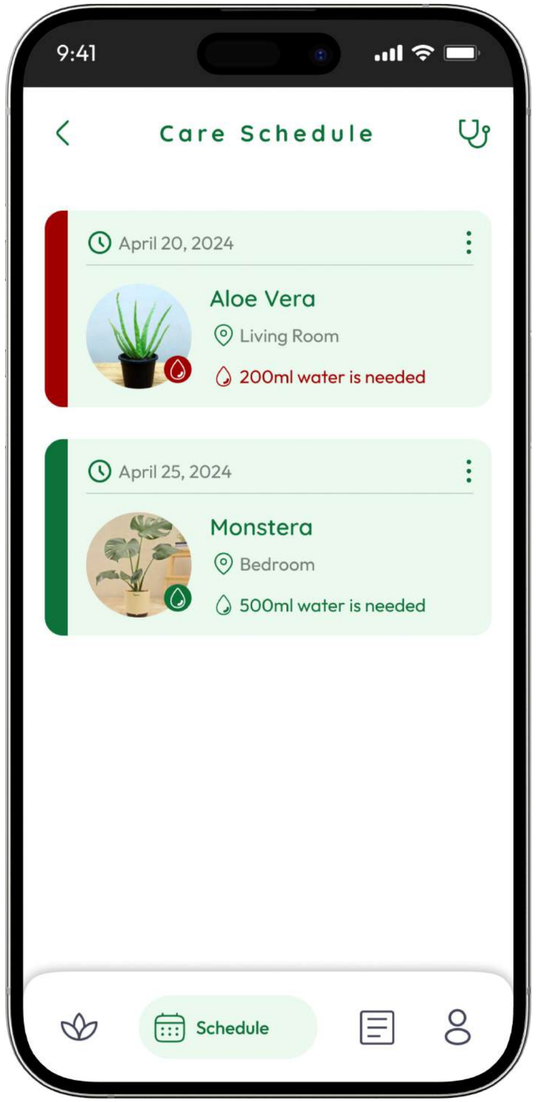
Plant Dashboard



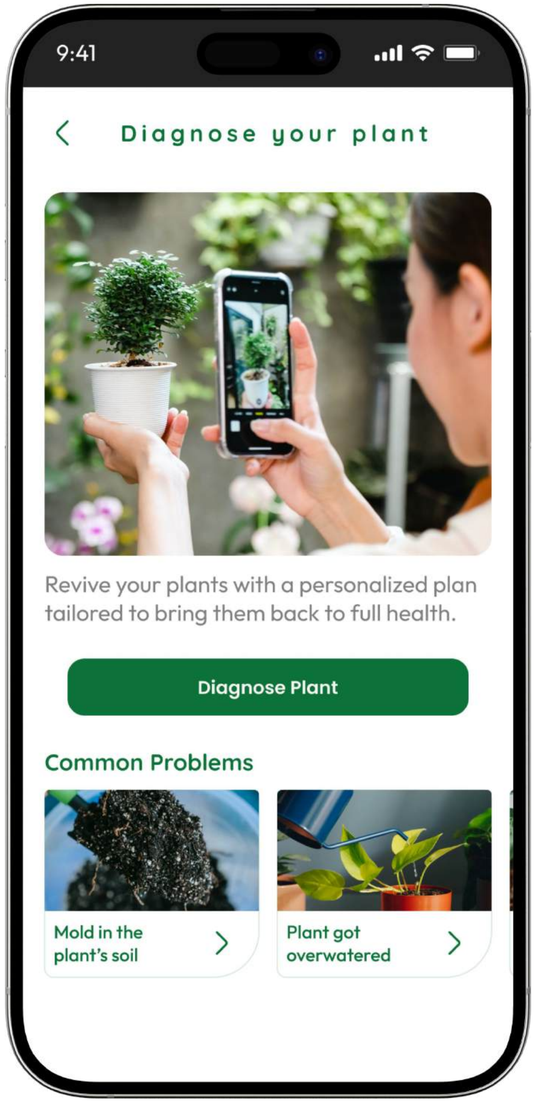
Blog



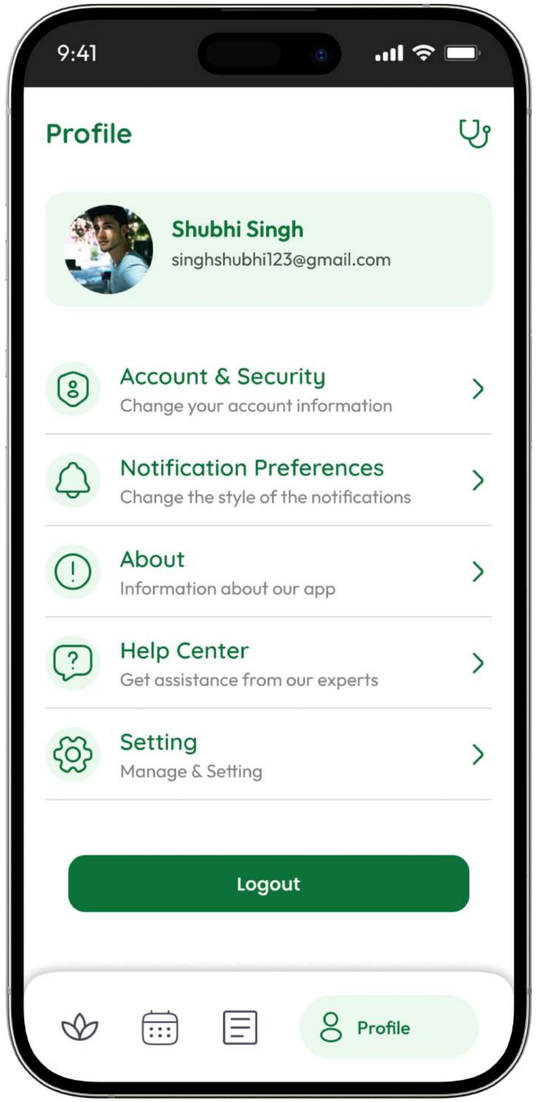
Care Schedule



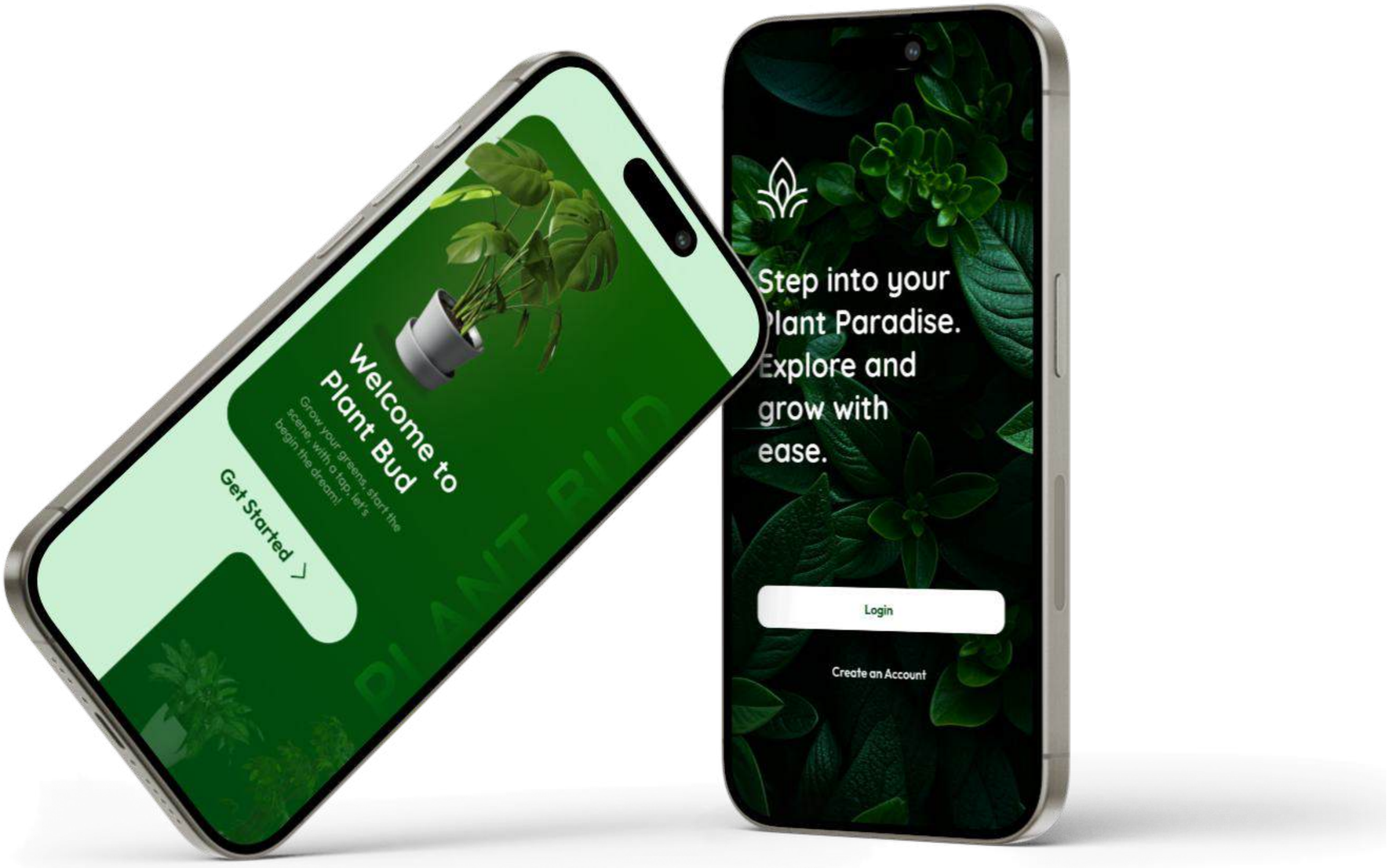
Plant Diagnosis



Profile



Click below mockup to see the prototype



Thank You